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## CHALLENGES HINDERING AUTOMATION OF LIBRARY SERVICES AND MEASURES FOR SPEEDING UP THE AUTOMATION PROCESS: EXPERIENCE FROM THE INSTITUTE OF ADULT EDUCATION

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# CHALLENGES HINDERING AUTOMATION OF LIBRARY SERVICES AND MEASURES FOR SPEEDING UP THE AUTOMATION PROCESS: EXPERIENCE FROM THE INSTITUTE OF ADULT EDUCATION

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## **Abstract**

The study examined the challenges hindering library services automation and measures for speeding up the automation process. The study was conducted at the Institute of Adult Education (IAE) in Dar es Salaam region. The choice of the study area based on the availability of large library compared to those in other regional centres. Data were gathered 76 respondents using questionnaire as the main data collection method. Findings revealed that the challenges hindering library services automation at the institute of adult education are Lack of good planning, Inadequate communication between participants, Weak participation to both library staff and library users, Lack of enough ICT staff, Lack of seriousness, Poor categorization of responsibility, Lack of reliable power supply, Lack of priorities, Lack of enough support and Lack of enough library representation to the Institute of Adult Education management. Furthermore, the study the measures for speeding up the automation process include the following having a Standby generator, soliciting fund for automation process, imparting ICT skills to some of library staff, Use of KOHA open source software for automation, having adequate involvement and communication between participants, Library should be highly supported, Total representation of library to IAE library management, Increase seriousness, Priorities should be implemented, Library should have stable budget and conducting orientation to IAE administrators. Based on the findings, the study recommends that the IAE management should take appropriate measures to address the identified challenges in order to speed up the automation of library services at the Institute of Adult Education.

**Key words:** *Library automation, Automation challenges, speeding up automation, Automation*

## **1. Introduction**

Library automation refers to the process which uses computer to perform library housekeeping duties such as acquisition, circulation control, cataloguing, reference as well as serials control (Boateng, Agyemang, & Dzandu, 2014). One of the major applications of information and communications technology is the automation of major library activities such as circulations, acquisitions, serial control and cataloguing. Most of the specific tasks in these activities are routine and repetitive; hence they are readily open to automation. Many of the library tasks are repetitive, for example in acquisition section there are a lot of repetitive tasks such as bibliographic searching, placement, checking duplicates, claiming etc. and all these tasks could easily be computerized. This would definitely save a lot of staff time which they can use for other non routine activities. Similarly in the cataloguing section where the cataloguer often has to ensure that all documents have three minimum access points: author, title and subject, computerization can considerably reduce this task. Furthermore, Egunjobi and Awoyemi, (2012) maintains that automation of library service enables easy access to library information resources, and enables staff to better serve users and assist a huge number of responsibilities such as acquisitions, serial control, cataloging, circulation control, and reference. Additionally, Aina, (2004) claims that charging and discharging of records at the circulation desk can easily be taken over by the computer when the library services are automated. Despite of the outstanding significance of library automation many governmental including the Institute of adult education in Tanzania as well as non government institutional libraries are still not yet automated their services for easy provision of library services to users. It is with this view that this study, intended to find out the challenges hindering library services automation and measures for speeding up the automation process.

## **2. Purpose of the study**

The prose of this study was to the challenges hindering library services automation and measures for speeding up the automation process. More specifically, the study attempted to: (1) to identify the challenges hindering library services automation at the Institute of Adult Education in Tanzania and (2) to determine the measures that could be taken to speed up the automation process of library services at the Institute of Adult Education.

## **3. Research Methodology**

This study was conducted at the Institute of Adult Education in Dar es Salaam, which is the head quarter of twenty one (21) regional centres of the Institute of Adult Education in Tanzania. The choice of the head quarter as a study area was based on availability of large library as compared to other libraries in regional centres. Moreover, presence of qualified librarians who are eager to see the library information services are automated for easy information services provision was another reason for the choice of the study area.

