An Audit of Change Management Process in Library System Migration at Africa Nazarene University Library

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ABSTRACT

Managing change is a critical factor in the success or failure of a system migration. Despite availability of information on the implementation of library management systems, tools, and experts in library systems, the Africa Nazarene University Library services have remained partially electronic yet automation began over 11 years ago. The library has continued to relapse to a manual system. The purpose of this study is to assess how the processes of changing from a manual to a computerized system was managed at Africa Nazarene University library. Jick’s Todd 10 step model of change management was used as the theoretical framework. This study is a case study that employs mixed method. A survey questionnaire was administered to 253 students and 45 staff members. 20 library staff, 5 ICT staff, 20 faculty members were randomly selected to be interviewed. Qualitative data in the questionnaire and interview were coded for emerging themes. The study found that the main reason for wanting to migrate from a manual to an electronic system was the desire to enhance the operations and delivery of services. The migration process was, however, unstructured unplanned and lacked laid down change management procedures and policies thus stymied the change process.

Keywords

Academic Libraries, Change Management, Change Strategy, Library Automation, Library System Migration,

1. INTRODUCTION

It is widely stated that change is the only constant, as far back as the 80’s, Charles Darwin in his work on the origin of species published in 1859 (as cited in Johnson, 1998) provided scientific evidence on species that became extinct because of mal-adopting to change. What was true more than 2,000 years ago is just as true today, we live in a world where "business as usual" is change. New initiatives, project-based working, technology improvements, staying ahead of the competition these things come together to drive ongoing changes to the way we work (Mind tools, n.d.). Accelerated technological innovations, competitive economies, globalization and increased stakeholders expectations are just but a few factors that propel change and the dynamics of its form, scope and impact. Despite this interest evidenced by the large body of literature, theories, practices and postulations of change management, evidence suggests that often than not, change management is just moderately successful. Factors that account for this are as varied as the actual levels of success or failure of transformative initiatives. Understanding and effectively responding to change is therefore considered not only a competitive, but also a survival strategy for most of today's organizations. In the context of libraries and information centers (LICs), Kamila (2009) aptly concludes that 'managing change is the only feasible solution to overcome all the difficulties and problems created in ever changing environment for the overall development and progress of LICs in the ICT era' (p. 316).

Literature presents change management as a complex issue irrespective of whether that change is perceived as big or small. The principles and processes of change are largely considered to be similar whether applied to redesign of the working practices of one section or restructuring of the entire organization (Heerwagen, & Kampschroer, 2016). Generally, the process is depicted as starting with articulation of the need for the change resulting from an understanding the implications of change in the external and internal environments, to the deployment of appropriate implementation strategies.
Like everything else in this world, libraries have also been transforming and metamorphosing in response to the changing times articulated by the specific social-cultural context in which they are set. Underlining the dynamics of libraries is Ranganathan’s fifth Law of Library Science ‘library is a growing organism.’ Growth here implies change, and academic libraries are faced not only with an unprecedented rate of change, but also with real challenge to their existence in contemporary society (Weiner, 2003). Pugh (2016) commenting on the change in information services, accurately observes that it has become the norm adding that it is no longer easy to scorn the power of technology as a changing instrument in libraries. Most of the libraries especially in the academic world are experiencing this change due to the growth of technology. Use of information technologies is transforming the way libraries are managing and providing its information services. The organisational structures of the libraries, roles of librarians, forms of information products have also been transformed. Drake (2000) describes technology as one of the primary drivers of change in the ways that people work, seek information, communicate, and entertain themselves. A case in point is library automation which is the design and implementation of ever more sophisticated computer systems to perform tasks formerly done by hand in libraries.

To libraries, Information Communication and Technology (ICTs) has presented them with an opportunity to provide value-added information services such as the provision of access to a wide variety of digital-based information resources to their clients.

Africa Nazarene University Library has a collection of both print and non-print materials, it started its automation process in 2006 using Sirs Mandarin, an integrated library system. Notwithstanding its concerted efforts and good intentions to provide its clients with state of the art information services, even to date, not all the housekeeping services in the library are automated. Severally, the library has had to fall back to manual processes.

2. RESEARCH GAP

In 2006 Africa Nazarene University Library began automating its services using Sirs Mandarin library information system. Ten years down the line a number of its functions are yet to be automated, and the library is still relapsing now and again to the manual system. This is despite the vast information, tools and specialists in library automation systems available in public domain. As such, it has yet to realise the benefits of the automated system fully.

