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THE IMPACT OF LIBRARY AUTOMATION ON THE JOB SATISFACTION OF LIBRARY STAFF

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ABSTRACT

The study discussed the impact of library automation on the job satisfaction of University of Education, Winneba (UEW) library staff. The overall aim of the study was to investigate the impact of the implementation of the library automation project on library staff in terms of how it affects their job satisfaction. The study employed the use of the survey research approach through the purposive sampling method as the study actually sought the views of all library staff with the aid of a structured questionnaire. A total of ninety-four (94) questionnaires with 35 items were used to obtain relevant data for the study. Of these, 66 of the questionnaires representing 70.21% of the total questionnaire were retrieved and analyzed. The findings have shown a high level of awareness of the project, increase in productivity, job satisfaction and acquisition of new skills by staff.

***Key words**: Job satisfaction; library automation; information technology; University of Education, Winneba; Ghana*

1.0 Introduction

Automation is defined by the Oxford Advanced Learners Dictionary (2005) as the use of machines to do work that was previously performed by people. In academic libraries, work done by people includes selection and acquisition, cataloguing, circulation, reference services and serial control. Lam (2001) defines library automation as the use of computer and networking technologies in the library. Library automation responds in a great measure to the requirements placed on the academic library by effectively harnessing the power of technology in computerizing its operations, with an intention to strengthen the intellectual mission of its parent organization. Kofi and Opare-Adzobu (2010) add that these systems reduce the time and energy of the staff in the overall management of the library systems, operations and services on one hand, and that of the users for accessing information and services on the other hand, at their convenience regardless of location and time of use.

Library automation is now a common phenomenon in some university libraries in Ghana and the library of University of Education, Winneba is not an exception. Housekeeping operations in the library like circulation, cataloguing, acquisition and serials have been automated. The automation project has been launched and the university library's online catalogue is accessible to the academic community and the general public. A lot of excitement characterised the prospects of moving away from the manual methods of performing routine jobs to computerized step by step online approach to achieving better results. In anticipation of the automation, staff were trained in the various modules with several follow-up training opportunities both in Ghana and abroad for selected staff. In spite of this apparent success chalked with the automation of housekeeping jobs, some noted challenges have been experienced by staff. These challenges have prevented the new system to be exploited to its optimum for the benefit of staff and the user community. This study is therefore an attempt to know how the new automated library has impacted on staff attitude, productivity and job satisfaction.

2.0 Purpose and Research Questions

The overall aim of the study was to investigate the impact of library automation on job satisfaction of library staff. The study therefore attempted to answer the following questions:

RQ1: What is the level of awareness among library staff of the automated library system?

RQ2: What is the extent of proficiency of library staff on the automated library system?

RQ3: Which housekeeping operations have been automated?

RQ4: Has there been improvement in the output of staff since the implementation of the automation project?

RQ5: Has the automation of library operations resulted in job satisfaction among library staff?

3.0 Literature Review

Studies into the impact of automation on the organization have its roots in the fields of industrial engineering and industrial sociology. Studies in the industrial engineering and operations management literature has traditionally focused on the impact of automation on the operational performance of the organization (Voss, 1988). Industrial sociology however takes the focus to the impact of new technology on industrial relations and the welfare of workers (Hudson & Parker, 1988). Rightly so, in spite of the massive transformational power of technology in libraries, it is not intended to replace the people who manipulate these systems. Library staff are the target of "informating" the library workspace. Zuboff (1988) classically describes the ability of information technology to "infor-mate" or automate the workplace, allowing employers to" infor-mate" their work force so that employees can do their jobs better. This illustration of automation presumes that there is a human factor which must be of paramount concern in any automation endeavour. The literature is extant with studies on the impact of automation and information technology on academic libraries and its staff (Engstrom, 2001; Haneefa, 2007; Lynch, 2000; Uwaifo, 2007; Horsefall, 1992; Bii and Wanyama, 2001).

Bii and Wanyama (2001) found that even though there were problems with the implementation of the library automated system of the Margaret Thatcher Library of Moi University in Kenya, staff viewed it as enrichment and a source of satisfaction to their jobs. Uwaifo (2007) investigated into the influence of age and exposure to computers as determinants of attitudes of librarians towards automation in the Nigerian setting. The study showed that majority of librarians welcomed the positive impact of library automation and that age of staff and prior exposure to the use of computers did not alter this established attitude towards library automation. This study challenges some perceived long-held notions that older library staff are technology averse.

