Empirical Assessment and the Development of Knowledge Management Networks (KMN) as Thesis Writing Tools in Self-Directed Environments

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ABSTRACT

This paper aims to introduce community of practice (CoP) as a form of knowledge management network (KMN) and to analyze its implications in the framework of a management education paper. Using a theoretical paradigm that incorporates Goal-setting theory (GST) and self-determination theory, this research investigates the process of thesis writing from the viewpoint of student mentees (SDT). The purpose of this paper is to introduce community of practice (CoP) as a form of knowledge management network (KMN) and to analyze its implications in the context of writing a thesis for management education. This research, grounded in an amalgamation of GST and SDT, aims to grasp the evolution of thesis writing from the viewpoint of student advising teams. Out of the 260 graduate students, 120 were male and 240 were female, with the former making up 45% and the latter making up 55% of the management education concentration. There were 52 PhD students among the total number of degree holders (or 20%), while there were 208 master's students (or 80%). The observational results of the quasi-experimental design show that participation in a community of practice and continued effort in an undertaking both contribute to the creative process. Self-determination and creative breakthroughs can only be achieved through consistent effort. Participants' gender and educational aspirations have no bearing on creativity, but men and women have different views on sticking with a task until it's finished. Self-efficacy is a factor that can have a direct influence on the quality of a community of practice, and this holds true across demographics. There is no significant correlation between CoP involvement and effort maintenance. No other factor but self-efficacy can bridge the gap between individual agency and the professional milieu. The process of setting and achieving goals strengthens one's sense of agency. In conclusion, the belief in CoP and the determination to see a project through can encourage creative thinking. The findings of this research will be useful in a theoretical and practical sense for those involved in the process of counseling and developing theses for graduate students and faculty advisors. The results of the study provide evidence in favor of an integrated theoretical model of interest and provide insight into how CoPs, a subset of KMNs, might be used in a number of different contexts.

Keywords: Community of practice, Goal-setting, Innoversity, Self-efficacy, Self-determinantion.

1. INTRODUCTION

In academia, the two purposes of thesis/dissertation for master and doctoral degrees are set in view of the practice aspect and contribution-to-knowledge aspect: (1) to provide graduate students training practice in conducting and displaying research; and (2) to come up with an original perspective empirically validated not just a research-oriented writing work (Thomas & Brubaker, 2000). As graduate students enter the graduate school, they could start off the process of degree-seeking research project. Academic advisors are not usually assigned to graduate students; instead, students may go through a series of decision-making processes to get to know prospective advisors. In this case, the graduates should take the time to research potential faculty

advisors because the adviser serves as the committee's chair and is in charge of providing guidance and support (Roberts, 2004).

Something should be done to help students enhance or at least maintain motivation, reduce the likelihood they would experience periods of depression, and help them turn to have a more positive experience (Cole, Feild, & Harris, 2004). For the nature of the thesis degree project, Thomas and Brubaker (2000) consider that in five stages: (1) Preparing the way, (2)choosing and defining research topics, (3) collecting and organizing information, (4) interpreting results, and (5) presenting the finished product. On account of the field of interest, this research paper identifies three key elements: Preliminary phase, Intermediate phase, and Final phase.

According to Thomas and Brubaker, the first two stages are equivalent to the preparatory stage, the third and fourth stages are similar to the concluding stage, and the fifth stage is the most advanced (2000). During the early stages of thesis preparation, students must deal with questions like where to find guidance (i.e., from professors, supervisors, and other graduate students), how to define their research topic, what ideas to generate, and where to find relevant literature. Students gather data and investigate their findings in the middle stage. They're wrapping up the final touches on their thesis and getting ready to submit the paper for publishing. Brewer and Brewer (2010) pointed out the importance of incorporating KM concepts into the curriculum regardless of the cognitive paradigm being used. Planning goals and assessment methods were also cited as potential KM dimensions by Brewer and Brewer (2010). The findings of a preliminary poll study performed by Lin and Chen (2012), which involved asking IT workers about their thoughts and feelings toward cloud computing, demonstrated the growing interest and appeal of this concept in both the academic and business communities. They argue that cloud computing allows users and Subject-Matter Experts (SMEs) to gain access to resources from storage on-demand, a concept that originates with Rogers' (1995) diffusion of innovation theory (IDT). Knowledge management (KM) initiatives have benefited greatly from the advent of cloud computing (Hester, 2011; Liana, Kathrin, & Frantisek, 2009; Sultan, 2013). Academics and corporations alike, as evidenced by a literature review, are interested in information management. To wit: (Kimmerle, Cress, & Held, 2010; Liu, 2011; Sun, Fang, & Lim, 2012; Tsai et al., 2011; Yen-Ku & Kung-Don, 2010; Zhao, 2010).

