THE IMPACT OF A DIGITAL FACULTY COMMUNITY ON ONLINE FACULTY ENGAGEMENT AND KNOWLEDGE SHARING: A PILOT STUDY

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ABSTRACT

This article highlights a pilot project which involves the development of a virtual faculty community and the impact that such community has on faculty engagement and knowledge sharing attitudes. In fact, a comprehensive Digital Faculty Community (DFC) including numerous communities of practice for the University’s practitioner/scholar faculty has been developed. Later on, an interesting pilot phase was launched to examine the usage patterns of it, its impact on faculty attitudes toward communities of practice, its the impact on intention to participate and share knowledge, and perceptions of the platform usability and utility.

The framework of this larger community was specifically designed to promote continuous learning among faculty and improve overall faculty engagement through knowledge sharing.

KEYWORDS: Communities of practice, Digital community, Faculty community

INTRODUCTION

Two interrelated ongoing concerns in online academia are how to sustain faculty engagement and how to build a sense of community. This can be especially daunting for institutions with large numbers of online-only faculty. University of Phoenix School of Health Services Administration has approximately 1283 faculty members geographically dispersed throughout 41 states, with 869 teaching online only.

A need for a sense of community has been an issue for faculty for some time. In their 1993 book, Smith and Smith cited a lack of community and limited sense of belonging as a common concern for faculty members. In 1999, Grubb research specifically looked at how a sense of community or belonging impacts leaning. What he found was that not having a sense of belonging has a detrimental impact on effective instruction. In 2009 Puzziferro and Shelton also observed that online faculty need professional development and ways to share expertise with other faculty in order to foster excellence. More recently, Dolan found that major concerns of online faculty were a lack of communication and a lack of opportunities to develop new skills (Dolan, 2011). Handley et al. conclude that the cultural richness of communities of practice “generate a fluidity and heterogeneity”, that address some of these faculty related concerns (Handley et al., 2006). Such faculty-based communities of practice are centred on specific skill sets such as scholarship of teaching and learning or around a curricular content area such as Health care Economics. Based on these finding, a decision was made to develop a comprehensive Digital Faculty Community (DFC) including numerous communities of practice for the University’s practitioner/
scholar faculty. A pilot was launched to examine the usage patterns of it, its impact on faculty attitudes toward communities of practice, its the impact on intention to participate and share knowledge, and perceptions of the platform usability and utility.

**Literature Review**

Research has shown multiple factors must be considered and converge to sustain engaging communities of practice, especially among widely dispersed online faculty. Lave and Wenger-Trayner pioneered the concept of communities of practice based on learning through participation in the sharing of a core knowledge domain. Here, a community of practice is defined as a group of people who are engaged in sharing knowledge, techniques, and best practices in order to learn to do something better (Lave, Wenger-Trayner, 1991). This conceptual model of knowledge sharing has spread widely throughout many industries. The essential elements of communities of practice are grounded in social learning and social exchange models. Wenger posits engagement as a key mode of belonging to a learning community (Wenger, 2000). Among online adjunct faculty, Dolan found engagement can be promoted through communication and faculty feelings of connectivity to the host institution and as part of a team.

The sustainability of virtual communities of practice based on the reciprocal exchange of practitioner-faculty knowledge can advance the social learning model beyond engagement to ongoing professional development for content competency and a sense of connectivity to the institution. Interestingly, Selmer, Jonasson, and Laurin examined the reciprocity and predictability of knowledge sharing and knowledge location on distinct aspects of faculty engagement. Knowledge processing was the key variable, comprised of knowledge sharing and knowledge location. Here, they hypothesized the location of knowledge or resources and sharing knowledge among a group can cultivate group identity, trust and collegiality, thereby making them antecedents or predictors of engagement. Their findings demonstrated positive predicted relationships between knowledge location and sharing with faculty engagement (Selmer, Jonasson, Laurin, 2012). The interplay between communities of practice and the continuous knowledge sharing can advance the fundamental concept of engagement to ongoing professional development and the creation of a knowledge repository or knowledge management system. As an institutional strategy, such engagement outcomes could subsequently spur innovative instructional strategies among the faculty participants, improve the institution’s competitive edge with faculty and students, and thereby reduce faculty attrition.