In her study into the human impact of library automation, Horsefall (1992) concluded that the integrated turnkey system implemented at the Library of the University of South Australia had a significantly greater impact on library support staff than on librarians. This finding is in congruence with Sorensen (1990) who opines that some librarians' resist change in terms of the traditional method of doing things to the use of modern technology.

Different authors have different approaches towards defining job satisfaction. Job satisfaction is one of the most researched topics in the field of organisational behaviour (Bahadur and Gurpreet, 2007; Mahmoud Al-Hussami, 2008). According to Aziri (2011), despite its wide usage and scientific research there is still no general agreement regarding what job satisfaction is. For Aziri (2011), before a definition of job satisfaction can be given, the nature and importance of work as a universal human activity must be considered.

Hackman and Oldham (1975) defined job satisfaction as one's affective reactions to his/her job in their Job Characteristics Model. Locke and Lathan (1976) on the other hand gave a comprehensive definition of job satisfaction as a pleasurable or positive emotional state resulting from the appraisal of one's job or job experience. Both definitions describe job satisfaction as a result of one's emotional reaction (Lim, 2008). Job satisfaction is a result of employee's perception of how well their job provides those things that are viewed as important. While Luthan (1998) posited that there are three important dimensions to job satisfaction: Job satisfaction is an emotional response to a job situation. As such if it cannot be seen, it can only be inferred; Job satisfaction is often determined by how well outcome meet or exceed expectations.

Spector (1997) proposes three important features of job satisfaction. These are: Firstly, organisations should be guided by human values. Such organisations will be oriented towards treating workers fairly and with respect. Secondly, the behaviour of workers depending on their level of job satisfaction will affect the functioning and activities of the organisation's business. Thirdly, job satisfaction may serve as indicators of organizational activities.

Other factors that have been found by various researchers as factors affecting job satisfaction include but not limited to: age, experience, educational levels, sense of belongingness, promotion opportunities, career orientation, interpersonal harmony, job security and team work (Kuo and Chen, 2004; Lim, 2008, McMurtrey et al, 2002; Mehmood et al, 2012; Metle, 2001).

4.0 Background of the library automation project at University of Education Winneba

The University Library System of the University of Education, Winneba, consists of the libraries of the Winneba South Campus (Osagyefo Library), the North Campus Library, and the Akumako Campus Library all in the Central Region of Ghana. The rest are the Kumasi Campus Library (COLTEK) and the Mampong Campus Library (NASKA) located in the Ashanti Region of Ghana.

In 2008, the Carnegie Corporation gave the Mortenson Center for International Library Programs at the University of Illinois a second grant to assist university libraries in East and West Africa with their automation projects. This grant was one small piece of Carnegie's grant making strategy, which was focused on the institutional strengthening of six universities in East and West Africa. The purpose of the grant was to improve the information and access to the information needed for the researchers and students at each of the universities, among which was the University of Education, Winneba. The other grantee institutions were University of Ghana, Ghana, University of Jos, Obafemi Awolowo University both in Nigeria, University of Tanzania, Dar es Salaam and Makerere University in Uganda.

The two main goals of the project were that Carnegie grantees in Ghana, Nigeria, Tanzania and Uganda will fully implement automated library management systems, which will better serve the research and learning needs of the users. In addition, all institutions will develop a team of librarians, trained and able to manage automation and automation-related projects in their libraries. The University Library System of the University of Education, Winneba then acquired and implemented the Virtua Library Management System in May 21, 2010 first at the Osagyefo Library at Winneba. The housekeeping operations that were automated include Acquisitions, Circulation, Cataloguing and Serial Control. In addition, the I-Portal (library website) on which the Online Public Access Catalogue (OPAC) resides, was also created to ensure remote access to collections of the Library. In the Final Report on the funding program of the library automation project by the Carnegie Corporation of New York, some light was thrown on the objectives of the automation project at the Library. Among five objectives identified, the project was to assist in implementing all the modules of the library management system in the main library by 2010. This included the online catalogue, cataloguing, circulation, serials and the I-Portal (website). The acquisitions module was at the time not implemented due to procurement challenges but has lately been implemented as well. By 2011, the OPAC and circulation modules were to be implemented at the COLTEK and NASKA Libraries (Mortenson Center, 2012).