Despite lack of agreement on its definition, Chatti (2012) brings up that KM revolves around two key perceptions of knowledge: (1) knowledge as a thing, (2) knowledge as a process. Derived from the knowledge-as-a-process KM model, Chatti (2012) highlights the need for new knowledge management (KM) models as a replacement for existing KM. Zhen, Song, & He (2012) argued that personal knowledge management (PKM) is appropriate for dispersed collaborative knowledge management settings, in contrast to the conventional centralized knowledge management (KM) models. In a context of a successful company education program, Brewer and Brewer (2010) examine the connections between knowledge management, human resource management, and typical learning objectives. Regardless of whether Bloom's Taxonomy is utilized for planning or evaluation reasons, the findings urged academic institutions to acknowledge the significance of integrating KM principles in their business curriculum. According to Brewer and Brewer (2010), these principles seem to fit very well with organizational notions for managing human resource assets.

Originated from SECI (Socialization-Externalization-CombinationInternalization) model of knowledge dimensions by Nonaka and Takeuchi (1996), Chatti (2012) also acknowledges the significance of the personal knowledge network (PKN) model, which provides an alternative perspective on knowledge management (KM) and professional knowledge management (PKM) and explores the network and personal components of knowledge. In the research context, the purpose is to understand the effect of community of practice (CoP) from the viewpoints of student advisees and faculty advisers as the thesis writing process developed.

2. THEORETICAL FRAMEWORK

2.1 Goal-setting

Locke, Cartledge, and Knerr (1970) created Goal-setting theory (GST) which has since been applied to the study of a wide range of topics. For instance, Miles and Clenney (2012) used Goal-setting theory to assess the results of negotiations, looking for evidence that establishing goals that are significantly more challenging but still feasible than what is actually attainable leads to either plateaued

or reduced objective results. Based on this study of how goal establishing improves over a period, Fried and Slowik (2004) contended that establishing loftier aims motivates students to put in more effort over a longer length of time. The Goods and Services Theory's central assumption is that people's moods and goals while performing an action are heavily influenced by their expectations of the consequence of that action (Miles & Clenney, 2012).

2.2 Self-determination (SD)

ICT-integrated learning has been based on self-determination theory (SDT), which was created by E.L. Deci and Ryan (1985) (Roca & Gagné, 2008; Sreb, Halvari, Gulli, & Kristiansen, 2009). Problems with online education, such as high rates of pupil turnover, can be fixed by employing the principles of SDT. A paradigm for online student motivation was proposed by Chen and Jang (2010), who drew on the SDT of Deci and Ryan to examine two online degree programs. In their investigation, they uncovered proof that all three types of motivation—intrinsic, external, and amotivation—are distinct from one another. So, SDT is a theory of concerning motivation based on the idea that students want to intentionally seek out the most difficult tasks and educational experiences in order to grow and develop (Deci and Ryan 1991). Independent student motivation should be the primary focus of school programs, say Edward L. Deci, Vallerand, Pelletier, and Ryan (1991).

Hypothesis 1: Goal-setting (GS) has significant impact on self-determination (SD)

Hypothesis 2: Goal-setting (GS) has significant impact on self-efficacy (SE)

Hypothesis 3: Self-determination (SD) has a significant impact on self-efficacy (SE)

2.3 Community of Practice (CoP)

Communities of practice are networks of experts in a given area, first proposed by Lave and Wenger (1991). (CoP hereinafter). Communities of practice (CoP) are defined by Wenger, McDermott, and Snyder (2002) as groups of people who share an interest in a subject, collection of issues, or worry and participate in regular conversation to deepen their knowledge of the topic through shared experience.

A "community of practice" (CoP) is a network of students who share interests and work together to improve their learning skills, and the ways in which they address challenges (Wenger et al., 2002). People prioritize reflective practice as a means of improving their own practice while also considering the CoP as a whole into account (Kimble, Hildreth, & Bourdon, 2008). CoPs are great places to foster creativity, collaboration, and knowledge exchange (Debowski, 2007). Participating individuals in CoPs follow various paths, and advance at specific speeds (Kimble et al., 2008). CoPs, taken as significant corporate influences, can foster better business strategies and innovations, new practices, member support and education, and a culture of learning and knowledge sharing (Debowski, 2007). However, CoPs can't function without dedication, altruism, and the development of a group mentality (Bishop, 2002).