Up until the time of this study, the causes of this limited performance of the library system had not been established. No efforts, for example, have been made to understand the change management practices at the Nazarene University Library so as to establish its strengths and deficiencies. The results of such an audit exercise are critical for the development of informed decisions and identification of corrective actions. Therefore the purpose of this study was to analyse the change management process at African Nazarene University Library system’s migration in order to suggest measures that can be taken to optimise the change management efforts. This study was guided by a set of six objectives which included: To establish the reasons/drivers for migration from the manual to the automated system at the library; To examine the phases of the migration process, assess the support system in place for the library system migration; To determine staff and users perception and response to the migration process; To seek out the change management
challenges experienced by the library during the migration; and propose a strategy for successful system implementation.

3 METHODOLOGY

The study is a case study, data was collected using structured questionnaires and interviews. Printed questionnaires were administered to 20 Librarians 5 ICT staff, 20 Faculty members, 15 administrators and 253 students at African Nazarene University. Librarians and students were randomly selected, while faculty members were purposively sampled based on departments they work in before being randomly selected. Administrators were also purposively sampled based on level of seniority before 5 administrators were randomly sampled at each of the 3 administrative levels (Lower, Middle, Upper). Upper level comprised any administrator at the level of Dean of Faculty and above, middle level administrators comprised heads of departments, while lower level administrators comprised heads of units within departments. These questionnaires were administered individually to each participant who filled it in while in a secluded room and on completion, the researcher collected the questionnaire. Out of the 313 questionnaires that were administered, we got 80 percent return rate.

45 participants were purposively sampled out of the 250 participants who filled in the questionnaire. The researcher personally interviewed each participant in a secluded room at Africa Nazarene University Library. The interviews were audio recorded and later transcribed and coded for emerging themes. To ensure consistency in the coding, the researcher used 2 other librarians to code a sample of 5 interviews based on the objectives of the study. The 3 coders achieved an inter-rater reliability coefficient of 88%. This coefficient was high enough to enable the researcher to code the remaining questionnaires by herself. There was no pre-established coding scheme and researcher coded as she went along reading the transcribed interviews.

4. STUDY RESULTS

4.1 Drivers for the System Migration from the Manual to the Automated System

It is well documented that the need for change in an organisation set up is a critical success factor to change management. Consequently, the study undertook to understand the driving forces for system migration library staff including the librarian, the system librarian and heads of sections were asked to explain the need for the change from manual to the automated system. Their response presented in Table 1 shows that despite the fact that the system was a donation and by which it may be construed to mean that they had little input in the decision to migrate, the respondents still cited multiple drivers for system migration. Most of the reasons cited related to improving the library services and products. The majority of the respondents were optimistic that the new system would improve efficiency in service delivery and working condition as well as pave the way for the introduction of new services and products. These findings collaborate Arnetz’s (as cited in Pryor et al., 2008) that established the dominant factor necessitating a change to be the need to improve productivity and efficiency. Though not directly indicated, these findings suggest that there was a sense of urgency for change. This recognition of a need for change is a positive step towards effective change management and comes as no surprise for an information environment characterised by a rapid change in new products and forms of service delivery. Other reasons cited include the need to improve the working environment, a factor that is closely associated with improved service delivery.
Significant in this finding, however, is the absence of any indication suggesting that the initiative for change was driven by feedback from a needs assessment. Moreover, going by the response that the new system was a donation to the library, it can be inferred that there was no needs assessment. This finding contradicts propositions advanced by change management models that a needs assessment of the gaps in the current system or operations and review of the nature of magnitude change and its impact are essential in planning a desirable change management strategy. Such is the centrality of a needs assessment as driving force for successful change management that Jick’s 2003 10 step change model, GE’s 7 step change acceleration process and Kurt Lewin’s 3 step change model, all propose needs analysis as the first phase of a change process. The underlying assumption is that is that when stakeholders see the significance of the change, they are likely to implement it more successful.

4.2 Process of Migration from Manual to Automated System

To find out about the migration process from the manual to the automated system, the respondents were required to respond to two related issues: (1) how they were involved in the system migration process and (2) what change management phases, and their respective activities were undertaken during the migration process.