In relation to staff training, two librarians were trained at the Mortenson Center in 2010 and 2011 respectively. Additionally, three in-country automation training sessions on the implementation of various modules of the library management system were held. These included workshops on basic cataloguing processes and MARC 21 Format for 40 library staff on all the campuses of the university from October 31 to November 25, 2011 (Vice Chancellor's Annual Report, 2012).

5.0 Research Methodology

The researchers carried out a survey of sixty-six (66) respondents who were library staff on four campuses of the University of Education, Winneba, in a study to find out the impact of library automation on their job satisfaction. The study employed the use of the survey research approach through the purposive sampling method as the study actually sought the views of all library staff with the exception of administrative staff, of the University of Education, Winneba. Using a structured questionnaire, questions in the instrument ranged from demographic background of respondents, respondents' awareness and willingness to embrace the library automation system, the impact of automation on work output, challenges of the automated system and the impact of the automation on the job satisfaction of staff.

A total of ninety-four (94) questionnaire with 35 items was used to obtain relevant data for the study. Of these, 66 of the questionnaire representing 70.21% of the total questionnaire were retrieved and analyzed with the aid of the Statistical Package for the Social Sciences. The research employed the frequency test, analysis of mean test and chi-square test in the analysis of the data surveyed and presented the results in tables and figures.

6.0 Results and Discussion of Findings

6.1 Background of Respondents

The researchers carried out a survey of 66 respondents who were library staff on four campuses of the University of Education, Winneba, in a research to find out the impact of library automation on the job satisfaction of library staff. The analysis of the responses of the respondents revealed that 50% (N =33) of them are male with the rest of the other 50% (N=33) of the respondents surveyed being females. Also majority (N=27, Percent =40.9%) of the respondents were shown to be in the age group of 28 -37 years, followed by respondents within the age group of 38-47 years (N = 18, Percent = 27.3%), while minority (N=6, Percent = 9.1%) of the respondents are in the age group of 48 years and above. Most (N=27, Percent =40.9%) of the respondents surveyed had worked in the University for about 6-10 years, while the least (N=5, Percent =7.6%) of them had worked for 15 years. In the status category, about 66.7% of the respondents were junior staff of the University forming the majority of the surveyed respondents. This was followed by 24.2% being senior staff, and 9.1% being senior members of the University. About two-thirds (N= 55, Percent = 83.3%) of the respondents were staff of the Winneba and Kumasi campuses, while the rest (N=11, Percent = 16.7%) of the respondents were staff of the Mampong and Ajumako campuses. The departmental composition of the respondents is shown in the Table below:

Table 1.

Department within Library	No. of respondents	Percentage
Cataloguing	22	33.33
Circulation	16	24.24
Acquisition	14	21.21
Serials	14	21.21
TOTAL	**66**	**100**

The departmental composition of respondents

When Category (Senior Members, Senior Staff and Junior Staff) of respondents were cross tabulated with the gender, age group and campuses of the respondents profiled, the analysis revealed that male respondents (4.5%) for senior members were the same as their female counterparts for the same category, while male respondents (15.2%) for senior staff were more than their female (9.1%) counterparts under the same category. This implies that majority of the senior staff surveyed were male (**Table 2**). However, among the junior staff who were surveyed, the cross tabulation of the data shows that, majority (36.4%) of them were females, while 30.3% of them were males. This means that more females were more likely to respond to the questionnaires than male respondents under the junior staff category. Under the age group, the analysis also revealed that majority of the responses in the category of senior members in the age group of 38-47 years was 4.5%, senior staff in the age group of 28-27 years was 10.6%, and 28.8% under the junior staff category was found to be in the age group of 28-27 years. This however means that majority of the respondents under the senior members' category surveyed were more likely to have an age range of 38-47 years (**Table 2**). In terms of campuses of the respondents, there were equal number of senior members in both Winneba and Kumasi campuses who were surveyed (4.5% each), while none of the surveyed senior members were from either Mampong or Ajumako campus (0.0% each). Meanwhile, majority (13.6%) of the respondents surveyed under the senior staff category were from Winneba. This means that more senior staff from Winneba Campus participated in the survey than same category of staff from the three other campuses (**Table 2**). However the Kumasi Campus recorded the highest (30.3%) of the respondents under the junior staff category.

