COLLECTION DEVELOPMENT IN UNIVERSITY LIBRARIES IN THE DIGITAL ENVIRONMENT

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ABSTRACT

Digital environment, a demanding concept, goes beyond a policy of acquiring materials such as policies on housing, preservation, storage, weeding, and discards of stock. Electronic resource, any product that delivers collection of data be it in text, numerical, graphical, or time based, as commercially available resource and a kind of documents in digital formats, that are made available to library users through a computer based information retrieval system. It has several constraints and reasons. In this study attempt has been made to know whether “ICT affects Budgeting” and “Reason for using digital collection”. Out of 520 questionnaires distributed among the LIS professionals working in University Libraries 389 responded and the response rate works out to 74.80%. This study further analysis sufficiency of the sample and reliability of the data thus collected. These 389 LIS professionals working University libraries of Tamil Nadu expressed their views on the above two concepts comprising of 17 variables. The study identifies “ICT affects collection development”; “High salary for trained staff”; “Lack of balanced collection”; “Affects regular budgeting”; and “ICT takes major share” were the “Primary factors”. It also identifies “Operational cost exceeds”; “Annual Maintenance Cost” and “More budget for digital collection” were the Latent factors in the impact of ICT in budgeting. Similarly “Motivate”; “Capability”; “Easy to use”; “Finding information”; “Improve” and “Flexibility” were considered as “Predominant factors” towards reason for using digital collection where as “Self confidence”; “Participate” and “Cognitively” were considered as “Presumed factors”.

Key words: Collection development, University libraries, University Library Collection, Digital Environment, Budget.
1. INTRODUCTION

Collection management, a more demanding concept in university libraries, which goes beyond a policy of acquiring materials, to policies on housing, preservation, storage, weeding, and discard of stock. It emphasized on systematic management of library’s existing collection (Seetharama, 1997). The changing phase of collection management, emphasized the need for cooperative collection development program, that are apt to the current library circumstances specifically electronic environment (Wajiti A Alvi, 1997). Collection development is a universal, dynamic and continuous activity. It involves the users, the library staff and subject experts (Naina Pandita, 2007). Collection management is implied as one of the managerial function in the administration of the library management. Despite a wide variety of institutional environments and management styles, Collection development would be more fruitful in fulfilling their responsibility by taking the support from their central administration (Robert Kenseler, 1996). In to-day’s digital environment, the collection development has different perspectives such as making difficult collection choices with decreasing funds, competing needs for space, and a continually developing e-market. Digital content is no longer new in collection management, but some of the ways the content is chosen have changed; collection-building activities now include various models of patron-driven demand acquisitions.

2. DIGITAL ENVIRONMENT

Libraries of all sizes and types are embracing digital collections, although most libraries will continue to offer both print and digital collections for many years to come. New purchases and purchase of journals, magazines, and abstracting and indexing services are heavily weighted towards digital, while digital books (e-books) are only beginning to become a presence in library collections.

Libraries prefer digital collections for many reasons, including but not limited to the following: digital journals can be linked from and to indexing and abstracting databases; access can be from the user’s home, office, or dormitory whether or not the physical library is open; the library can get usage statistics that are not available for print collections; and digital collections save space and are relatively easy to maintain. When total processing and space costs are taken into account, electronic collections may also result in some overall reductions in library costs.

3. NEED FOR THE STUDY

Collection Development, a planned purchase of materials in various formats to match the instructional and research needs of the campus, within the current fiscal environment and resource sharing opportunities. The developments in information environments implies that new collection development policies need to be revised from time to time to ensure access to a wider range of e-documents and e-databases. These policies should give more emphasis on licensing agreements, copyrights, intellectual access, mode of payment, subscription costs and archiving. Access to electronic information resources is on the rise in all types of libraries. Great importance is given on how to balance new electronic acquisitions with traditional print formats. The book titles such as “Building and Managing E-Book Collections”, “Collection Development in the Digital Age”, “Managing Electronic Resources”, “Electronic and
Collection Development in University Libraries in the Digital Environment

"Resources Management in the Academic Library", etc., indicates the growth of e-resources in libraries especially in academic libraries.