**Method**

The University currently has an online faculty discussion forum that is not widely used by faculty. Because the overall design, framework, utility and location of virtual communities of practice can influence faculty participation and engagement within the communities, a decision was made to develop the Digital Faculty Community (DFC). It includes 27 distinct content-area communities of practice and a community of scholars. Additionally, because communication is often cited as an engagement issue, various communication venues such as blogs, profiles, and announcements were built into the Community. The framework of this larger community was specifically designed to promote continuous learning among faculty and improve overall faculty engagement through knowledge sharing.

The Digital Faculty Community is composed up of seven different areas: communities of practice, community of scholars, a welcome message, Dean of Faculty blog, faculty resource page, faculty recognition page, and faculty orientation page. On the homepage for the site is the Dean of Faculty Welcome message, the Dean of Faculty blog and announcements blog. Both of these blogs and the welcome message are used as communication mechanisms. The Dean of Faculty blog is used to discuss and clarify issues important to faculty members such as Title IX compliance or new scholarship requirements. The announcements area is used to communicate important messages to faculty members such as looming deadlines, changes in criteria, award winners, and upcoming opportunities. The Communities of Practice area is the primary mechanism used to engage faculty and propagate knowledge sharing. A Community of Scholars area is where faculty can improve their scholarship skills, locate scholarly activities and find multiple resources to help conduct scholarship. The faculty resources area is designed for faculty to post documents and other resources to a knowledge management system that then allows other faculty to search, sort, and download useful resources. The faculty recognition area is designed to showcase faculty achievements and motivate other faculty in their own careers. Finally, there is a faculty orientation area where new faculty members receive extensive information about the School through videos, PowerPoint presentations, and other documents. The Communities of Practice (CoP) consist of 27 curricular content area forums, an assessment forum where both classroom and outcome assessment are discussed, and a forum on Faculty Governance. The basic aim of the Communities of Practice is threefold. First, it is about engagement. Most online faculty surveyed by the School report a strong sense of isolation and disconnect from the program curriculum/degree. Each community of practice is a place where faculty can make professional connections to other faculty teaching in the same content area, leading to a sense of community. Second, it is about knowledge sharing. By sharing what they see, know and practice, faculty develop a richer, more holistic understanding of the program curriculum, course content they teach, and the hierarchy student learning process. This can also assist with identifying opportunities for improvement, such as instructional strategies that are not working properly or learning activities that need to be added or deleted from courses. Within each community there is a link to a reporting form to provide feedback for course improvement. Third, as a knowledge management system, faculty can share resources such as rubrics, forms, handout, videos, URL links, etc. to a central location and other faculty can download them for their own use. This page has course level search capabilities. The Community of Scholars is an area designed to engage and support faculty in scholarly activities. The area consists of a blog by the Community of Scholars leader where current trends in scholarly activities and research are discussed, a blog on Boyer’s Model to help faculty members understand how the model is implemented at the institution, a case study’s library where faculty can make professional connections to other faculty teaching in the same content area, leading to a sense of community. Second, it is about knowledge sharing. By sharing what they see, know and practice, faculty develop a richer, more holistic understanding of the program curriculum, course content they teach, and the hierarchy student learning process. This can also assist with identifying opportunities for improvement, such as instructional strategies that are not working properly or learning activities that need to be added or deleted from courses. Within each community there is a link to a reporting form to provide feedback for course improvement. Third, as a knowledge management system, faculty can share resources such as rubrics, forms, handout, videos, URL links, etc. to a central location and other faculty can download them for their own use. This page has course level search capabilities. The Community of Scholars is an area designed to engage and support faculty in scholarly activities. The area consists of a blog by the Community of Scholars leader where current trends in scholarly activities and research are discussed, a blog on Boyer’s Model to help faculty members understand how the model is implemented at the institution, a case study’s library where faculty submit case studies that can be used by other faculty members in their courses. Additional resources available in the Community of Scholars include: a faculty scholarship showcase to highlight scholarly products, a gallery of publication where versions of all published scholarship...
by faculty members are housed, a research resources page with multiple links to useful sites, a work-related scholarship blog that helps faculty identify scholarly activities that they are doing in their professional work and how to document that scholarship, and a writing for publication blog. In November 2016, the pilot of this community was launched. A representative sample of the faculty stratified by expertise was invited to participate in the pilot. A pre-survey instrument was designed to evaluate faculty members’ attitudes toward community of practice, subjective or professional norms toward participation in community of practice, perceived behavior control to participation, intent to participation and share knowledge, perception of ease of usage of an online community, and to identify any pre-existing issues with online communities. A 5-point Likert scale was used to examine variables related to Ajzen’s Theory of Planned Behaviour and perception of the platform utility. Main variables included attitude toward Communities of Practice, subjective or professional norm toward participation, perceived behavior control toward participation and intention to participation. A total value was captured for each variable, resulting in an attitude total score, subjective or professional norm total score, perceived behaviour control total score, intention total score, and Digital Community website utility total score. Attitude total was captured using 6 survey items, subjective or professional norm total with 3 survey items, perceived behaviour control total with 3 survey items, intention to participate total with 3 survey items and the Digital Community platform utility total with 3 survey items. A similar post survey was administered to examine attitudinal changes resulting from participation in the pilot. Usage data was also collected that included number of posts, number of response posts, and number page views (posts, blogs, announcements, uploads/downloads, etc.).