Table 2.

Characteristics of respondents	**Senior member (%)**	**Senior Staff (%)**	**Junior Staff (%)**	**Total (%)**
Gender				
Male	4.5	15.2	30.3	50.0
Female	4.5	9.1	36.4	50.0
Age group(years)				
18-27	0.0	0.0	22.7	22.7
28-37	1.5	10.6	28.8	40.9
38-47	4.5	7.6	15.2	27.3
>=48	3.0	6.1	0.0	9.1
Campuses				
Winneba	4.5	13.6	24.2	42.2
Kumasi	4.5	6.1	30.3	40.9
Mampong	0.0	4.5	7.6	12.1
Ajumako	0.0	0.0	4.5	4.5

Characteristics of respondents

At a 99% confidence interval of the cross tabulation of age with category, (Chi-square Value =22.35,p-value (Sig. 2 sided)=0.001) (**Table 3**). This shows that at a Monte Carlo Sig. (2-sided) value of 0.000 – 0.067, within which the statistical test is significant, the p-value is 0.001, which is within the range of Monte Carlo Sig. (2-sided) values, hence the statistical results is significant (**Table 3**).

Table 3.

Statistics	Value	df	Asymp. Sig.(2 sided)	Monte Carlo Sig. (2-sided)			Monte Carlo Sig. (1-sided)		
				Sig.	99% Confidence Interval		99% Confidence Interval		Sig.
					Lower Bound	Upper Bound	Lower Bound	Upper Bound	
Pearson Chi-Square	22.345[a]	6	0.001	0.000[b]	0.000	0.067			
Likelihood Ratio	28.004	6	0.000	0.000[b]	0.000	0.067			
Fisher's Exact Test	22.344			0.000[b]	0.000	0.067			
Linear-by-Linear Association	18.368[c]	1	0.000	0.000[b]	0.000	0.067	0.000	0.067	0.000[b]
N of Valid Cases	66								
A	8 cells (66.7%) have expected count less than 5. The minimum expected count is 0.55								
B	Based on 66 samples								
C	The standardised statistic is - 4.286								

Chi-Square Test for Age and Category of Respondents

The results of the test between the Campuses and Category of Respondents shows (Chi-square Value =5.34, p- value (Sig. 2 sided) =0.50) that at a Monte Carlo Sig. (2-sided) value of 0.357 – 0.674, within which the statistical test is significant, the p-value is 0.50, which is greater than 0.001 at 99% confidence interval, hence the relationships between campuses and category of respondent is not statistically significant (**Table 4**).

Table 4.

Statistics	Value	df	Asymp. Sig.(2 sided)	Monte Carlo Sig. (2-sided)			Monte Carlo Sig. (1-sided)		
				Sig.	99% Confidence Interval		99% Confidence Interval		Sig.
					Lower Bound	Upper Bound	Lower Bound	Upper Bound	
Pearson Chi-Square	5.344[a]	6	0.500	0.515[b]	0.357	0.674			
Likelihood Ratio	7.014	6	0.320	0.379[b]	0.225	0.533			
Fisher's Exact Test	4.525			0.591[b]	0.435	0.747			
Linear-by-Linear Association	1.885[c]	1	0.170	0.212[b]	0.083	0.342	0.038	0.265	0.152[b]
N of Valid Cases	66								
A	7 cells (58.3%) have expected count less than 5. The minimum expected count is 0.27								
B	Based on 66 samples								
C	The standardized statistic is 1.373								

Chi-Square Test for Campuses and Category of Respondents

Also, the results of the test between the gender and Category of Respondents shows (Chi-square Value =1.364, p- value (Sig. 2 sided) =0.621) (**Table 5**). This shows that at the p-value of 0.621, which fall which is greater than 0.001 at 99% confidence interval, hence the relationships between gender and category of respondent is not statistically significant (**Table 5**).

Table 5.