The population for the study comprised of all library clients at the IAE library. The study conveniently sampled 76 respondents to be involved in this due to time and availability of resources. Data were collected through structured questionnaires which were administered library users for examining what they think were the challenges faced by the IAE library in automating its services and measures that could be taken to address those challenges for speeding up the automation process at the IAE library. The questionnaire mainly comprised of close-ended questions with some few open-ended questions. Statistical Package for Social Sciences (SPSS) was used to analyze quantitative data while qualitative data were subjected to content analysis.

#### 4. Research findings

##### 4.1 Challenges facing IAE in automating its services

Study respondents were asked to identify the challenges affecting the whole process of automating the Institute of Adult Education library services. Findings are summarized in Table 1.

**Table 1: Challenges Hindering Library Service Automation at IAE (N=76)**

Challenges hindering Automation	Responses					
	Agree		Neutral		Disagree	
	F	(%)	F	(%)	F	(%)
Lack of good planning	30	39	3	4	43	57
Inadequate communication between participants	36	47	2	3	38	50
Weak participation to both library staff and library users	34	44	2	3	40	53
Lack of enough ICT staff	35	46	3	4	38	50
Lack of seriousness	65	85	2	3	9	12
Poor categorization of responsibility	69	90	2	3	5	7
Lack of reliable power supply	58	76	2	3	16	21
Lack of priorities	68	89	1	1	7	9
Lack of enough support	70	92	0	0	6	8
Lack of enough library representation to the IAE management	72	95	0	0	4	5

**Lack of good planning:** Findings of this study revealed that 30 (39%) of the respondents agreed that lack of good planning affects the automation process where as 43 (57%) of the respondents disagreed with the statement, implying that lack of good planning was not necessary one of the obstacles hindering the automation process at the institute of adult education library. However, findings of this study negates those by Lawal-Solarin, Allison, & Justice, (2018) who maintains that good planning of library automation is important as it deals

with carrying out feasibility study of the automation project and not just adopting any software and for this will eliminate time, fund and energy.

**Inadequate communication between participants:** The study findings show that 36 (47%) of the respondents noted that inadequate communication between participants was one of the obstacles that affects the automation process to take place at IAE whereas 2 (3%) of the respondents were neutral or non-committal, 38 (50%) disagree on the statement. Furthermore, this results shows that inadequate communication among participants is not necessarily a challenge which hinders the automation process.

**Weak participation of both library staff and library users:** 34 (44%) of the respondents agreed on the statement that weak participation of library staff and library users in an obstacle to the automation process at the Institute of Adult Education, 2 (3%) of the respondents were neutral whereas 40 (53%) did not support the statement which implies that that weak participation by both library staff and library users is not a strong enough reason or problem to hinder the automation process at the Institute of Adult Education Library. Hassan (2019) maintains that participation of stakeholders in the automation process important as stakeholders' inputs are envisaged enhance the automation project development initiatives in an institution.

**Lack of enough ICT staff:** 35 (46%) of the respondents agreed that lack of enough ICT personnel is one of the obstacles that hinder the automation process whereas 3 (4%) remained non-committal. However, 38 (50%) of the respondents were disagreed with the statement, implying that the respondents didn't see lack of ICT personnel as one of the obstacles affecting the automation initiative at the IAE library. Overall, the greatest percent seemed not to support the statement. On the other hand, the finding are not in line with those of Gbadamosi, (20 12) who claims that Library automation project requires vast knowledge in the areas of computer engineering, civil engineering, computer networking and software installation and training and thus having enough number of well trained ICT staff is imperative.

**Lack of Seriousness:** Study finding further revealed that 65 (85%) of the respondents agreed with the statement that lack of seriousness is one of the obstacles that hinders the automation process at the IAE while only 9 (12%) of the respondents disagreed with the statement. Therefore, lack of seriousness constitutes one of the strong obstacles that hinder the automation process at the IAE Library. Thus, the institute and its management seriousness should embrace seriousness this important task.