Hypothesis 4: Self-efficacy (SE) has significant impact on community of practice (CoP)

Hypothesis 5: Self-determination (SD) has a significant influence on community of practice (CoP)

Hypothesis 6: Community of practice (CoP) has a significant influence on effort continuance (EC)

Hypothesis 7: Self-determination (SD) has a significant impact on effort continuance (EC)

2.4 Innoversity Drivers

People with shared hobbies can create a community of practice (CoP) by regularly meeting to identify problems, share solutions, and share best practices (Wenger et al., 2002). The word "innoversity" was developed by Hildreth and Kimble (2004) to describe the effect of variety on the creative process through the concept of communities of practice (CoPs). Hildreth and Kimble's (2004) five Innoversity Principles are aimed at promoting learning and innovation within Communities of Practice. These factors all point to variety within and between Communities of Practice as a key generator of new ideas. First, absorbent capacity; second, requirements diversity; third, network diversity; fourth, creative destruction; and fifth, problem solving are the five motivators.

Hypothesis 8: Effort continuance (EC)has significant influence on innoversity (INN)

Hypothesis 9: Community of practice (CoP) has significant influence on innoversity (INN)

3. METHODS

The goal of this research is to analyze how community of practice (CoP) affects thesis drafting from both the student and teacher viewpoint.

3.1 Research Participants and Procedure

A total of 260 MBA candidates from Northeast China's colleges took part. All of the respondents voluntarily filled out a lengthy online poll that included both a demographics section and a scale section. Individuals who took part received no incentives. There were 120 male individuals (45%) and 140 female players (55%). 20% (n=52) were PhD students, and 80% (n=208) were master's students. Non-random sampling limits the applicability of the study's results to similar groups.

3.2 Measures

Most of the components of the study models were evaluated using revised versions of established tests. When accurate and reliable measurement scales aren't already available in the books, this research will create them. According to Arthur, Woehr, and Maldegen (2000), it is contradictory to have content-based validity and criterion-based validity but no convergent validity or discriminant validity within the same paradigm of validity. As was previously stated, the scale items for the investigated structures were created using data from the existing literature. All operational meanings were written in a way that ensured they would work in any given situation. Using a measure from "strongly disagree" (1) to "strongly agree" (8), how do you feel about this? (8). When conducting studies that rely on self-report, it is important to account for potential sources of bias caused by prevalent technique variation (CMV). Instead of reflecting the true connection between the fundamental constructs, the common method variance (CMV) refers to the overlap in variance between two variables as a consequence of the measurement tool used (Teo, 2011). That is to say, it is not the structures themselves that account for the variation; rather, it is the method by which the variation is measured. Podsakoff, MacKenzie, Lee, and Podsakoff (2003) state that methods for minimizing the impact of CMV-induced prejudice include incorporating checks and balances into the study's design and/or processes. CMV can be sidestepped by compiling predictive factors and dependent variables from multiple sources.

3.3 Reliability

Researchers are required to evaluate the validity of the tools and share their findings. Many of the techniques used to experimentally evaluate dependability are grounded in traditional test theory (O'Leary-Kelly & Vokurka, 1998). The degree to which chance error compromises a measure is directly proportional to its reliability, which refers to the degree to which it is consistent or stable (Bollen, 1989). One of the most common approaches to measuring trustworthiness is the use of Cronbach's index. Estimated systematic variation is represented by the coefficient, which can take on values between 0 and 1 (with larger values indicating greater dependability). Reliabilities below 0.70 are considered unacceptable, according to Nunnally (1978). Many studies, when presented with lower values, continue to refer back to Nunnally's (1967) earlier stance that a values as low as 0.50 are appropriate for preliminary study. Still, there is debate over what value of the index is satisfactory.

4. RESULTS

For both the measurement and structural model estimations, partial least-squares (PLS) analysis was applied. In recent years, PLS-SEM, or structural equation modeling, has been extensively adopted due to its dependability and usability (Hair, Black, Babin, & Anderson, 2010; Hair, Ringle, & Sarstedt, 2011; Vinzi, 2010). The PLS-SEM is a causal modeling strategy that seeks to maximize the explained variance of the model-dependent latent variables (Hair et al., 2011). Ringle, Wende, and Will (2005) developed the PLS-SEM application Smart PLS 2.0 for estimating model parameters using a path weighting method and calculating path models.

