Information Technology Availability, Use and Job Satisfaction of Academic Staff at Tai Solarin University of Education, Nigeria: A Correlative Study

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I. Introduction

Organizations all over the world have come to the realization that job dissatisfaction among workers have contributed strongly to the problem of manpower recruitment and retention. Hence, the factors that influence job satisfaction in organizations have been identified and positively implemented to forestall turnover and ensure increased staff recruitment and retention rates.

Job satisfaction as an input necessary for attainment of organizational objectives has also become very topical in recent times. Job satisfaction which refers to the extent to which workers derive happiness on their job, can be summed up as all captive and positive aspects related to workers salary, physical conditions, the authority and relationship with co-workers (Kaya, 1995). It is pertinent to always consider job satisfaction from the point of view of all concerned stakeholders. In the opinion of Seashore (1974), quality of employment should be assessed from the value perspectives of the employer, society and the workers.

Information technology (IT) includes the use of computing, micro-electronics, telecommunication technology and how they are used to collect store, process, retrieve and disseminate any form of information (Ekireghwo, 1998; Attawood and Attawood, 1989; Oketunji, 2000 and Marghatani, 1987). Indeed, the impact of IT on work and workers has been revolutionary. Organizations introduce IT for many reasons. In many cases, they are introduced by managers to improve productivity, market products and for communication (Subair and Kgankenna, 2002). The convergence of information technology and communication technology has led to profound and continuous changes in organizations (Shepherd, 2000).

According to Torkzadeh and Doll (1999), organizations...
spending millions of dollars on IT, face the critical issue of accessing the impact of technology investment in terms of its impact on workers, his or her work and attainment of organizational objectives. The good news is that over time, IT has improved work performance and productivity. (Lancaster and Sandore, 1997),

IT availability, accessibility and its consequent utilization in academic institutions such as Tai Solarin University of Education (TASUED) portends well in that it holds out clear prospects for institutional management and staff productivity if continuously and appropriately deployed (Akinde and Adagunodo, 2001). The applications of IT in academic institutions include its use as an administrative tool, a teaching and learning device, for skill development, for drafting and redrafting of materials, for materials production and presentation, expert tool and programming (Ekireghwo, 1998).

The reality in many African settings is that though IT is desirable and infectious, it may not necessarily ensure job satisfaction. This is because job satisfaction in many developing nations is determined relative to economic, social and cultural conditions.

TASUED is reputed to be the first University of education in Nigeria. It currently runs twenty eight (28) undergraduate academic programmes in four colleges of Social and Management Sciences, Science and Information Technology, Humanities, Applied Education and Vocational Technology. From inception the University did deployed IT in its operations especially with regards to its administration, teaching, learning and research activities.

II. Statement of the Problem

Job satisfaction in African settings is often times believed to be contingent upon economic, social and cultural conditions. Therefore, the provision of IT facilities which can bring about efficiency and effectiveness of work may not always ensure job satisfaction of workers. Observations have shown that the availability and utilization of IT at TASUED by its academic staff may not guaranteed job satisfaction because incidences of staff resignation to take up appointment elsewhere were noticeable. Despite an appreciable level of availability of IT resources, the high level of IT utilization by the academic staff in their offices and departments may not necessarily mean they will stay on the job if other considerations are nonexistent. It is against this background that this study examines the relationship among IT availability, utilization and job satisfaction of academic staff in TASUED.

a. Research Questions

The following research questions were raised to guide the study.

1. What is the level of IT availability for academic staff at TASUED?
2. What is the level of IT use by academic staff at TASUED?

b. Research Hypotheses

The underlisted hypotheses were formulated to guide the study. The hypotheses were tested at 0.05 level of significance.

1. Ho i: There is no significant relationship between IT availability and job satisfaction of academic staff of TASUED.
2. Ho ii: IT Use has no significant relationship with job satisfaction of academic staff at TASUED.