**Poor categorization of responsibility:** 69 (90%) of the respondents agreed with the statement that poor categorization of responsibility is an obstacle to the effective automation process whereas 2 (3%) of the respondents neither agreed

nor disagreed with the statement. Another 5 (7%) disagreed with the statement, indicating that poor categorisation of responsibility could not necessarily be an obstacles to automation. The study results imply that some of the library staff do not possess some necessary basic library skills and, hence, the resultant low implementation of the tasks. Therefore, the management should be serious and the process of designating responsibilities for the library staff should be done well by considering professionalism.

**Lack of reliable power supply:** Results from the study indicate that 58 (76%) of the respondents agreed with the statement that lack of reliable power supply is one of the obstacles that hinder the automation process at the Institute of Adult Education whereas 2 (3%) said nothing regarding the statement as they neither agreed nor disagreed with it. On the other hand, 16 (21%) of the respondents disagreed with the statement which means they did not see lack of reliable power supply as a problem to the automation process at IAE. These results imply that lack of reliable power supply is an important factor to consider for ensuring the smooth running of an automated library, particularly in most African developing countries where the issue of electricity remains on the agenda. In this regard, a generator should be on stand-by to provide power when public power is off.

**Lack of priorities:** The study further found that 68(89%) of the respondents agreed with the statement that lack of priorities is one of the obstacles that hinder automation process at the Institute of Adult Education Library; 1 (1%) did not agree or disagree with the statement whereas 7 (9%) of the respondents disagreed with it, as they did not see it as one of the serious obstacles to the automation process at the IAE Library. These results affirm that the issue of priorities are crucial problem to the Institute of Adult Education, whereby library improvement together with the automation project has been one of the priorities of the institute for some years albeit without any actual implementation. The management and the Institute of Adult Education in general should thus sit down and try to avoid this tendency which appears to undermine the modernisation and development of the library.

**Lack of enough support:** Results from the study indicate that 70(92%) of the respondents agreed with the statement that lack of enough support is one of the obstacles that hinder the automation process to take place whereas 0(0%) neither supported nor disagreed with the statement and 6 (8%) disagreed with the statement. In other words, 92 percent of the respondents, who supported the statement, is quite big and seem to be having a problem in supporting this automation initiative. Only a few respondents (8%) disagreed with it. In fact, this project cannot be done without the full supported of the key stakeholders such as the IAE management team and those with decision-making powers. For the project to be implemented, this obstacle must be overcome.

**Lack of enough library representation to the IAE management:** The study results indicate that 72 (95%) of the respondents agreed with the statement that lack of enough library representation in the IAE management is one of the strongest obstacles to the implementation of automation process to the IAE library. 0(0%) of the respondents disagree with the statement whereas another 4(5%) of the respondents disagreed with the statement. During the study, it emerged that most of decision-making relating to library matters were being decided in the absence of qualified librarians, with knowledge and skills of Librarianship (Information Science). Moreover, the results of this study indicate that the meetings of the management had been taking place without representation of qualified librarians since the librarian of the Institute of Adult Education is not part of the management team. According to the IAE management structure, the library is one of the sections of Adult and Continuing Education Studies Department (ACES). Therefore, the one who can speak on behalf of the library to the management meeting is the head of this department who is not a librarian by profession. To alleviate this problem, the IAE management should quickly work on this issue to enable a professional librarian to be part of the management team to make library issues move accordingly.

#### 4.2 Measures to Speed up Automation Process

This is objective aimed at revealing and discovering some possible solutions that could speed up the automation process at the Institute of Adult Education Library. The solutions identified by respondents are summarized in table 2

**Table 2: Measures to Speed up Automation Process (N=76)**

<b>Solutions to the problems hindering Automation</b>	<b>Frequency</b>	<b>Percentage</b>
Standby generator	36	38
To solicit fund for automation process	37	49
To impart ICT skills to some of library staff	36	47
Use of KOHA open source software for automation	64	84
Adequate involvement and communication between participants	58	76
Library should be highly supported	65	86
Total representation of library to IAE library management	69	91
Increase seriousness	68	89
Priorities should be implemented	68	89
Library should have stable budget	70	92
Prepare orientation to IAE administrators	72	95

**Standby generator:** Thirty-six (47%) of the respondents identified that for easy operation of an automated library there must be a reliable power supply. The problem of unreliable power supply is one of the biggest problems in most developing countries such as Tanzania and other African countries. Therefore, for easy management and running of an automated library suggestions were

given by respondents to purchase electricity generator to continue with the work once there is no public electrical power supply. Kingdom and Ebikabowei (2014) note the need for regular power supply cannot be overemphasised. In such a case, alternative power supply is a basic necessity. Doing so would ensure steady current supply to the equipment and equipment damage through power surge would be minimised. This problem is being addressed with the installation inverter equipment to provide alternate source of power.