4.1 Descriptive Statistics

The mean and standard variation were calculated across all 46 products (SD). Each mean number was higher than the midpoint of the 8-point Likert scale, coming in at between 5.63 and 7.08. As can be seen from the mean ratings, participants responded favorably to the study's factors. The small variation in participants' answers (1.04%–1.90% SD) was reflected in the SD.

4.2 Evaluation of the Scale

There are two methods to assess discriminant validity, or the degree to which one concept can be distinguished from others: Component loading should be greater than cross loading, and the square root of the AVE for each construct should be greater than its relationships with other constructs (Bollen, 1989; Hair et al., 2010). All associations between constructs were less significant than the square root of the AVE for the respective construct (i.e., the off-diagonal elements in the corresponding rows and columns). Cross loadings and component loadings for every structure exceeded 0.70. The preceding analysis demonstrated the measures' discriminant validity. In the final analysis of the measurement model, all construct measures were revealed to be accurate and reliable. In light of these findings, the next step was to analyze the structural model, paying particular attention to the alleged connection between the constructs. When multiple variables or markers account for the same degree of variation, this is referred to as convergent validity. Consistency reliability (CR) and average variance extracted from the data were utilized to independently confirm the instrument's reliability, which is a further indication of convergent validity (Hair et al., 2010). (AVE). CR numbers above. 70 are generally considered adequate (Bollen, 1989; Hair et al., 2010). Adequate convergence is indicated when the AVE is 50 or higher; otherwise, more error variance exists than can be accounted by the residual variance in the measurement model. In this research, both the CR and AVE values were below the limits that were considered optimal.

4.3 Analysis of the Structural Model

Estimating route coefficients and R2 values were part of the structural model analysis. The R2 values reflected the proportion of variation in the dependent factors that could be attributed to their respective independent variables, while the path coefficients indicated the extent of the expected change in the observed variables (Vinzi, 2010). As evidenced by the R2 values and path coefficients, the data supported the study model to variable degrees.The bootstrapping method was used to conduct the significance checks for all of the routes. Researchers can evaluate the reliability of parameter predictions and give more precise numbers thanks to bootstrapping (Byrne, 2013). The results of the study show that GS (=.84, p .001), rather than SD (R2 =.70), explains SD. SD (=.81, p .001) and not GS (=.01, p >.05) determined

SE (R2 =.57), which provided evidence for H3 but not H2. In this case, SE (=.64, p .001) significantly explained CoP (R2 =.58), while SD (=.13, p >.05) did not, lending credence to H4 but not H5. SD (=.59, p .001) significantly explained the variance in EC (R2 =.57), while CoP (=.23, p >.05) did not, lending support to H7 but not H6. Finally, EC (=.51, p .001) and CoP (=.45, p .001) provided explanations for INN (R2 =.73), lending credence to H8 and H9. The data shows a complete mediation relationship between SD and SE, and also between SE and CoP. Indirectly and directly, these three factors (GS, SD, and SE) accounted 58% of the variation in CoP. Three-quarters of the variation in INN could be accounted for by these five causes.

5. CONCLUSION

This research, which is grounded in the theories of Goal-setting theory (GST) and self-determination theory (SDT), is to gain insight into the thesis-writing process from the viewpoints of student mentees. Community of practice and persistent effort are two key factors that contribute to innovation. Self-determination and creativity are fully mediated by the level of effort that is maintained. Participants' gender and educational aspirations have no impact on innovation, but men and women see work differently. While self-efficacy can have a direct impact on the quality of a professional network, the degree to which women and men benefit from it is equivalent. There is no discernible change in effort persistence after incorporating CoP. Completely mediating the relationship between autonomous decision making and professional networks is self-efficacy. The degree of independence can be influenced by establishing goals. Simply put, innovation can be fostered through the recognition of CoP and the consistent application of effort. These findings will have significant theoretical and practical consequences for graduate student and faculty advisor views on thesis advising and growth. The study's real-world benefits include validating an integrated theory model of the topic of interest and investigating the possibility for community of practice (CoP) to be used as a knowledge management network (KMN) across a variety of fields.

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