Today no library has sufficient funds to purchase everything it needs; particularly slim budgets mean that librarians must focus on the main principle of basing collection decisions on patron needs. Librarians, knowing they must justify their spending and, in some cases, even the existence of their libraries, have become more judicious about how funds are spent, looking closely at what is being requested and what is used. Majority of the libraries were spending enormous amount towards building the e-collection. Hence for this study two concepts “ICT affects Budgeting” and “Reason for using digital collection” were identified and analysed based on the opinion of respondents.

4. REVIEW OF RELATED LITERATURE

It has been well documented that digital information seeking and use varies by discipline, profession, task, situation, and context (e.g., Bates, 1994; Bates et al., 1995; Borgman, 2006; Bystrom, 1999; Case, 2002; Cool, 2001; Dervin, 1997; Kling & McKim, 2000; Hansen & Järvelin, 2005; Rice & Tarin, 1993; Savolainen, 2006a, 2006b; Solomon, 1997, 2002; Talija & Maula, 2003; Tenopir et al, 2005; Tenopir et al, in press; Vakkari, 2006; Vakkari & Talija, 2005; Zhang, 2001). Using various research methods (Wang, 1999), the majority of the studies have focused on specific user groups or individual I ICTs, such as e-journals, digital library, and online library catalog, etc.

Taking various approaches, such as cognitive, sense-making, behavioural, etc., different models have been proposed at both the macro and micro levels (e.g., Belkin, 1980; Ellis, Cox, & Hall, 1993; Dervin, 2005; Ingwersen, 2001; Ingwersen & Järvelin, 2005; Kuhlthau, 1993; Marchionini, 1995; Saracevic, 1996; Wilson, 1981, 1999).

Philip Hunter & Micheal Day (2005) attempted to identify some of the main issues of collection development that needs to be considered when institutional repositories and aggregator services are established. Two practical suggestions are that collection development policies should clearly state information on access, intellectual property rights, intended scope of the quality of collection and that these repositories should develop secondary metadata generation tools that facilitate the production of consistent metadata.

Sandler et al. (2012) state, “As scholars increasingly rely upon electronic access to needed resources, these libraries like libraries everywhere are seeking ways to preserve access to the printed volume but at the same time redirecting resources dollars, staff, and space to the management of increasingly digital collections.”

5. OBJECTIVES

The objectives of the study are

- To identify the impact of ICT on digital collection
- To identify the reason for using the digital collection
- To identify the reliability of the data
- To identify the adequacy of the sample for data collection

6. HYPOTHESES

The following hypotheses were formulated based on the objectives

- The sample thus collected were adequate for the study
- There exist reliability of the data
- There exist significant impact of ICT on digital collection
• There exist numerous of reasons for using the digital collection over traditional collection
• There exist significant difference in using digital collection

7. LIMITATIONS
Some of the limitations are:
• The libraries that exist 52 Universities in Tamil Nadu alone taken up for the study.
• The constitutional institutions were not taken up for the study.
• The LIS Professionals working in universities alone taken up for the study.
• Each institution, only 10 questionnaires alone distributed.

8. METHODOLOGY
The questionnaire was administrated among the LIS professionals working in 22 State Universities, 28 Deemed Universities and 2 Central Universities in Tamil Nadu. A total of 520 questionnaires were distributed. Out of which 389 were responded and response rate is 74.80%.

Table 1 Distribution of Questionnaire

<table>
<thead>
<tr>
<th>S.No</th>
<th>Type of University</th>
<th>No. of Universities</th>
<th>Questionnaire distributed</th>
<th>Responses received</th>
<th>Percentage</th>
<th>Cumulative Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>State University</td>
<td>22</td>
<td>220</td>
<td>164</td>
<td>42.2</td>
<td>42.2</td>
</tr>
<tr>
<td>2</td>
<td>Deemed University</td>
<td>28</td>
<td>280</td>
<td>209</td>
<td>53.7</td>
<td>95.9</td>
</tr>
<tr>
<td>3</td>
<td>Central university</td>
<td>2</td>
<td>20</td>
<td>16</td>
<td>4.1</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>52</td>
<td>520</td>
<td>389</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

9. SAMPLE SUFFICIENCY
Sample determination, simple question is a never-ending quandary for researchers. A larger sample can yield more accurate results but excessive responses can be pricey. Consequential research requires an understanding of the statistics that drive sample size decisions.