Results

Pre-pilot Survey

Over 80% of the faculty sample accepted the invitation to participate in the pilot, resulting in 149 faculty participants. One hundred fifteen faculty members attempted the pre-pilot survey (77.2%) which resulted in 106 completed without missing responses (71.14%). Key demographics of the 115 participants included: majority online only faculty (81%), majority held Master’s/MBA degree (71.3%) and modal length of service to the university was 6-10 years (43%). Of the completed surveys, the majority of faculty (69.8%) anticipated logging-in 1-2 times weekly. All survey items related to attitude toward Communities of Practice were collectively favorable, with > 85% agreeing either Agree or Strongly Agree. The most favorable survey item assessed if the participants believed the Digital Community was a professional development opportunity. Approximately 95% either Agree or Strongly Agree participation could lead to ongoing professional development. The least favorable survey item was related to subjective or professional norms, which assessed if the participants believed the faculty as a whole would participate in the Digital Community. Here, approximately 54% either Agree or Strongly Agree with the survey item. While significant correlations existed among all variables at the 0.01 level, attitude toward Communities of Practice had the highest correlation to intention to participate at $r = 0.86$. Multiple regression analysis was explored to examine predictability of attitude towards Communities of Practice, subjective or professional norm and perceived behavior control on participation, and utility of the Digital Community platform on intention to participate. This model explained 82% of the variance in intention to participate, with attitude toward Communities of Practice as the greatest predictor ($β = .405$, sig =0.00). Both subjective and professional norm ($β = .363$, sig =0.00) and perceived behaviour control ($β = .274$, sig =0.00) on participation were significant contributors to predicting participation intention. Utility of the Digital Community platform had no significant contribution ($β = -.090$, sig =0.166) to predicting participation intention.

Post-Pilot Survey

The post survey was administered at the end the 30-day pilot. Survey items were slightly revised to reflect past tense to participation in the pilot. The survey was attempted by 75 (51%) participants, which resulted in 69 (46.3%) completed without missing responses to survey items related to the main variables. Key demographics were similarly consistent with the pre-pilot survey participants; majority online faculty, master’s/MBA degree and 6-10 years length of service with the university. Among the participants, 50.7% self-reported actual participation of 1-2 times per week as compared to the pre-survey estimation of 69.8% participation 1-2 times per week. Ongoing participation after the pilot was similar, with 59.4% participants anticipating 1-2 times per week participation after the pilot ends. All survey items related to attitude toward Communities of Practice were collectively favorable, with > 78% either Agree or Strongly Agree as compared to > 85% favorable in the pre-survey. Even within the least favorable in the attitude section (78.26% Agree or Strongly Agree), participants believed the discussions were thought provoking and interesting. For each post attitude survey item, the percentages of Agree or Strongly Agree were less than the pre-attitudinal survey responses. Similarly, all main variables were significantly correlated at .01 level, with attitude toward Communities of Practice having the highest correlation to intention to participate after the pilot (r=.804). Again, regression analysis was conducted to examine the predictability of the main variables; attitude toward Communities of Practice, subjective/professional norm, perceived behaviour control to participate and utility of the Digital Community on participation intention. Results indicated this model explained 73.5% of the variance in intention to participate. Expectedly, attitude toward Communities of Practice was the greatest predictor ($β = .473$, sig =0.00) and utility of the platform having no significant contribution ($β = .121$, sig =0.263) to predicting participation intention. Lastly, to evaluate any change in attitude toward Communities of Practice, the mean total pre-post attitude scores were compared. There was no statistical significant difference in attitude between pre (r=.106; mean =26.094) and post (r=.69; mean =24.986) pilot groups (r = .113, equal variances assumed).

