Role of Organizational Context on Digital Library’s Success Factor

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ABSTRACT
Organizational context was examined on postgraduate students on their perception on ease of use and the impact in relation to digital library. Moreover success factors of the digital library’s usage were also explored in this study. Upon examining the result, the study indicated that only system relevance was found to have direct impact on the perceive use of digital library. On the other hand, system accessibility and system visibility just had a little impact on the perceived usefulness of digital library.

INTRODUCTION
The proliferations of information resources available through new distribution networks are likely to promote fundamental changes on both institutions and personal habit for other forms of culture and scholarly work especially in Malaysia. Digital library is a computer based system for storing, acquiring, organizing, searching, and distributing digital materials for end user access. It requires less space and the data can be made available through communication networks to anyone anywhere while facilitating searches with speed (Sharma & Vishwanathan, 2001). As organizations rely more on digital technology to produce, process, store, communicate, and use information in their activities, the quantity of records being created in electronically form will increase exponentially (Lim et al., 2003). Further, digital libraries also can solve some problems facing print-based academic libraries (Dugdale, 1999). Organizations have adopted the use of Internet technology and in particular the adoption of digital libraries in exchange of information and resources, co-operative projects to avoid duplication of efforts and bridging access to information to distant and disadvantaged communities.

Given the above background, digital libraries would facilitate researches in their research works. However based on recent studies, people still prefer to read from paper despite the progress in the technology (Monopoli & Nicholas, 2001; Woodward, 1997; Borghuis et al., 1996; Dijkstra, 1998). Moreover a survey by the Visual Arts Data Service (Groud & Rymer, 1998) discovered that the two most highly reported factors inhibiting the use of digital resources were lack of time and quantity of records being created in electronically form will increase exponentially (Lim et al., 2003).

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THEORETICAL FRAMEWORK

Research model by Hong et al. (2002) will be adapted in studying the understanding the user acceptance of digital libraries. The impact of organizational context will be examined. Further based on the literature reviews, the theoretical framework is depicted in Figure 1.

Thus, several hypotheses are generated:

H₃: Perceived ease of use has a direct influence on perceived usefulness of the digital library.
H₄: System relevance to post-graduates’ needs will have a positive influence on the perceived ease of using the digital library.
H₅: System relevance to post-graduates’ needs will have a positive influence on perceived usefulness of the digital library.
H₆: System accessibility to post-graduates’ needs will have a positive influence on perceived ease of use of the digital library.
H₇: System accessibility to post-graduates’ needs will have a positive influence on the perceived usefulness of the digital library.
H₈: System visibility to post-graduates’ needs will have a positive influence on the perceived usefulness of the digital library

RESEARCH METHODOLOGY

Convenience sampling method was adopted in conducting this study. The unit of analysis is the individual post-graduate students in Universiti Sains Malaysia in Penang, and Universiti Multimedia in Malacca. Three-hundred questionnaires were distributed to post-graduate students in various places through out both universities. Only 140 useable questionnaires were returned. The questionnaire was divided into sections: Section A: Perception on the ease of using digital library (Hong et al., 2002); Section B: Perception on the usefulness of digital library (Hong et al., 2002); Section C: Organizational context in relation to digital library (Davies, 1997); and Section D: Demographic information.

RESULTS

A total of 300 questionnaires were distributed, and 164 responded to the survey. Majority of the respondents in the survey were male that comprised of 55% as compared to female of 45%. Based on ethnic group of the country, the respondents were divided as Malays, 15%; Chinese, 73.6%; Indians, 5.7%; and others, 5.7%.

Based on the students major, they indicated that business major, 47.1%. Meanwhile the balance was science and engineering, 40%. They also indicated their mode of program that 54.3% were part-time students as compared to 45.7% as full-time. Further, respondents were also asked on their exposure on the Internet, majority of them stated that they were exposed for more than 5 years as 53.6%.

Moreover, summary of the above demographic is depicted in Table 1.

Table 1: Demographic of Respondents

<table>
<thead>
<tr>
<th>Item</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>77</td>
<td>55.0</td>
</tr>
<tr>
<td>Female</td>
<td>63</td>
<td>45.0</td>
</tr>
<tr>
<td>Ethnic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Malay</td>
<td>21</td>
<td>15.0</td>
</tr>
<tr>
<td>Chinese</td>
<td>103</td>
<td>73.6</td>
</tr>
<tr>
<td>Indian</td>
<td>8</td>
<td>5.7</td>
</tr>
<tr>
<td>Others</td>
<td>8</td>
<td>5.7</td>
</tr>
<tr>
<td>Academic Program</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Business</td>
<td>66</td>
<td>47.1</td>
</tr>
<tr>
<td>Science &amp; Engineering</td>
<td>56</td>
<td>40.0</td>
</tr>
<tr>
<td>Education</td>
<td>2</td>
<td>1.4</td>
</tr>
<tr>
<td>Social Sciences</td>
<td>6</td>
<td>4.3</td>
</tr>
<tr>
<td>Others</td>
<td>10</td>
<td>7.1</td>
</tr>
<tr>
<td>Study Mode</td>
<td></td>
<td></td>
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<tr>
<td>Full-time</td>
<td>63</td>
<td>45.0</td>
</tr>
<tr>
<td>Part-time</td>
<td>77</td>
<td>55.0</td>
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<tr>
<td>Internet Usage</td>
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<td></td>
</tr>
<tr>
<td>Less than 1 year</td>
<td>2</td>
<td>1.4</td>
</tr>
<tr>
<td>1 – 2 years</td>
<td>4</td>
<td>2.9</td>
</tr>
<tr>
<td>2 – 3 years</td>
<td>10</td>
<td>7.1</td>
</tr>
<tr>
<td>3 – 4 years</td>
<td>22</td>
<td>15.7</td>
</tr>
<tr>
<td>4 – 5 years</td>
<td>27</td>
<td>19.3</td>
</tr>
<tr>
<td>More than 5 years</td>
<td>75</td>
<td>53.6</td>
</tr>
</tbody>
</table>