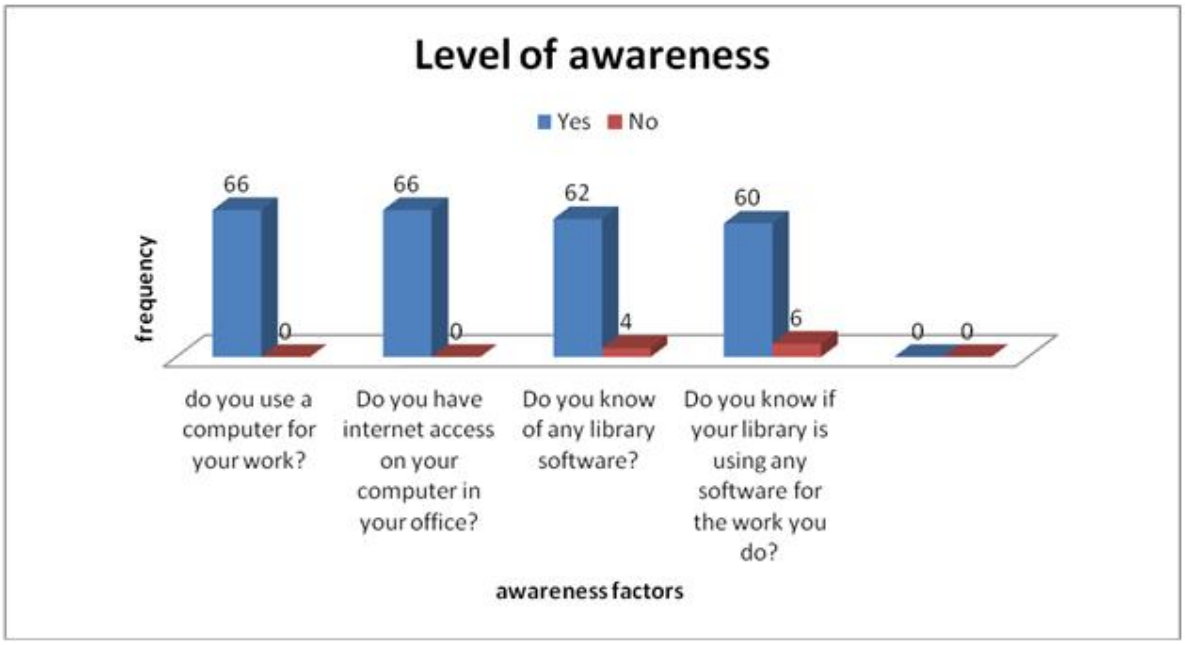
Statistics	Value	df	Asymp. Sig.(2 sided)	Monte Carlo Sig. (2-sided)			Monte Carlo Sig. (1-sided)		
				Sig.	99% Confidence Interval		99% Confidence Interval		Sig.
					Lower Bound	Upper Bound	Lower Bound	Upper Bound	
Pearson Chi-Square	1.364[a]	2	0.506	0.621[b]	0.467	0.775			
Likelihood Ratio	1.375	2	0.503	0.621[b]	0.467	0.775			
Fisher's Exact Test	1.423			0.621[b]	0.467	0.775			
Linear-by-Linear Association	0.560[c]	1	0.454	0.621[b]	0.467	0.775	0.171	0.466	0.318[b]
N of Valid Cases	66								
A	2 cells (33.3%) have expected count less than 5. The minimum expected count is 3.0								
B	Based on 66 samples								
C	The standardized statistic is 0.749								

Chi-square test for gender and category

RQ1*: What is the level of awareness among library staff of the automated library system?*

The analysis of the data responsible for finding the level of awareness among library staff of the automated library system in the University of Education, Winneba Library showed that all (100%) of the respondents surveyed, indicated that they use computers for their work and they have internet access on their office computers (**Figure 2**). Again, majority (93.9%) of the respondents indicated that they know of the library software, while 90.9 % of the respondents also admitted that they know their library is using a software for the work they do. Additionally, majority (95.5%) of the respondents indicated that their campus library uses the Virtua software and 89.4% of them stated that they know how to use the Virtua software. This means that out of five factors responsible for determining the level of awareness, over 50% of respondents in each case indicated that, there is a high level of awareness of the library automation system used in the university.

Figure 1.



The level of awareness of respondents of the library automation system.