Usage Data

The usage data for the current online faculty forum was captured for the 30 days prior to the beginning of this project. The usage data for the 30-day pilot was also collected. In the 30-days snapshot for the current system there were 94 logins, 10 original posts, and 32 reply posts. During the 30-day pilot, there were 644 logins, 146 original posts, 335 reply posts, and 9746 page views.
Recommendations

Because there was such a high rate of correlation and predictability between attitudes towards the Communities of Practice and the likelihood of engagement, it is recommended that a strategic promotional campaign should be maintained to raise awareness of the Digital Community and of the benefits of participating in sharing knowledge in the content areas. It is also recommended that faculty feedback system used in the pilot be permanently incorporated into the site for continuous improvement. Based on the survey analysis, a sense of control is a major predictive factor in engagement. Finally, it is recommended that based on faculty input, the Digital Community be expanded to include desired features such as geographic communities of practice and the addition of private chat capabilities.

Discussion & Recommendations

The Digital Faculty Community was developed to increase faculty engagement, increase knowledge sharing, and to give a framework for professional communities to develop. In this study, two primary data sources were used. The first was usage data for the Digital Community compared to the existing faculty discussion forum as a measure of engagement. The second was a pre-and post-pilot survey, which were measures of attitudes and expectations.

When the Digital Faculty Community was being developed, the expectation was that there would be an increase in utilization by faculty members because of the way it was designed. The usage numbers seen in the Digital Community were significantly higher than those expected with increases ranging from 685% to 1460%. This number is even more notable in that the current online faculty forum is available to approximately 1283 faculty members and the pilot was only available to 149 faculty members. However, it would not be wise to extrapolate these numbers based on opening the Digital Community to all faculty members. By nature of the selection process for the pilot, many of the faculty participating in the pilot are most motivated and engaged than the typical faculty members. We do anticipate that the usage numbers will go up substantially once the site is open to all but have no indication of how much higher they will go. One conclusion that can be drawn from these data is that, at a minimum, faculty were ready for a new discussion platform. The high rate of usage of the Digital Community strongly suggest that the design of the site is successful in terms of engagement.

When the pre-and post-pilot survey data are reviewed and analysed, there are a few aspects that are noteworthy. First, every single item on the pre-and post-survey were positive with 87.2% Agree or Strongly Agree responses to the least favourable attribute. The pre-pilot data suggest that the faculty in the pilot were anticipating a positive experience that they felt would be beneficial to them personally and professionally. The fact that the post pilot survey data are still extremely positive indicates that the participants in the pilot are generally happy with the experience. One characteristic of the data worth highlighting is that for each post attitudinal survey item, the percentage of Agree or Strongly Agree were less than the pre-survey responses. There are no data in the surveys to definitively identify the cause. However, there is sufficient anecdotal data in the comments on the surveys to indicate that faculty members were unhappy about some of the technical issues with the new site and with a lack of large quantities of discussion post in some content areas. In contrast to that, several faculty members commented that the discussions were “thought-provoking” and “interesting”.

Table: Comparison of Usage Numbers

<table>
<thead>
<tr>
<th></th>
<th>Current Faculty Forum</th>
<th>Digital Faculty Community</th>
<th>% Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Logins</td>
<td>94</td>
<td>644</td>
<td>+685%</td>
</tr>
<tr>
<td>Original Posts</td>
<td>10</td>
<td>146</td>
<td>+1460%</td>
</tr>
<tr>
<td>Reply Posts</td>
<td>32</td>
<td>335</td>
<td>+1047%</td>
</tr>
<tr>
<td>Page Views</td>
<td>Data unavailable</td>
<td>9746</td>
<td></td>
</tr>
</tbody>
</table>

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