4.2.1 Level of staff Involvement in the System Migration Process

On the level of involvement in the change process, the survey established that the senior library staff, (that is, the heads of sections and the librarian) were involved in the planning stage while the system librarian participated in the training of the library staff. The rest of the library staff were only involved in data transfer – converting the data from manual to electronic. The ICT staff, on the other hand, took part in the technical aspects of the migration including computerization of all house-keeping operations along with net enabled integrated library software, the creation of OPAC, networking library resources on the institute’s website, and development of library server(s) and databases. The level of participation of most of the library staff was minimal and sidelined to only data entry and transfer contrary to required levels of engagement for a smooth transition. Several authors (Malhan, 2006; Cohn, Kelsey, & Fiels, 1997) emphasis on representation of staff and users involvement in the planning for library automation. They add that the purpose of such participation is to provide more stakeholders to articulate their interests and concerns, share their perspectives and learn about the new system. They suggest that group interaction is an important contributing factor to the success of institutionalising and sustaining library automation years after its implementation and in realigning the new system to the staff daily duties. All the library section heads and university administrators confirmed their participation in the planning stage. Kotter (2007) in his first phase of ‘creating a sense of urgency’ suggests that over 75% of a company’s management must honestly be convinced that business, as usual, is totally unacceptable. The sheer involvement of this cadre of staff in the planning stage may be taken as an indicator of their commitment to the change initiative.

4.2.2 Stages of the Transition Process from Manual to Automated System

Most change management models attest the various steps involved in a change process even though they differ regarding the number of stages, the actual activities in each stage and the order of the steps However respondents were largely not familiar with the activities undertaken in a change process. Consequently, to stir up their recall, the respondents were required to identify against Jick Todd’s 10 step change model, which phases and activities they participated in. However, not to influence the objectivity of the respondents, the
activities within the phases were not included in the instrument. This exclusion meant that the respondents had to specify what activities were done at what stage. Mapping of ANUL’s change management process against Jick Todd’s 10 step change model revealed that the library did not undertake many of the phases expected in an efficient change process. Additionally, the depth of the activities within these phases executed was wanting. There was no evidence of stages 1 (analysis of the organizational need for change), stage 3 (separating from the past), stage 4 (creating a sense of urgency) and stage 9 (communicating honestly and involving people) being executed (Figure 1). The change process was largely unstructured and unplanned for with the majority of the respondents demonstrating little mastery of knowledge of what strategic change management entails. Disparities in their narratives suggest that there was no strict adherence to a particular sequence of events. In most cases, activities were executed when a need arose. Nevertheless, the findings strongly suggest that there was not sufficient staff involvement at all the stages of the change process, no structured approach to the change process and there was no framework guiding the change process.

4.3. ANUL Change Management Readiness

To assess the support system in place for the change management, this study adopted and modified Prosci’s (2016) organisational change management readiness assessment tool. This tool anchors on five pillars of successful change each comprising of six Likert scale items. These pillars are communication, sponsorship, stakeholder’s management, organisation support and training. Self-assessment responses of library and ICT staff to how ready they thought the library was for the system migration are presented in Table 2.

4.3.1 Communication

Communication is an engagement mechanism for building positive change. It helps frame how the stakeholders are introduced and kept informed of the what, how, when and why questions related to the change. The findings presented in Table 2 shows that the respondents have a low opinion of the communication efforts put in place during the transition period. The findings indicate an absence of clear structures for regular communication of updates to the stakeholders. There was no evidence of mechanisms put in place to identify lapses in effective communication neither were priorities set concerning change projects and any competing initiatives. Jick’s (2003) 10 Step Change Model stresses on the need for disseminating an exact message amongst the change agents and the recipients of change. Similarly, the fourth stage of Kotter’s 8 step change model emphasizes on communicating the vision of change management to all stakeholders. It emphasizes on the significance of quality communication without which the stakeholders will not have the required level of awareness and understanding they need to commit to and implement the change successfully. Effective communication should, therefore, be deliberate and well thought out. These findings show that ANUL lacked any of these with the respondents strongly disagreeing that the library kept those affected and impacted by the change informed.