Table 2: Descriptive Statistics and Reliability

<table>
<thead>
<tr>
<th>Item</th>
<th>Mean</th>
<th>S.D.</th>
<th>Cronbach’s Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>System relevance</td>
<td>5.07</td>
<td>1.13</td>
<td>.90</td>
</tr>
<tr>
<td>System accessibility</td>
<td>4.85</td>
<td>1.24</td>
<td>.72</td>
</tr>
<tr>
<td>System visibility</td>
<td>3.79</td>
<td>1.39</td>
<td>.70</td>
</tr>
<tr>
<td>Perceived ease of use</td>
<td>5.22</td>
<td>0.96</td>
<td>.88</td>
</tr>
<tr>
<td>Perceived usefulness</td>
<td>5.57</td>
<td>0.89</td>
<td>.91</td>
</tr>
</tbody>
</table>

Table 3: Multiple regression analyses

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Adjusted R²</th>
<th>Independent Variable</th>
<th>Beta</th>
<th>T Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived usefulness</td>
<td>.28</td>
<td>H₃ Perceived ease of use</td>
<td>.54**</td>
<td>7.45  .00</td>
</tr>
<tr>
<td></td>
<td>.13</td>
<td>H₄ System relevance</td>
<td>.44**</td>
<td>2.33  .00</td>
</tr>
<tr>
<td></td>
<td></td>
<td>H₅ System accessibility</td>
<td>-.20</td>
<td>1.04  .05</td>
</tr>
<tr>
<td></td>
<td></td>
<td>H₆ System visibility</td>
<td>.14</td>
<td>3.34  .00</td>
</tr>
<tr>
<td></td>
<td>.13</td>
<td>H₇ System relevance</td>
<td>-.57**</td>
<td>3.71  .00</td>
</tr>
<tr>
<td></td>
<td></td>
<td>H₈ System accessibility</td>
<td>.00</td>
<td>0.02  .99</td>
</tr>
</tbody>
</table>

The means and standard deviations of the variables in the theoretical framework are summarized in Table 2. The Cronbach’s alpha for the variables was the above recommended level of confidence at .70. Further, regression analyses were conducted in testing the hypotheses. The results of regression analysis were depicted in Table 3.

Between system relevance and system accessibility in the organizational context, the relevance is good descriptor of perceived ease of use (Beta=.37, p<.01). This indicates that relevance is important in organizational context. An adjusted R² value of .13 explained that 13% of the dependent variable (i.e. perceived ease of use). Further, perceived ease of use has a positive influence on perceived usefulness (Beta=.54, p<.01). Thus the independent variable (i.e. perceived ease of use) explained that 28% of the dependent variable (i.e. perceived usefulness).

Meanwhile, the other three variables (i.e. system relevance, system accessibility, and system visibility) in organizational context, only system relevance was the good descriptor of perceived usefulness (Beta=.44, p<.01). This result indicated that system relevance is important in determining perceived usefulness. This can be summarized that independent variables (i.e. system relevance, system accessibility, and system visibility) explained that 13% of the dependent variable (i.e. perceived usefulness).
DISCUSSION AND CONCLUSION

This paper tries to investigate the impact of organizational context on perceived ease of use and perceived usefulness of the digital library. Between the two independent variables under organizational context, only system relevance was found to have a direct impact on the perceived ease of use of digital library. The remaining independent variable (i.e., system accessibility) had little impact on the perceived ease of use of digital library.

System relevance was found to have an impact on the perceived ease of use of the digital library. Users’ search effort is more likely to be productive and effective if there is relevant information in the digital library. Thus students are more likely to find digital library easy to use if the resources in the digital library relate well to their study needs. Moreover, this would facilitate the research work of post-graduate students who wish to have an access to electronic journals and books. This finding is also similar to the study of Hong et al. (2002).

On the other hand, system accessibility had little impact on the perceived ease of use of the digital library according to the present study. Although there may be system accessibility, there was no ease of use if the contents of the digital library did not relate to the students’ information needs. This finding contradicted the study conducted by Hong et al. (2002).

Another interesting discovery in this study is that among the three independent variables under organizational context, only system relevance has a direct impact on the perceived usefulness of digital library. The remaining independent variables (i.e., system accessibility and system visibility) had little impact on the perceived usefulness of digital library. On the other hand, system relevance was found to have an impact on the perceived usefulness of digital library. This means that students are more likely to find digital library useful if the resources in the digital library relate well to their study needs. Findings of Eason et al. (2000) suggested that the amount of relevant information provided was the most important factor in whether a user will use the service or not. This finding is also similar to the study of Hong et al. (2002).

System relevance provides relevant contents to suit the students’ information needs. This paper revealed that there should be more focus on end-user requirements to find out their expectations and requirements to increase the relevance of library content. This would help post-graduate students in their research work and thus increase the perceived usefulness of the digital library.

However, system accessibility and system visibility had little impact on the perceived usefulness of digital library according to the present study. Although system accessibility and system visibility could be present, there was no usefulness in the contents of the digital library did not relate to the students’ information needs. This finding contradicted with the study of Hong et al. (2002).

Finally, perceived ease of used and perceived usefulness indicated a positive correlation between them. This means that most post-graduate students who find it easy to use digital library are also likely to find digital library to be useful. Post-graduate students want to become skilful at using the digital library with the shortest time frame and probably do not want to go through the hassle of reading up manuals. This result is similar to the study of Hong et al. (2002).

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