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Anukrati Agrawal
Washington State University, Pullman, Washington, anukrati_agrawal@wsu.edu

K. D. Joshi
Washington State University, Pullman, Washington, joshi@wsu.edu

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LEVERAGING SOCIAL CAPITAL THROUGH CLASSROOM COMMUNITIES

OF PRACTICE

Anukrati Agrawal
Department of Entrepreneurship and Information Systems
Washington State University, Pullman
anukrati_agrawal@wsu.edu

K. D. Joshi
Department of Entrepreneurship and Information Systems
Washington State University, Pullman
joshi@wsu.edu

Abstract:

Educators have advocated the use of informal complementary learning approaches such as Communities of Practice (CoPs) to support existing formal educational structures. They argue that educational structures need to leverage its social capital through informal learning to support the sociocultural approaches to instructions. The CoP concept has been successfully used in business and other organizational settings. However, its application in the educational setting has not been examined in a systematic and deliberate manner. This extended abstract establishes this primary research question by providing a preliminary literature review and also gives an overview of the planned research methodology.

Keywords: social capital, community of practice, seeding structures, education

I. PRIMARY RESEARCH QUESTION

The educational structures for learning and instruction have slowly evolved over the years by diversifying its focus from solely presentation driven mode of instruction to a more participative mode. Yet, presentation based instructional designs such as lectures, where a learner is a passive recipient of knowledge, remain dominant. The proponents of participative instructional modes argue that learning is interactive and dialogic (Carpendale and Lewis, 2004; Tomasello et al. 2005; Vygotsky, 1997). Participative mode actively engages the students in the learning process through formal mechanisms such as class discussions, case-based learning, and group collaboration. However, the use of sociocultural approaches to instruction which leverage the social capital embedded within the *informal* relational structures (e.g. network of students) is still in its infancy. Extant literature suggests that social capital can be developed and leveraged through informal structures, such as communities of practice, to support the sociocultural approaches to teaching and learning. Social capital refers to the actual and potential resources embedded within, available through, and derived from the network of relationships among individuals (Nahapiet & Ghoshal 1998). These resources can be accessed, mobilized, and utilized to help support and enhance existing formal pedagogical structures. We argue that the inclusion of social-media enabled Classroom Communities of Practice (CCoPs) to supplement traditional classroom instruction will enhance students' learning experiences. However, no systematic and deliberate efforts have been directed toward empirically evaluating the application of CoPs in the educational environments. Therefore, this study attempts to take a step towards empirically assessing the efficacy of social-media enabled CoPs within the classroom setting by examining the following primary research question: *What are the effects of social media-enabled support structures on the creation of CCoPs and on student learning?*

II. PRELIMINARY LITERATURE REVIEW

Communities of Practice for Education

Communities of practice are "groups of people who share a concern for something they do and learn how to do it better as they interact regularly (Wenger 2004). The notion that knowledge and its internalization are socially constructed is central to the concept of CoP. The basic premise behind CoP is that learning is a social practice which unfolds continually in social settings. The community acts as a living curriculum for learners. For instance, Lave argued that 'learning is ubiquitous in ongoing activity, though often unrecognized as such' (Lave 1993). Wenger characterized this concept as, "Communities of practice are formed by people who engage in a process of collective learning in a shared domain of human endeavor: a tribe learning to survive, a band of artists seeking new forms of expression, a group of engineers working on similar problems, a clique of pupils defining their identity in the school, a network of surgeons exploring novel techniques, a gathering of first-time managers helping each other cope" (Wenger 2005).

The CoP concept has been successfully used in business and other organizational settings (Wenger 2004). In addition to the business context, this concept has also been used in government settings, non-profit-organizations, and associations. Despite its pedagogical roots, CoP's application in formal education is very limited." We argue that the use of CoP as an informal learning mechanism can nicely complement the accredited formal learning mechanism. Individual accreditation and formalization of learning is crucial. However, informal mechanisms can add depth to the process of learning. We argue that incorporating informal complementary learning approaches such as CoPs to existing formal education structures can be transformative. Communities of practice have become an integral part of an organization's learning strategies (Wenger 2004).

We believe that this concept can also be integrated within the educational systems to enhance student learning. Although coordinating teaching around the notion of "communities" and/or "practice" is very demanding and challenging, if institutionalized effectively, CoPs have a potential of changing the landscape of education. For instance, if the concept of CoPs is yoked with existing teaching structures they will help students to learn from their peers, not only about the subject matter, but also about other practical things which can help him in his academic endeavors.