**To solicit fund for automation process:** Results from the study revealed that 37 (40%) of the respondents advised the library staff and the IAE management in general to solicit for funds for the implementation of the automation process. Soliciting funds from external sources by requesting for donor support was a solution for speeding up the project. This is also important suggestion but most of the respondents did not treat this as a critical suggestion for dealing with the problem at hand as it was supported and suggested by just 44 percent of the respondents, hardly half of the participants. According to Mishra and Thakur (2015), generally any successful running of an operation required sound financial aid for buying hardware, software and other associated ICT peripherals.

**To impart ICT skills to some of library staff:** Responding, 36 (47%) of all respondents suggested that some of the library staff did not have ICT skills and, therefore, they should be imparted with ICT skills, learning how to use the computer to operate easily an automated library. In this regard, some of the library staff who did not possess ICT skills should be trained on how to use the computer and other ICT-related equipment so as to alleviate this problem and, finally, be in a position to work in an automated environment. Similarly, Raval and BankLaw, (2013) recommends for the training of personnel, i.e., proper communication among the librarian, computer programmer and systems analyst is very important. Courses on library automation are also being taught; however, there is a general need for better understanding among these three architects of library automation. Training is also critical through a series of regular workshops on software maintenance and use. Overall, the training of librarians in IT-related matters is highly recommended.

**Use of KOHA open source software for automation:** Some 48(51%) respondents reported that the IAE library staff and management in general should use open source software such as KOHA in automating library services. This software is an open source software, which is cheap and worldwide applicable. In fact, many libraries have opted for this software. The Open University of Tanzania (OUT) Library has installed this software and it is fully functional (Samzugui, 2016). Once installed, the difficulties associated with this software would be easily addressed based on experiences drawn from other libraries using similar software. Dilroshan, (2006) noted that the library defined clearly the goal and objective of the library automation and computerisation, which is to provide wide access to digitised library collections, using computer-based skills to dispense with library

services delivered to the end-users. Library management decides on the application software that could support integrated library management system. The application software for selection must be assessed to determine its scope and capacity that would facilitate the achievement of library goals. Although there are long lists of application software packages in the market, the few notable ones particularly for the developing world's context include the UNESCO micro CDS/ISIS, TINLIB, Konlib pro-library manager, X-lib, Alice for Windows, Integrated Library Software Koha, Greenstone and Glass software.

**Adequate involvement and communication between participants:** With regard to this aspect, 58 (76%) of the respondents suggested that there should be adequate involvement and communication among the participants to quicken the automation process at the IAE library. They further suggested that there should be enough involvement and communication between participants. Information and feedback on the automation process and initiatives is important among the participants. Also, 58 percent of the respondents suggested this as a measure that could quicken the automation process. In this regard, Rafiq and Ameen (2009) contend that libraries and library professionals need to empower themselves with the requisite technological skills and address the conceptual, social, financial, technical and human factors in a collaborative manner for greater efficiency and cost-effectiveness.

**Library should be highly supported:** The study revealed further that 65(85%) of all the respondents indicated that the library should highly be supported by the management for it to develop and execute effectively its academic activities, including the automation process. Since library is the heart of any academic institution, for the IAE to meet its academic objectives it is advisable for it to support its library and revamp its services. As such, the IAE management has the responsibility of supporting library activities to oversee the smooth implementation of an automation programme. Arachchi and De Silva's (2007) study on library automation strategies for human resource management in Sri Lanka found that the management has the mandate to support the library by establishing a shared motivating vision, providing funding, creating open communication and fostering a collaboration culture, as well as providing appropriate staffing, appropriate training and coaching staff. These aspects were deemed as critical in making the library automation programmes in place successful.