RQ2*: What is the extent of proficiency of library staff on the automated library system?*

The analysis of the factors responsible for decision making under this question showed that (Percent = 98.5%, Frequency = 65) of the respondents have received training on the use of the Virtua software. Additionally, majority (59.1%) of the respondents said they had received the training several times, while those who had received the training twice and once were 12.1% and 28.8% respectively. Also 74.2% of the respondents indicated that they can conveniently use the automated system to perform their duties at work, while 16.7% and 9.1% indicated that they somehow and cannot conveniently use the automated system to perform their duties respectively. Meanwhile, most (81.8%) of the respondents showed that they require further training to enhance the use of the Virtua software being used in the University Library. Again, majority (95.5%) of the respondents stated that there was training organized on the use of the Virtua Software and they rated it useful, while 86.4% of the respondents showed that the training met their expectation. From **Table 6,** the smaller the variance, which means the lesser the variation in responses to the different options on that factor by the respondents and vice versa. The lowest variance value has the highest significance and vice versa. The lowest significance occurred when respondents were asked whether they had received training on how to use the automation system. (Variance =0.015151515, standard dev =0.123091491). This implies that there had not been enough training for staff.

Table 6.

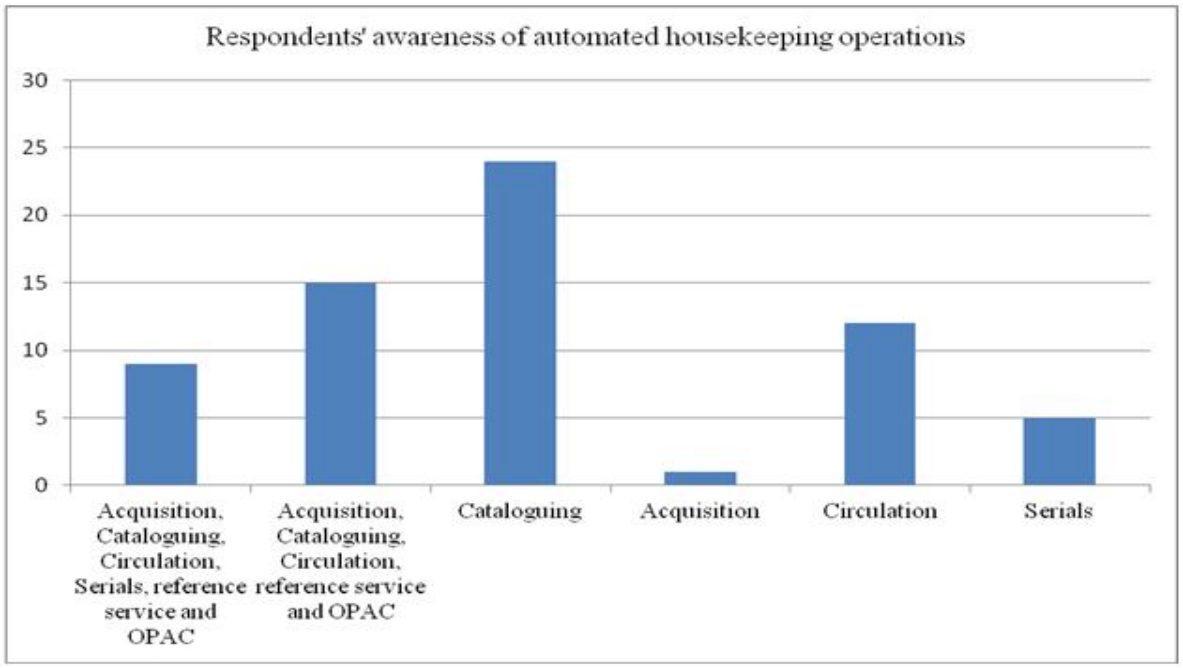
statistics	Have you received any training on the use of the Virtua Software?	How many times have you received these training, if yes to Q7?	Can you conveniently use the automated system to perform your duties?	Do you require further training to enhance the use of the Virtua Software?	How would you rate the training on the use of the Virtua Software?
N	66 0	66 0	66 0	66 0	66 0
Mean	1.015151515	2.303030303	1.424242424	1.181818182	1.045454545
Std. Deviation	0.123091491	0.893905811	0.765819944	0.388650165	0.209895079
Variance	0.015151515	0.799067599	0.586480186	0.151048951	0.044055944
Minimum	1	1	1	1	1
Maximum	2	3	3	2	2
Sum	67	152	94	78	69