4.4.2 Sponsorship

A x̅ score of 2.2 on sponsorship assessment (Table 2) scored by the respondents suggests that there was no active participation by senior management of ANUL in the change initiative. The absence of active sponsorship at ANUL can partially be explained by the fact that the new system was a donation resulting in low enthusiasm on the part of ANUL community little sense of obligation on the part of the donors. Such a situation collaborates Prosci’s (2016) research report that established a direct correlation between the electiveness of sponsorship and the likelihood of meeting project objectives. According to their findings, 72%
of organisations with extremely effective sponsors had their projects meeting or exceeding their set objectives compared to only 29% of organisations that had ineffective sponsors. In their successive previous nine benchmarking studies, effective sponsorship was identified as the top contributor to change success. It provides the vision and the required resources and facilities to see to the success of an introduced innovation. Their findings serve to demonstrate that active and visible sponsorship is a significant contributor to the successful transition.

4.3.3 Stakeholder Management

Stakeholder management relates to the early and routine efforts made to engage key players in a change cycle. It is based on the premise that identifying and managing key player’s relationships often directly correlates to successful change efforts. This pillar received a $\bar{x}$ 0.2 as shown in Table 2. Like sponsorship, actively engaging stakeholders often helps gain and maintain stakeholder buy-in. In any change processes, there are a number of stakeholders each playing different roles. The approach to each stakeholder category is therefore expected to be different. A $\bar{x}$ of 0.2 suggests that the parties concerned were not widely involved, their needs not identified, their potential contribution not considered nor were their special tactics put in place for handling resistance to change from the various stakeholders. This result come as no surprise considering that the level of staff participation was found to be low as indicated in 4.2.1

4.4.4 Organisational Support (Readiness)

The organisational pillar (originally referred to as readiness pillar) examines an organisation’s ability to marshal everyone to accept and advance with change. Factors considered include support accorded to those affected, the culture and history of change in the organisation, accountability, resource availability, and availability of staff with change management knowledge and experience. A $\bar{x}$ of 1.9 was scored on the level of organisational support by the respondents as shown in Table 2 suggesting that the institution did very little in adapting the stakeholders to the new system. Prosci (2016) explains that a successful change management strategy is a product of assessments, analysis of the characteristics of a change and custom solutions for the unique situations of the change. Though not asked directly, the absence of a monitoring system at ANUL may explain why the new library system had not fully functioned at the time of data collection as informed decisions could not be arrived at in the absence of an assessment of progress made.

4.4.5 Training

The primary goal of training is to understand gaps in stakeholders’ skills and bridge these skills before the change is implemented. One way of minimizing resistance and ensuring a successful transition is by enabling all users to work with and build their confidence in the new processes/systems. Providing adequate training and communication about the change is essential in demystifying rumours and opposition to the change initiative. Training scored highest as indicated in Table 2 with a $\bar{x}$ of 3.82 suggesting a general acceptance of the level of training received about the new system. The results shows the system librarian was involved in the training of the library staff, the participants’ rating suggest that the library management realised the need for reinforcing skills and behaviors required for the change effort and provided for flexible methods of training effort suggesting that the library management saw the need for, and acted on reinforcing skills and behaviors required for the change effort as well as provided flexible methods of training effort. When the library and ICT staff were prompted further on kind of training they had received in relation to the new system, they
identified three forms of training as: on job training, one-on-one training and module training. On job training was mainly in the form of observing other members of staff using the system. Module training took place mainly during installation and targeted staff who were directly using that specific module. The study further established that the library management was responsible for spearheading the training through a phase to phase strategy as was affirmed by one of the respondents: “It was the librarian’s idea to automate the library, and he made sure all the members of staff would undergo training for the new system” According to Paton and McCalman (2008), the Librarian has various options in managing the library and introducing innovative services and facilities. Such training and knowledge transfer should aim at helping the staff have the necessary technical and business knowledge skills and abilities to use the new system. To this end, ANUL staff were largely (60%) initiated to the new system through continuous on-job training suggesting that much of the training may have been informal. A planned and strategic change management training requires that in addition to the organisational leadership (herein, the librarian), a team of change agents should be trained on change management methodologies such as ADKAR or project management as well as well as the specifics on the change itself (Prosci, 2007). Thus it may be concluded that there were weaknesses in the training strategy adopted by ANUL despite the sentiments of satisfaction with the transition process shared by the majority of the respondents as earlier noted.

4.4 Response to the Migration Process

The study engaged the users to determine their opinion and response to the migration process. To achieve this, the library users, that is the students, and faculty members were required to respond to questions constructed to not only elicited their opinion of the transition process but also their assessment of the status of the library services and products after the migration.