Before one can calculate a sample size, it is essential to determine a few things about the target population and the sample thus need:

**Population Size** How many total people fit for the research problem demographic? For instance, if one want to know about mothers living in a country, the population size would be the total number of mothers living in that country. Normally the researcher was unsure about the number. It is common for the population to be unknown or approximated.

**Margin of Error (Confidence Interval)** No sample will be perfect, so one has need to decide how much error to allow. The confidence interval determines how much higher or lower than the population mean one willing to let their sample mean fall. One can have a confidence interval. For example it will look something like “68% of voters said yes to Proposition Z, with a margin of error of +/- 5%.”

**Confidence Level** How confident do you want to be that the actual mean falls within your confidence interval? The most common confidence intervals are 90% confident, 95% confident and 99% confident.

**Standard of Deviation** How much variance one can expect in their responses? Since one haven’t actually administered the survey yet, the safe decision is to use .5 this is the most forgiving number and ensures that the sample will be large enough for the study.
One can calculate needed sample size for the research.

The confidence level corresponds to a Z-score. This is a constant value needed for this equation. Here are the z-scores for the most common confidence levels:

- 90% – Z Score = 1.645
- 95% – Z Score = 1.96
- 99% – Z Score = 2.576

If one choose a different confidence level, use this Z-score table* that will be available in any statistics book to find the score.

Next, plug in the Z-score, Standard of Deviation, and confidence interval into this equation:

\[
\text{Necessary Sample Size} = \frac{(Z\text{-score})^2 \times \text{StdDev} \times (1-\text{StdDev})}{(\text{margin of error})^2}
\]

Normally one chose a 95% confidence level, 0.5 standard deviation, and a margin of error (confidence interval) of +/- 5%.

\[
\frac{(1.96)^2 \times .5(.5)}{(.05)^2}
\]

\[
3.8416 \times .25 / .0025
\]

\[
384.16
\]

385 respondents are needed

Therefore for this study 389 responses were considered

10. DEMOGRAPHIC DETAILS
The demographic details of the respondents of campus wise were shown in Table 2.

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Description</th>
<th>Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of University</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>State University</td>
<td>164</td>
</tr>
<tr>
<td>2</td>
<td>Deemed University</td>
<td>209</td>
</tr>
<tr>
<td>3</td>
<td>Central University</td>
<td>16</td>
</tr>
<tr>
<td>Domain</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Arts and Science</td>
<td>139</td>
</tr>
<tr>
<td>2</td>
<td>Engineering</td>
<td>74</td>
</tr>
<tr>
<td>3</td>
<td>Medical</td>
<td>45</td>
</tr>
<tr>
<td>4</td>
<td>Multi</td>
<td>75</td>
</tr>
<tr>
<td>5</td>
<td>Others</td>
<td>56</td>
</tr>
<tr>
<td>Status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Superior</td>
<td>37</td>
</tr>
<tr>
<td>2</td>
<td>Subordinate</td>
<td>352</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Male</td>
<td>254</td>
</tr>
<tr>
<td>2</td>
<td>Female</td>
<td>135</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Below 30 years</td>
<td>29</td>
</tr>
<tr>
<td>2</td>
<td>Between 31 and 40 years</td>
<td>46</td>
</tr>
<tr>
<td>3</td>
<td>Between 41 and 50 years</td>
<td>300</td>
</tr>
<tr>
<td>4</td>
<td>Above 50 years</td>
<td>14</td>
</tr>
<tr>
<td>Designation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Librarian</td>
<td>38</td>
</tr>
</tbody>
</table>
Table 2 reveals that among 389 respondents, 209 (53.7%) belong to deemed universities followed by State universities 164 (42.2%) and Central Universities 16 (4.1%). Majority of the respondents 139 (35.7%) are from Arts domain. 90.5% of the respondents are on the status of subordinates and 254 (65.3%) are male. The age of the respondents were grouped and 82.5% of the respondents are in the age group of 41-50. Almost 82% are working as Asst. Librarian and 77.1% of the respondents having experience between 6 and 20 years. 96% of the respondents having PG qualification. Out of 389 respondents, 116 (30%) are having Ph.D qualification.