The basic statistics of staff proficiency

RQ3: *Which housekeeping operations have been automated?*

The results of the analysis of the factors responsible for this question indicates, according to respondents that, cataloguing is the most automated module (count = 24), followed by a combination of acquisition, cataloguing, circulation and reference service and OPAC (count =15). A minority (Count = 1) of the respondents believed that the least automated housekeeping operation is acquisitions. (**Figure 1**).This result shows respondents' awareness of which of the housekeeping operations in the library are automated. This finding therefore confirms the responses in **Table 8**, which shows that respondents were more likely to have stated that the automation project has brought a significant improvement in their job satisfaction. This is because **Figure 1** shows that almost all the housekeeping operations in the University Library have been automated.

Figure 2.



Respondents' awareness of automated housekeeping library operations

RQ4: *Has there been improvement in the output of library staff since the implementation of the automation project?*

The analysis in support of this research question was based on seven (7) different factors as shown in **Table 7.** The factors responsible for whether or not there is improvement in the output of library staff as a result of the implementation of the automation project shows that there is a significant variation of library staff output from when the project was implemented, which is shown in **Table 7** under variance roll. However, majority of the respondents agreed that all the factors studied have improved their output as a result of the automation, and that is the reason why the variance value under each case is greater than zero. This also implies that the higher the value, the smaller the impact and vice versa. The highest impact occurred at "Has the automation increased your productivity at work" (Variance = 0.071095571, standard dev. =0.266637528). This means that majority of the respondents were more likely to have said that the automation has increased their productivity at work. (**Table 7**). This was followed by the factor of if the automation has made their work easier (Variance =0.083916084, Standard Dev. = 0.28968273). However, the highest variance occurred when respondents were asked for the challenges they experienced in using the automated system (Variance =2.80955711, standard dev. = 1.676173353). This means that even though the automated system increased their productivity, there were still some challenges in its use by respondents. Prominent among these challenges were unstable Internet connectivity (63.63%). This finding is congruent to Bii and Wanyama (2001) who found that even though there were problems with the library automation project at Kenya's Moi University, staff viewed it as enrichment and a source of satisfaction to their jobs.

Table 7 below depicts the results:

Table 7.

Statistics	Has the automation increased your productivity at work?	Has the automation improved your service delivery?	Has the automation made your work more enjoyable?	Do you experience any problems with the automated system?	Which of these challenges have you experienced?	Has the automation reduced the time you spend on your job?	Has the automation made your work easier?
N	66 0	66 0	66 0	66 0	66 0	66 0	66 0
Mean	1.075757576	1.106060606	1.121212121	1.121212121	2.742424242	1.257575758	1.090909091
Std. Deviation	0.266637528	0.310274711	0.328874609	0.328874609	1.676173353	0.440650081	0.28968273
Variance	0.071095571	0.096270396	0.108158508	0.108158508	2.80955711	0.194172494	0.083916084
Range	1	1	1	1	8	1	1
Minimum	1	1	1	1	1	1	1
Maximum	2	2	2	2	9	2	2
Sum	71	73	74	74	181	83	72

The output variation of factors

RQ5: *Has the automation of library operations resulted in job satisfaction among library staff?*

The analysis of the factors responsible for decision making on whether or not there has been job satisfaction among library staff since the implementation of automation in the library showed that about 81.2% of the respondents believed that it motivates them to come to work regularly. This result is consistent with the findings of Bii and Wanyama (2001) who found higher satisfaction among library workers after the automation of their library. According to Redmond and Housell (2013), when people are satisfied with their job, they may be more likely to attend work even if they have a cold; however, if they are not satisfied with their job, they will be more likely to call in sick even when they are well enough to work. This implies that due to automation, absenteeism has been reduced because the automation serves as a source of satisfaction. It is also supported by (Aamodt 2007) that satisfied employees tend to be committed to an organisation, and employees who are satisfied and committed are more likely to attend work, stay with an organisation, arrive at work on time, perform well and engage in behaviours helpful to the organisation. Also, 65.2% of the respondents revealed that they would be concerned if the system is temporarily suspended, while 81.8% of the respondents said that they would be more concerned if the system is suspended permanently. Again, 89.4% of the respondents stated that as a result of the automated library system, they feel achievement after a day's work. About 77.3% of the respondents also believed that the automation gives them control over their jobs and about 72.7% of the respondents believed that the university cares for them. The feeling that the university cares for them demonstrates the commitment of the university towards their satisfaction. The analysis of the factors responsible for the decision making shows that over 50% of the respondents in all the factors considered, believed that the implementation of the automation project has made them satisfied with their jobs.