They were asked to give their opinion of the transition process and assessment of the status of the library services and products after the migration. The findings of the study found little variation in the respondents’ perception of the migration process (Figure2). They all expressed dissatisfaction with the training they had received with some reckoning that this had negatively influenced their use of the new system. Further, the findings revealed that no needs assessment was conducted to establish the stakeholders’ needs nor gaps in the old system. According to Dorner, Gorman, and Calvert (2015) analyzing and assessing the information needs of clients is key to the provision of effective service and appropriate collections. Jicks’ 2003 10-step model of change management also emphasize the importance of analyzing an organizational need for change so as to create a shared vision and common direction.

Similarly, the users were of the opinion that there was no effective communication to induct them adequately to the new system. They also expressed their disappointment with the disruption in the service delivery during the migration. Despite their discontent with the system migration process, the Staff (library and ICT staff) and users (faculty and students) were relatively satisfied with the new system. According to the users, it had expanded the services and products offered by the library and enhanced service delivery (Figure 3) changing their perception of the library. The library staff collaborated these findings (Table 4) adding that the new system had boosted their morale thereby motivating them to be more productive, efficient and proactive in extending their services to remote users. . Overall, both user groups were of the opinion that the change from manual to automated library system had enabled the provision of more services and products, facilitated effective and efficient services and improved the library’s status thus fulfilling the central purpose of libraries
as envisioned by Chisenga (2006). They none-the-less voiced their concern with the internet downtime which implied disruption in service delivery.

4.5 Change Management Challenges Experienced

To understand the factors that could have derailed the change management process, only the opinion of the library and ICT staff were sort. Restricting the question to this group rests on the assumption that the responsibility for the execution of the change rests on the library even though other stakeholders participate in the process. The library and ICT staff identified seven forms of challenges as presented in Figure 4 Categorizing them by their potential root cause, they fall into three broad categories. They include those associated with 1. Poor enabling infrastructure such as power blackouts. 2. Server downtimes and poor internet connectivity. 3. Libraries administrative/managerial failure to attend to the system such as partial automation and malfunction of the computers and server due to lack of upgrading of the software. 4. The new system's functionality such as some modules not functioning well. However, for this latter reason, the respondents were not able to confidently say if the inadequate system capacity was a result of system’s limitation in totality or whether it was due to poor installation of the system.

The majority of the respondents regarded malfunctioning of the computers and poor internet connectivity as the greatest challenge. This finding is in contrast to popular association of unsuccessful change management process to poor human resource administration and resistance as brought out in Adeyoyin et al. (2012). The study findings instead established that technological challenges such as malfunctioning of the computers and poor internet connectivity were the major impediments. Noteworthy to the study is the association of these obstacles to poor enabling infrastructure. The fact that the new system was a donation may explain why ANUL was not sufficiently prepared with the prerequisite support infrastructure; most probably they had not sufficiently planned for it. Moreover, initial findings also suggested that ANUL had no change management plan and consequently had not factored in resources to support the change process.

4.6 Proposed Measures to be put in place to facilitate a Successful System Migration Process

In partial fulfillment of the study’s objective of proposing ways of enhancing the change management process for successful migration, the respondents were asked to suggest what they thought would facilitate a successful system migration. While there was no significant difference in opinions on this, more respondents proposed expanded training on the use of the system, acquisition of right hardware and software and upgrading of the system (Table 4). Other interventions proposed included an effective stakeholder’s communication, more involvement of library and ICT staff in the initial phase (planning) of the migration, and a phase implementation where the two system would run parallel to each other thus allowing for business continuity.

5. CONCLUSION

The study findings vividly established that ANUL lacked a structured change management approach in its system migration. The process of change either required some critical phases or activities to be incorporated. Notably lacking were a needs assessment to establish gaps in the manual system, and analysis of stakeholders’ needs, and infrastructural requirements. Except for modest training that the library staff and users received, the library ranked poorly in all the other change management maturity indicators - communication, sponsorship,
The ultimate objective of this study was to propose a change management strategy that ANUL could use for its future projects based on the lessons learned from their experience in the current system migration process. The proposed ANUL change management strategy constitutes four phases. The first phase is change process analysis, it constitutes four components these are; Analysis of the type of change, change specification, change approach and change management readiness assessment. Successful strategies for change management include evaluations of the characteristics of the change and identification of custom solutions for any unique situations of the change. The output of these activities plays a significant role in identifying principle decision-making considerations for any change initiative as well as informing further decisions on the change implementation framework.