**Representation of library to IAE library management Meetings:** Sixty nine (91%) of all the respondents observed that one of the issues hindering the automation process implementation is the absence of adequate representation of the library unit in the IAE management meetings. The library has partial representation in the IAE management meeting for number years. For quick refurbishment and development of the library section, however, the library should be represented by personnel who are full professionals in library issues for

better and efficiency decision-making regarding the library. The IAE management team should rectify this situation which has been undermining the library's development for so long. Sometimes, a lot of necessary information that were supposed to reach the library in time did not do so and sometimes it did not reach it at all. In fact, important decisions for the library have been undertaken by unprofessional staff. In this regard, Pise (2016) notes that the management response has played major role in library automation. The management includes both the university management and the librarian as a secretary whose task is to carry out the decisions taken by the executive bodies of the university. If the Librarian had the initiative then he would convince the authorities on this emergent need.

**Increase seriousness:** Results show that 68 (89%) of all the respondents said that the IAE management and the library generally should increase seriousness regarding the automation process at the IAE library as lack of seriousness constitutes a serious weakness that hinders automation initiatives at the Institute of Adult Education Library. In this regard, Gbadamosi and Alayande, (2011) observes that the implementation of automation library project require seriousness. All the staff involved in the service provision chain should have access to computer sets and they should be exposed to training and retraining in using automation software and fostering Internet operations.

**Priorities should be implemented:** 68 (89%) of the respondents indicated that priorities of the library unit should be implemented, implying that the library has been setting priorities for implementation every year but without any accompanying implementation. This problem needs rectification and for the authorities to start working on the priorities of the library, including on the library automation project which has been one of the library and IAE priorities for a number of years. This could be a solution for automation delay. Aswal (2008) observes that the advancement of ICT has raised the expectations of the users of the library and information centres. As a result, they expect much more and at a rapid rate. This has influenced and forced the library and information centres to automate their activities to meet the users' expectations and needs and to provide better service.

**Library should have stable budget:** In addition, 70 (92%) of the respondents proposed that the IAE library should have a stable budget exclusively for its activities. Once the budget for the library has been set and passed it should be used accordingly and as intended or planned. According to Haider (1998), the most crucial hurdle for a library in pursuit of automation is to obtain necessary funds. As such, the library automation committee must keep in the mind the expenditure for library automation and for maintenance as well as the development cost for a successful execution of the library automation process.

In this regard, a year-wise development plan for library automation and service must be integral in the library automation plan.

**Prepare orientation to IAE administrators:** Some 72(95%) of the respondents recommended that orientation programme should be given to IAE administrators on the importance and significance of library automation to the IAE. This suggestion is important as was supported by great number of respondents, which also reveal some awareness and orientation on library issues and its importance to academic institutions. Thus, the IAE administrators and other key stakeholders should take cognisance of this requirement. Training, workshop or seminar should also be organised to impart some necessary information on the significance of the librarianship profession in an academic institution. According to Raval (2013), user awareness and orientation are crucial requisites in library automation. The users comprise managerial policy-makers as well as research scholars and regular clientele of the library. In short, the need for, as well as the possibilities of, automated library facilities have to be highlighted by professionals and experts in this area.

## **CONCLUSION**

With regard to the challenges hindering the automation process at the Institute of Adult Education library, the study concludes that lack of good planning, inadequate communication between participants, weak participation of both library staff and library users, inadequate numbers of ICT staff, lack of seriousness, poor categorisation of responsibility, lack of reliable power supply, lack of priorities, lack of enough support and lack of enough library representation in the IAE management were the main hindrances to the effective IAE library service automation. On the other hand the study concludes that speeding up the automation of the IAE library services requires the Institute to have a standby generator, solicit funds for the automation process, impart library staff with ICT skills, use of KOHA open source software for automation, adequate involvement and communication among participants, land the library getting ample support from the management coupled with, total representation of library to IAE library management, increase seriousness, prepare orientation to IAE administrators, library should have stable budget and priorities should be implemented.

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