A Study to Investigate the Relationships of Usefulness, Enjoyment, Sense of Community, and Knowledge Management in University Community of Practice (CoP)

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Abstract. The purpose of this study is to examine the effects of usefulness, enjoyment, and sense of community on knowledge management in Community of Practice (CoP) among university students. Questionnaires were conducted to ninety two university students to examine their perceived usefulness, perceived enjoyment, sense of community, and knowledge management activities while they are engaged in learning groups in university. Results show that sense of community has positive and significant impact on knowledge management while usefulness and enjoyment do not have such a relationship.

Keywords: Community of Practice (CoP), University, Knowledge Management, Usefulness, Enjoyment, Sense of Community

1 Introduction

Researchers have studied better ways to access more knowledge to improve organizational performance. Community of Practice (CoP) is one of those strategies, as it is groups of people sharing ideas and insights, helping each other solve problems, and developing a common practice [1]. CoP can not only increase the productivity within an organization, but also allow for active knowledge exchange through sharing tacit knowledge and know-how. This study aims to investigate the possible relationships between usefulness, enjoyment, sense of community, and knowledge management among university communities of practice.

2 Literature Review

Learning involves a deepening process of participation in a group of people who share a common concern and interest in a topic to fulfill both individual and group goals [2]. Lave and Wenger [3] first used the term CoP to describe learning through practice and participation. Eckert and Wenger [4] described a CoP as an aggregate of people who come together around some enterprise to develop and share ways of doing
things, beliefs, and values. Knowledge is shared, managed, and created in CoP activities. Knowledge management is an approach to experience, knowledge, and expertise which opens new possibilities, enables superior performance, encourages innovations, and increases the value for the user [5]. As a practice or discipline which involves interaction of people, processes, and technology, it presents a function of management which strives to improvement of results of operation [6].

Usefulness, enjoyment, and sense of community are three factors that may affect knowledge management. Usefulness is the perception of the users whether the community is useful or not determines the success of the community. Students bring their own experiences and prejudices in evaluating the usefulness of their CoP, and their perceptions are affected by what has happened in the past [7]. Perceived usefulness is a major determinant and predictor of intentions to use computers in the workplace [8]. Perceived enjoyment is whether the users perceive the community as enjoyable or not. It has consistent impact on the two dimensions of usage, namely frequency of use and extent of daily usage [9]. Also, Moon and Kim state that perceived enjoyment has positive effects on users’ attitudes toward using the Internet [10]. Sarason [11] defined sense of community as "the perception of similarity to others, an acknowledged interdependence with others, a willingness to maintain this interdependence by giving to or doing for others what one expects from them, and the feeling that one is part of a larger dependable and stable structure." McMillan and Chavis [12] classified the elements of sense of community: membership, influence, meeting needs, and a shared emotional connection.

3 Methods

To investigate the effects of usefulness, enjoyment, sense of community on knowledge management, researchers gathered data about the perception of university study group participants. An extensive structured survey asked participants to answer questions about their usefulness, enjoyment, sense of community, and knowledge management activities. A questionnaire was administered to 93 university students of which 92 usable responses were used for further analyses after accounting for missing information and an incomplete response. Participants were engaged in study groups in B University & M College in Korea.

For the study, both usefulness and enjoyment were measured with four items each developed by Bae et al. [13]. Coefficient alpha scores of usefulness and enjoyment were .86 and .89. Sense of community consists of four subordinate variables: meeting needs, membership, influence, and shared emotional connection. This study revised Sense of Community Index version 2 (SCI-2), a 12 item questionnaire of three items for each subordinate variable created Clavis, Lee, and Acosta [14] with a coefficient alpha score of .84. Knowledge management was measured with 17 items derived from Lee and Jung [15], and Ruggles [16] with a coefficient alpha score of .92.

In order to carry out this study, correlation and regression analyses were conducted using the SPSS software. Correlation analysis examined how each variable is related to one another. MANOVA was performed to measure the impact of variables on knowledge management.
4 Results

Means, standard deviations, and correlations among all variables are presented in Table 1. The mean score of sense of community ranks the highest, while that of usefulness is the lowest. All the variables are significantly and positively correlated with each other. As presented, usefulness, enjoyment, and sense of community have significant and positive relationships with knowledge management.

Table 1. Correlation of Usefulness, Enjoyment, Sense of Community, and Knowledge Management (n=92, **p < .01)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>s.d.</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Usefulness</td>
<td>4.21</td>
<td>.57</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Enjoyment</td>
<td>4.23</td>
<td>.64</td>
<td>.582**</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Sense of community</td>
<td>4.47</td>
<td>.38</td>
<td>.516**</td>
<td>.609**</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>4. Knowledge management</td>
<td>3.99</td>
<td>.50</td>
<td>.497**</td>
<td>.497**</td>
<td>.677**</td>
<td>-</td>
</tr>
</tbody>
</table>

Table 2 reports the results of multivariate regression analyses that were carried out to investigate the relationship between usefulness, enjoyment, sense of community, and knowledge management of the university students. In order to check for multi-collinearity among the predictors, variance inflation factors (VIF) were calculated. As VIF values of all the variables are less than 10, there is no sign of multi-collinearity between independent variables. Significant results were found for sense of community (β=.548), but not for usefulness (β=.160) and enjoyment (β=.045). By using the model, sense of community explains approximately 48.9% ($R^2=.489$) of knowledge management.

Table 2. Impact of Usefulness, Enjoyment, and Sense of Community on Knowledge Management (n=92, ***p < .001)

<table>
<thead>
<tr>
<th>Dependent variable</th>
<th>Independent variables</th>
<th>Non-standardized coefficients</th>
<th>B</th>
<th>Standard error</th>
<th>T</th>
<th>VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge management</td>
<td>Usefulness</td>
<td>.160</td>
<td>.086</td>
<td>.181</td>
<td>1.871</td>
<td>1.614</td>
</tr>
<tr>
<td></td>
<td>Enjoyment</td>
<td>.045</td>
<td>.083</td>
<td>.057</td>
<td>.545</td>
<td>1.884</td>
</tr>
<tr>
<td></td>
<td>Sense of community</td>
<td>.733</td>
<td>.133</td>
<td>.548</td>
<td>5.527***</td>
<td>1.697</td>
</tr>
</tbody>
</table>

R=.700, $R^2$ (adj.$R^2$)=.489(.472), F=28.126

5 Conclusion

The purpose of this study is to examine the effects of usefulness, enjoyment, and sense of community on knowledge management to facilitate CoP for university students. The key contribution of this study is that it applied the concept of CoP in the university context, and investigated the relationships of usefulness, enjoyment, the sense of community, and knowledge management. It is meaningful to investigate the
current status of CoP in university environment to strengthen university competitiveness as well as individual competencies.

Results of this study suggest that sense of community has a significant effect on knowledge management activities. However, usefulness and enjoyment showed insignificant impact on knowledge management activities. These results are in parallel with the precedent study [17] that application of learning community in university enhances learning performance, which supports the importance of sense of community among university students. Compared to business environment, sense of community rather than usefulness and enjoyment has significant impact, which implies that the learning tendency of university students is relation-oriented and learning-oriented. Therefore, this study suggests the further study that strengthens the sense of community of university students in order to support systematic CoP activities in university environment.

References

1. McDermott, R.: Nurturing Three Dimensional Communities of Practice: How to get the most out of human networks, Knowledge Management Review. Fall (1999)