Seeding Structures for CCoP Development

CoPs are often organically created to meet the epistemic needs experienced within a community. The epistemic needs motivate participants to willingly share their knowledge and collectively engage in the creation of new knowledge (Thompson, 2005). The knowledge ambiguity, task complexity can serve as a key epistemic contributor to the creation of CoPs (Juriado and Gustafsson, 2007). Although the epistemic drivers are key and central to the creation and sustenance of CoPs, they "cannot consist in practice alone and must have structural components" (Thompson, 2005). These structural components are often referred to as boundary objects, such as symbols, infrastructure, and points of focus around which CoPs can congregate to organize their interactions (Wenger 1998). Research shows that although controlled structures are detrimental to the development of the CoPs, *seeding structures* which do not directly control people's actions, but "merely seek to influence future interactions are productive and may even be necessary in generating" (Thompson, 2005) some sociocultural context around which the community members can coalesce. The seeding structures help form a foundation on which community can create boundary objects. Thompson (2005) uncovered the importance of seeding structures in the creation of a CoP in his study of a CoP within a large global IT hardware and services organization. He found that the seeding structures such as playing space (e.g., pool tables, plastic weapons), contemporary job titles such as "creative spark," and informal office surroundings (e.g., music playing on desk) provided an environment within which a CoP of web-designers could flourish. In addition to such seeding structures, Web 2.0 tools have also been

used to foster the creation and maintenance of CoPs.   Web 2.0 tools foster interaction, collaboration, and contribution (Gillmor, 2004; Goerzen, 2007). "An essential feature of Web 2.0 is user generated content enabling sharing, co-creating, co-editing, and co-construction of knowledge reflecting the collective intelligence of the community of users" (Gunawardena et al. 2009 pp.5). In an educational setting, social media tools can allow students to communicate with classmates to generate greater course related communication and interaction which can enhance engagement and learning (Gillmor, 2004; Rosen and Nelson, 2008). However, the potential of Web 2.0 tools within the realm of academia remains untapped. Gunawardena et al. (2009) suggest that the "recent developments in Web 2.0 technologies are far outpacing the development of theoretical frameworks for their utilization in education and training."

The terms Web 2.0 students, the net generation, digital natives, the millennial are often used to profile this generation of college students. In the classroom settings, this generation of learners prefers and often gravitates toward media they are already using for socialization purposes. Given the growing student participation within the social media such as Facebook and Twitter, we propose that seeding structures in form of social media will be appropriated more readily by the students to bolster the development of Classroom CoPs.

III. OVERVIEW OF PLANNED RESEARCH METHODOLOGY

While several educators have advocated the use of informal structures such as CCoPs, few have empirically evaluated and demonstrated its effects on learning. To the best of our knowledge, no studies have employed an experimental or a quasi-experimental design approach, with proper control and treatment conditions, to empirically measure the impact of structural support on creation of and learning within a CCoP. We are making an attempt to fill this gap through this study. The research design that we will follow will contribute to this line of research by providing a quasi-experimental comparison of a course with and without explicit seeding structural support for CCoPs based on both learning outcomes and CCoP creation. Out research design is in it incipient stages and how not fully formalized. Below we briefly summarize the steps we are taking to pilot this work which will allow us to refine our research design for this work. We also hope to receive feedback on our design approach from the conference participants which will help strengthen the execution of this study. Currently we are piloting this work by incorporating the communities of practice concept in one of the MIS courses. One section of this course will be the control group and the other section will act as a treatment group. In both the groups we will introduce and encourage creation of community of practice by embedding epistemic needs that students have to resolve with the help of their peers and by encouraging knowledge sharing among the peers.   The difference between the treatment and control condition will be the presence or absence of seeding structures to support classroom communities of practice. In the control condition, no explicit structural support will be provided to facilitate the creation of learning within the classroom community. Whereas, in the treatment group, (Web 2.0 enabled) structural support will be made available to the students. The two dependent or endogenous variables in this study are - Classroom Community of Practice and Student Learning. The CCoP construct captures the presence or absence of CCoP during both the treatment and control conditions. This measure also acts as a manipulation check. This variable will be captured by surveying the students' and the instructors' perceptions regarding community formation. The survey will be based on Wenger's CoP indicators (Wenger, 1998). The Student Learning construct captures the extent to which a student has absorbed the course related knowledge and developed intellectual skills. This will be captured by student's performance in the course and their perception of how much they have learned in this course. We plan to use a mixed-methods data collection approach to measure the study's constructs. The data will be collected using student surveys, focus groups, and classroom assessments (e.g., exams, quizzes), and secondary data (monitoring students' presence on Web 2.0 enabled space, number of interactions with the instructor etc.). Moreover, the mixed-method data collection approach allows us to capture data from three different perspectives, i.e., students, instructor, and secondary data. This data triangulation approach adds robustness and credibility to our study's findings (Thurmond, 2004).

We will include appropriate controls such as student GPA, experience with the course content, and age during our analysis.

IV. CONCLUSION

The application of informal complementary learning approaches such as CoPs to existing formal education structures can be transformative. The CoP concept has been successfully used in business and other organizational settings. However, its application in the educational setting has not been examined in a systematic and deliberate manner. This work designs an empirical study which is grounded in theory to examine whether or not CoPs can contribute to student learning. The results of this work could provide theoretical well grounded guidance for incorporating CoPs in the educational setting to enhance learning.

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