11. RELIABILITY ANALYSIS

To ensure that the research produces reliable findings and results, a reliable tool would need to be employed. Moreover, the exploratory nature of this study necessitated the need to conduct some form of test to check whether items used in the measures are tapping into the same construct (variables) or not. Such test was accomplished through the use of factor analysis. According to Coakes and Steed (2003)\(^7\), factor analysis is a data reduction technique used to reduce a large number of variables to a smaller set of underlying factors that summarize the essential information contained in the variables. Two widely used methods in factor analysis are Principal Components and Principal Axis Factoring. However, this study adopted the former and applied it to all variables that employed multi-items measures.

Reliability is concerned with consistency of a variable. There are two identifiable aspects of this issue: external and internal reliability. Nowadays, the most common method of estimating internal reliability is Cronbach’s alpha (C). The formula used is

\[
\alpha = \frac{K}{K-1} \left( 1 - \frac{\sum_{i=1}^{K} \sigma_{i}^2}{\sigma_X^2} \right)
\]

A commonly accepted rules for describing internal consistency using Cronbachs alpha (Cronbach, Lee and Shavelson 2004)\(^8\) are \(0.9 > \alpha \geq 0.8\) (Excellent), \(0.8 > \alpha \geq 0.7\) (Good), \(0.7 > \alpha \geq 0.6\) (Acceptable), \(0.6 > \alpha \geq 0.5\) (Questionable), \(0.5 > \alpha \geq 0.5\) (Poor) and \(0.5 > \alpha\) (Unacceptable).

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Concept</th>
<th>No. of Variables</th>
<th>Alpha value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ICT affects Budgeting</td>
<td>8</td>
<td>0.7497</td>
</tr>
<tr>
<td>2</td>
<td>Reason for using digital collection</td>
<td>9</td>
<td>0.7357</td>
</tr>
</tbody>
</table>
The reliability test using Cronbach alpha ($\alpha$) indicates that the two concepts comprising of 17 variables taken up for the study were good since the alpha values were 0.7357 and 0.7497.

### 12. ICT AFFECTS BUDGETING

It is the presumption that ICT environment affects budgeting of the library. For identifying the factors of ICT that have impact on budgeting eight variables were identified and responses were obtained in a five point scale such as “Never”; “Rarely”; “Sometimes”; “Frequently” and “Always”. The mean, median, mode and standard deviation were calculated based on the responses. The ranks were assigned based on mean and standard deviation. The responses, mean, median, mode, standard deviation and rank were shown in Table 4.

**Table 4 ICT Affects Budgeting**

<table>
<thead>
<tr>
<th>S.No</th>
<th>Description</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Frequently</th>
<th>Always</th>
<th>Mean</th>
<th>Median</th>
<th>Mode</th>
<th>Std</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ICT affects collection development</td>
<td>0 (0.0)</td>
<td>127 (32.6)</td>
<td>235 (60.4)</td>
<td>27 (6.9)</td>
<td>3.74</td>
<td>4.00</td>
<td>4</td>
<td>.575</td>
<td>4</td>
</tr>
<tr>
<td>2</td>
<td>Affects Regular budgeting</td>
<td>25 (6.4)</td>
<td>78 (20.1)</td>
<td>247 (63.5)</td>
<td>39 (10.0)</td>
<td>3.77</td>
<td>4.00</td>
<td>4</td>
<td>.712</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>ICT takes major share</td>
<td>102 (26.2)</td>
<td>52 (13.4)</td>
<td>221 (56.8)</td>
<td>14 (3.6)</td>
<td>3.38</td>
<td>4.00</td>
<td>4</td>
<td>.913</td>
<td>6</td>
</tr>
<tr>
<td>4</td>
<td>Operational cost exceeds</td>
<td>76 (19.5)</td>
<td>221 (56.8)</td>
<td>92 (23.7)</td>
<td>0 (0.0)</td>
<td>3.04</td>
<td>3.00</td>
<td>3</td>
<td>.657</td>
<td>8</td>
</tr>
<tr>
<td>5</td>
<td>Annual Maintenance Cost</td>
<td>38 (9.8)</td>
<td>209 (53.7)</td>
<td>116 (29.8)</td>
<td>26 (6.7)</td>
<td>3.33</td>
<td>3.00</td>
<td>3</td>
<td>.744</td>
<td>7</td>
</tr>
<tr>
<td>6</td>
<td>High salary for trained staff</td>
<td>13 (3.3)</td>
<td>89 (22.9)</td>
<td>247 (63.5)</td>
<td>40 (10.3)</td>
<td>3.81</td>
<td>4.00</td>
<td>4</td>
<td>.655</td>
<td>2</td>
</tr>
<tr>
<td>7</td>
<td>lack of balanced collection</td>
<td>37 (9.5)</td>
<td>118 (30.3)</td>
<td>194 (49.9)</td>
<td>40 (10.3)</td>
<td>3.61</td>
<td>4.00</td>
<td>4</td>
<td>.797</td>
<td>5</td>
</tr>
<tr>
<td>8</td>
<td>More budget for digital collection</td>
<td>52 (13.4)</td>
<td>53 (13.6)</td>
<td>50 (12.9)</td>
<td>234 (60.2)</td>
<td>4.20</td>
<td>5.00</td>
<td>5</td>
<td>1.112</td>
<td>1</td>
</tr>
</tbody>
</table>