Such an exercise is crucial if a full understanding of the implication of such a large scale change initiative is to be achieved. It would expose the potential and limitation of alternative approaches that could be adopted, the potential risks to be expected and their impact, and an overall institution's capacity to manage and sustain the change initiative. Observing this phase would mean that the ultimate approach adopted by the library would be founded on a robust and objective assessment of the library’s ability to implement the desirable changes as well as establish how the new system could best be customized to meet the library’s needs. In the same way, a risk analysis would project potential challenges such as disruption of services due to internet and power downtime, staff resistance, resource limitation amongst others. Based on these findings, the library can then devise appropriate modalities of circumventing them, an undertaking that would promote smoother transition and ensuring business continuity.

The second phase is the Change framework implementation plan this strategy requires ANUL to develop several change management plans for use as reference guides to the change process. These may include the action plan, activities schedule, communication plan, training plan and resistance plan. Such plans would ensure that the change process is built on a change road map that recognizes the organisational strengths and weaknesses.

In the third phase the library engages in executing the change plans developed in the second phase. Change disturbs the framework by which people make sense of their daily lives and work activities, adherence to the suggested plans would promote the internalization of the changes into the organisation structure, systems, process and individuals’ attitudes thereby ensuring a smooth and fruitful transition. Successful change management should result in the complete change in behaviours or practices.

The Fourth phase and the last should include monitoring and evaluation of the change process. This can be achieved by documenting the critical success factors as well as the challenges experienced. The same evaluation reports could additionally be shared with the various stakeholders as this would most likely build healthy relationships and buy-in their willingness to support the new changes as well as extend their support for future projects.
REFERENCE


**Table 1: Factors Influencing the Library System Migration**

<table>
<thead>
<tr>
<th>Respondents</th>
<th>Reasons for wanting a system migration</th>
<th>No of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Improve the library services and products</strong></td>
<td></td>
<td>20 out of 45</td>
</tr>
<tr>
<td>R1</td>
<td>“The system was supposed to provide access to electronic journals”</td>
<td></td>
</tr>
<tr>
<td>R2</td>
<td>“The manual system took almost five to seven minutes to serve one patron unlike in the new system where it takes an average of two minutes and below”</td>
<td></td>
</tr>
<tr>
<td><strong>Provide new services and products</strong></td>
<td></td>
<td>15 out of 45</td>
</tr>
<tr>
<td>R3</td>
<td>“It made it possible for users to look for library resources via the OPAC since in the manual system all the services were manual”</td>
<td></td>
</tr>
<tr>
<td><strong>Provide better communication channels between the library and the users</strong></td>
<td></td>
<td>10 out of 45</td>
</tr>
<tr>
<td>R1</td>
<td>“With the electronic system communication between library and its users is very easy, users can enquire about services via email which is connected to the new library system and the library is able to remind its users about overdue items, update then on new arrivals in the library”</td>
<td></td>
</tr>
<tr>
<td><strong>Enabled efficiency and effectiveness in the library services and process</strong></td>
<td></td>
<td>15 out of 45</td>
</tr>
<tr>
<td>R1</td>
<td>“Library statistics is no longer tasking since the system automatically does it”</td>
<td></td>
</tr>
<tr>
<td>R2</td>
<td>“The new system makes the processing of library materials very easy and very fast compared to the manual way of processing library materials”</td>
<td></td>
</tr>
</tbody>
</table>
“The new system provides better access to the library stock and it is possible to find out areas that need more materials.”

Better working environment and boost the morale of the staff 15 out of 45

“It made the work enjoyable and satisfying”

Marketing the library 10 out of 45

“The new system brought more users to the library and made the place user conducive”

Donation 1 out of 45

“The new system was donated by friend of university”