Table 8.

Factor	Yes (%)	No (%)
Does it motivate you to come to work regularly?	81.2	18.2
Does it motivate you to come to work on time?	75.8	24.2
Does it motivate you to stay a little bit longer than usual at work?	63.6	36.4
Do you care if the system is temporarily suspended?	65.2	34.8
Would you be concerned if the system is permanently suspended?	81.8	18.2
Do you feel achievement after a day's work as a result of the automation?	89.4	10.6
Does the automation give you control over your job?	77.3	22.7
Does the introduction of the system indicate that the University cares for you?	72.7	27.3

The factors responsible for job satisfaction of respondents

7.0 Conclusion and recommendations

The study discussed the impact of library automation on the job satisfaction of library staff of University of Education, Winneba, Ghana. The findings of the study have shown a high level of awareness of the project by staff. It was also revealed that there is use of computers in the execution of work by all staff. Furthermore, staff had acquired the skill of working in a library management system through training organized as part of the project. In addition, the findings of the study disclosed that automating the library system increased the productivity of staff. Again, a look at the factors responsible for job satisfaction shows that the implementation of the library automation project has resulted in job satisfaction of library staff. The study also revealed that, overall there has not been enough training for staff even though library staff are aware that all the housekeeping operations in the University Library have been automated. Finally, many staff identified intermittent Internet connectivity and unstable power as major challenges confronting the automated library system.

In view of these findings, the following recommendations are being made to improve the automated library system of the University of Education, Winneba:

1. Communication: It is evident in the study the role of keeping staff up to date with any new development on the automation project. Communication is a basic human impact principle, which if practiced in an automation system such as this one, would prevent any tendencies of staff having little or no control over the new system and therefore lead to non-commitment on the part of staff.
2. Staff participation: Despite the fact that the automation project has been launched and is in operation, staff must have the opportunity to be part of any future evaluation of the new system through their participation in evaluation programmes and or follow-up sessions. Views of all staff must be taken into consideration in the event of any further changes to the system. This is necessary because the whole concept of implementing an automated system revolves around changing ways in which tasks have been done (Horsefall, 1992).

3. Structured training: The study also recommends that there should be a well-structured training programme for all library staff on not only software updates but on courses like general ICT, computer hardware and troubleshooting to improve staff confidence on the automated system. The inability to have such training programmes may result in apathy on the part of staff and may fuel feelings of frustration and lack of control over the new system. There is also the need for comprehensive cross-training of staff on each of the main sub-systems. For instance, cataloguing staff should have enough training and hands on practice on circulation, acquisitions and serial sub-systems to enable the staff function effectively in those sections should they be transferred there in the future.
4. Technical support: Staff must be made to feel that they are able to make use of the system to its full potential, without which staff tends to feel they have little or no control over the system. The consequence is that they develop frustration and stress as staff doubt their ability to cope with the system. To solve this problem, there should be a competent and well motivated IT staff who has been trained in the software and other technical issues of the system to address promptly any challenges staff may encounter in operating the system. However, the over-reliance on one person is quite risky to the library, and at the same time it is unnecessarily restrictive and overburdening to the system librarian or IT staff and hence the need to train other library staff is highly recommended (Bii and Wanyama, 2001). To enable adequate and efficient running of the system, the library needs its own IT technical support unit to be headed by a systems librarian with database management skills. The current sole reliance on the University's IT staff has been a cause of worry to many staff, who sometimes are unable to work due to computer breakdown and so on.
5. Acquisition and installation of internet server for the University Library: The study also recommends the acquisition and installation of the library's own internet server to ensure that the library has absolute control over its activities. This would ensure that in the long-run the library would be able to provide uninterrupted services to its patrons and ensure that staff are not subjected to feelings of uselessness in the event of Internet fluctuation and connection problems which arise due to the wide array of services a single server of the university is responsible for.

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