**Figure 2 ICT Affects Budgeting**
Nearly 60 to 73% of respondents indicated that ICT affects library budget either frequently and always. The mean value ranges between 3.04 and 4.20 which indicate the ICT affects library budget sometimes as well as frequently or always. The standard deviation ranges between 0.575 and 1.112. This indicates that there were no much deviation in the respondents opinion. The median and mode value were almost identical and the values were four and five. This shows that ICT affects budgeting frequently and always.

“More budget for digital collection”, “High salary for trained staff” and “Affects regular budgeting” were the first three preferences indicated by the respondents. The least preferences were indicated for “Operation cost exceeds”; “Annual Maintenance Cost” and “ICT takes major share”.

The classification of variables using Hierarchical Cluster analysis has been identified and the dendrogram thus obtained were shown in figure 3

![Figure 3] Dendrogram for ICT affects Budgeting

At 40% level there exist two clusters. Cluster one comprises of variable “Operational cost exceeds”; “Annual Maintenance Cost” and “More budget for digital collection”. This cluster can be named as Latent factors. The second cluster comprises of five variables such as “ICT affects collection development”; “High salary for trained staff”; “Lack of balanced collection”; “Affects regular budgeting”; and “ICT takes major share”. These clusters can be named as “Primary factors”. Therefore it is essential to consider the primary factors during the budgeting.

13. REASON FOR USING DIGITAL COLLECTION

In every library, the predominance was given for digital collection since the majority of the users’ preferred digital collection. For identifying the reasons for using digital collection nine variables were identified and responses were obtained in a five point scale such as “Strongly disagree”; “Disagree”; “No opinion”; “Agree” and “Strongly Agree”. The mean, median, mode and standard deviation were calculated based on the responses. The ranks were assigned based on mean and standard deviation. The responses, mean, median, mode, standard deviation and rank were shown in Table 5.
Table 5 Reason for using digital collection

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Description</th>
<th>Disagree (Mean)</th>
<th>No opinion (Median)</th>
<th>Agree (Mode)</th>
<th>Strongly Agree (Std. Dev.)</th>
<th>Mean</th>
<th>Median</th>
<th>Mode</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Finding information</td>
<td>0 (0.0)</td>
<td>40 (10.3)</td>
<td>312 (80.2)</td>
<td>37 (9.5)</td>
<td>3.99</td>
<td>4.00</td>
<td>4</td>
<td>.445</td>
</tr>
<tr>
<td>2</td>
<td>Motivate</td>
<td>0 (0.0)</td>
<td>39 (10.0)</td>
<td>286 (73.5)</td>
<td>64 (16.5)</td>
<td>4.06</td>
<td>4.00</td>
<td>4</td>
<td>.511</td>
</tr>
<tr>
<td>3</td>
<td>Improve</td>
<td>13 (3.3)</td>
<td>0 (0.0)</td>
<td>313 (80.5)</td>
<td>63 (16.2)</td>
<td>4.10</td>
<td>4.00</td>
<td>4</td>
<td>.536</td>
</tr>
<tr>
<td>4</td>
<td>Self Confidence</td>
<td>25 (6.4)</td>
<td>187 (48.1)</td>
<td>152 (39.1)</td>
<td>25 (6.4)</td>
<td>3.46</td>
<td>3.00</td>
<td>3</td>
<td>.712</td>
</tr>
<tr>
<td>5</td>
<td>Participate</td>
<td>12 (3.1)</td>
<td>199 (51.2)</td>
<td>101 (26.0)</td>
<td>77 (19.8)</td>
<td>3.62</td>
<td>3.00</td>
<td>3</td>
<td>.833</td>
</tr>
<tr>
<td>6</td>
<td>Flexibility</td>
<td>0 (0.0)</td>
<td>27 (6.9)</td>
<td>249 (64.0)</td>
<td>113 (29.0)</td>
<td>4.22</td>
<td>4.00</td>
<td>4</td>
<td>.558</td>
</tr>
<tr>
<td>7</td>
<td>Capability</td>
<td>0 (0.0)</td>
<td>40 (10.3)</td>
<td>262 (67.4)</td>
<td>87 (22.4)</td>
<td>4.12</td>
<td>4.00</td>
<td>4</td>
<td>.559</td>
</tr>
<tr>
<td>8</td>
<td>Easy-to-use</td>
<td>0 (0.0)</td>
<td>53 (13.6)</td>
<td>288 (74.0)</td>
<td>48 (12.3)</td>
<td>3.99</td>
<td>4.00</td>
<td>4</td>
<td>.510</td>
</tr>
<tr>
<td>9</td>
<td>Cognitively</td>
<td>12 (3.1)</td>
<td>147 (37.8)</td>
<td>178 (45.8)</td>
<td>52 (13.4)</td>
<td>3.69</td>
<td>4.00</td>
<td>4</td>
<td>.737</td>
</tr>
</tbody>
</table>