Table 2 ANUL Change Management Readiness

<table>
<thead>
<tr>
<th>Pillars</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Somewhat Agree</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>( \bar{x} )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication</td>
<td>21</td>
<td>2.6</td>
<td>0.4</td>
<td>0.4</td>
<td>0.4</td>
<td>0</td>
<td>1.24</td>
</tr>
<tr>
<td>Sponsorship</td>
<td>15.4</td>
<td>3</td>
<td>1.6</td>
<td>0.6</td>
<td>1.2</td>
<td>3.4</td>
<td>2.2</td>
</tr>
<tr>
<td>Stakeholder Management</td>
<td>17.2</td>
<td>18.8</td>
<td>2</td>
<td>1.2</td>
<td>0.8</td>
<td>0.4</td>
<td>0.2</td>
</tr>
<tr>
<td>Organisational Support</td>
<td>17.2</td>
<td>1.4</td>
<td>2.4</td>
<td>1.4</td>
<td>3</td>
<td>0</td>
<td>1.9</td>
</tr>
<tr>
<td>Training</td>
<td>9.8</td>
<td>2</td>
<td>1.4</td>
<td>4.6</td>
<td>2.2</td>
<td>8</td>
<td>3.82</td>
</tr>
</tbody>
</table>

Change management maturity weighted average score 1.56
Table 3: Library Staff Perception of the New System

<table>
<thead>
<tr>
<th>Perception of the new automated system</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Has made work easier and boosted morale</td>
<td>90</td>
<td>31</td>
</tr>
<tr>
<td>Favourable for most student especially distance learning student</td>
<td>20</td>
<td>7</td>
</tr>
<tr>
<td>Encounter challenges such as internet downtimes</td>
<td>30</td>
<td>10</td>
</tr>
<tr>
<td>Effective, and efficient,-easy to use and access</td>
<td>70</td>
<td>24</td>
</tr>
<tr>
<td>Reliable, saves time, quick/faster and more access to variety of related books</td>
<td>80</td>
<td>27</td>
</tr>
</tbody>
</table>

Response

Frequency  multiple responses

%  multiple responses
Table 4: Proposed Strategies for Facilitating a Successful System Migration

<table>
<thead>
<tr>
<th>Respondents’ view on successful System migration</th>
<th>Study’s Interpretation of action to be taken</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acquisition of right hardware and software and provide upgrading of system</td>
<td>Prevent breakdown and malfunction of the computers and system</td>
<td>22</td>
</tr>
<tr>
<td>Assurance of job security</td>
<td>Provide adequate communication and understanding of the impact of the system to the individuals</td>
<td>19</td>
</tr>
<tr>
<td>Include Library and ICT staff in planning stage</td>
<td>Involve the stakeholders in the initial planning phase of the migration process</td>
<td>19</td>
</tr>
<tr>
<td>The two systems should run parallel to each other</td>
<td>Ensure continuity of processes and services</td>
<td>20</td>
</tr>
<tr>
<td>Provide adequate awareness/communication of the proposed changes</td>
<td>Adopt an effect communication and market strategy</td>
<td>22</td>
</tr>
<tr>
<td>Train the students and the staff on how to use the system</td>
<td>Empower the stakeholder through structured training programmes</td>
<td>23</td>
</tr>
</tbody>
</table>
STAGE 2: Create a shared vision and common direction
- Proposal for donation given
- Librarian shared idea with section heads
- Automation agreement shared with stakeholders

STAGE 5: Support a strong leader role
- Librarian planned with the section heads the automation activities

STAGE 6: Line up political sponsorship
- Librarian informed university management and requested for hardware software support

STAGE 10: Reinforce and institutionalize the change
- Persistent new system trial inspite of challenges
- Continuous staff training

STAGE 7: Craft an implementation plan
- Donor defined and partially supported the implementation
- Run the new system concurrently with the old system

STAGE 8: Develop enabling structures
- Staff training
- Acquisition of computers
- Internet connectivity

STAGE 9: Support strong leader role
- Librarian planned with the section heads the automation activities

Figure 1: ANUL Change Process

<table>
<thead>
<tr>
<th>Perception of migration process</th>
<th>Users (N=273)</th>
<th>Library &amp; ICT Staff (N=25)</th>
</tr>
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<tbody>
<tr>
<td>Insufficient training provided</td>
<td>70</td>
<td>65</td>
</tr>
<tr>
<td>Disruption of library services</td>
<td>50</td>
<td>45</td>
</tr>
<tr>
<td>Inadequate communication</td>
<td>50</td>
<td>65</td>
</tr>
<tr>
<td>No user needs assessment</td>
<td>95</td>
<td>65</td>
</tr>
</tbody>
</table>

% of frequency of responses
\(n=multiple\) responses

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</tr>
<tr>
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<td>60</td>
</tr>
</tbody>
</table>
Figure 3: User's Perception of the New System

Figure 4: Challenges Associated with Change Management Experienced During the System Migration