Figure 4 Reason for using digital collection

Nearly 60 to 90% of respondents indicated either “agree” or “strongly agree” for the variables thus indicated as reason for using digital collection except “self confidence” and “Participate”. The mean value ranges between 3.46 and 4.22 which indicate that all the reasons indicated were either agree or strongly agree. The standard deviation ranges between 0.445 and 0.833. This indicates that there were no much deviation in the respondents opinion. The median and mode value were almost identical and the values were four for seven reasons and three for two reasons. This shows that reasons indicated for using digital collection were agreeable.
“Flexibility”, “Capability” and “Improve” were the first three preferences indicated by the respondents. The least preferences were indicated for “Self confidence”; “Participate” and “Cognitively”.

The classification of variables using Hierarchical Cluster analysis has been identified and the dendogram thus obtained were shown in figure 5.

Figure 5 Reasons for using digital collection - Dendrogram

At 40% level there exist two clusters. Cluster one comprises of variable “Self confidence”; “Participate” and “Cognitively”. This cluster can be named as “Presumed factors”. The second cluster comprises of six variables such as “Motivate”; “Capability”; “Easy to use”; “Finding information”; “Improve” and “Flexibility”. These clusters can be named as “Predominant factors”. Therefore it is essential to consider the primary factors during the budgeting.

14. CONCLUSIONS

In this study as a first step 389 samples thus collected were adequate for the study has been identified. The reliability of data for the concepts “ICT affects Budgeting” and “Reasons for use of Digital environment” were identified using Cronbach alpha value which enabled to identify that there exist reliability of the data

“More budget for digital collection”, “High salary for trained staff” and “Affects regular budgeting” were the first three preferences indicated by the respondents. The least preferences were indicated for “Operation cost exceeds”; “Annual Maintenance Cost” and “ICT takes major share”. The above finding supports the hypothesis that there exist significant impact of ICT on digital collection.

“ICT affects collection development”; “High salary for trained staff”; “Lack of balanced collection”; “Affects regular budgeting”; and “ICT takes major share” were considered as “Primary factors”. “Operational cost exceeds”; “Annual Maintenance Cost” and “More budget for digital collection” were considered as Latent factors. Thus the study enabled to identify the primary factors and latent factors that has impact of ICT on budgeting.

“Flexibility”, “Capability” and “Improve” were the first three preferences indicated by the respondents towards reason for using digital collection. The respondents indicated “Self confidence”; “Participate” and “Cognitively” as least preferences. The cluster analysis enable
to identify the six variables such as “Motivate”; “Capability”; “Easy to use”; “Finding information”; “Improve” and “Flexibility” as “Predominant factors” towards reasons for use of digital collection. Similarly the study list “Self confidence”; “Participate” and “Cognitively” were the “Presumed factors” as reasons for use of digital collection. The above findings support the hypothesis “There exist numerous of reasons for using the digital collection over traditional collection”

REFERENCES