III. Literature Review

The introduction of IT in terms of its availability, access and utilization in academic institutions such as Universities is essentially to improve productivity of academics and for institutional managers to take decisions and solve problems. (Subair & Kgan Kenna, 2002). Kasongo (1993) viewed that IT is widely recognized as having the potential to narrow the digital divide and help developing countries to leapfrog development.

A few organizations will survive without availability IT (Foster, 1993). Universities and other academic institutions all over the world have therefore realized the importance of access to and use of IT to work performance and invariably job satisfaction. Although availability of IT does not translate to its utilization; it is pertinent to state that the extent of IT functionality in an organization have correlation with its utilization (Chisenga, 2004). Job satisfaction and job performance are not entirely contingent upon the development of technology alone but on other organizational situations (Magara, 2002; Ajayi, 2002 & Okon, 2005).

IT use in academic institutions by academics is generally perceived as necessary to enhance teaching and research functions; and by extension, their productivity. Studies such as Ajayi (2001) Ogunsola (2004) and Oduwole (2005) have evidence that lends credence to this thinking. In academic institutions, technologies are deployed and used in lecture hall, theatres, laboratories, libraries, workshops etc (Ekireghwo, 1988). Rosenberg (1997) in a survey found that IT availability and exploitation by African Universities for organizational effectiveness has become prevalent. He adds that indexing, abstracting and publication of locally produced researches and their digitization to facilitate IT access will go a long way in meeting academics and student’s research and learning needs.

Since the pioneering works (Hoppock, 1935) and (Houser, 1938), research and theory on the nature, causes and correlates of job satisfaction has blossomed. Job satisfaction as a concept has been variously defined by experts. But according to Ejiogu (1992) one common thing in these definitions is the recognition of the fact that an individual expression of job satisfaction is an emotional, affective and personal response as a consequence of his estimation of how the job conforms with his values.

Blau, (1999); Reiner and Zhao (1999) and Kose (1985) had reported that demographic variables such as age, sex and educational status had positive relationship with job satisfaction. Studies on the correlates of academic staff job satisfaction which include Ajayi (1981), Akanbi
(1981), Alao, (1996) and Adeniyi (2000) found that there was relationship between job satisfaction and job commitment of college teachers and university lecturers respectively. A study on factors that impact on nurses’ job satisfaction (Ma, Samuels and Alexander, 2003) found that about two-thirds of nurses’ job satisfaction remained the same or lessened for two years; significant differences were found between job satisfaction and years of service, position and geographical area. Chen (2008) in a study reported that job characteristics influenced job satisfaction of information system personnel and that job satisfaction and job characteristic are positively related.

Mcmurtry, Grover, Teng and Lightner (2002) surveyed the job satisfaction of IT workers in a Computer Aided Software Engineering (CASE) environment and found that in a CASE environment, personnel with predominantly technical career orientation had more job satisfaction than those with predominant managerial orientation. The study suggests that combating IT personnel shortage through task automation may also increase workers satisfaction and reduce turnover.

Kim (2002) found that managers’ use of participatory management style and employee’s perception of participative strategic planning process are positively related to high levels of job satisfaction while Incqua, Schumacher and Li (1995), reported that intrinsic factors such as responsibility and the satisfaction for work itself arise from the human ability to personally advance and grow.

A study on the relationship between job satisfaction and psychological burnout (Wolpin, Burke and Greenlass, 1991), revealed that negative work settings characterized by dissatisfaction were associated with greater work stressors which increased burnout and in turn resulted in decreased job satisfaction. Other studies with useful findings between job satisfaction and the world of work includes Igbaria and Guimaraes (1993) and Korunka and Vitouch (1999).

IV. Methodology

The research design adopted for this study is a survey based on the ex-post facto type. Thus is because the manifestation of the independent variable had occurred; they are inherently not manipulated. The target population is the lecturers in the university’s twenty eight academic programmes and the academic librarians in the University’s Library. Academic records derived from the Academic Planning office at TASUED showed that there was two hundred and eighty six (286) academic staff at the time of the study. The stratified proportionate random sampling technique was adopted. The population was stratified into the four colleges and the university library as follows:

- College of Applied Education and Vocational Technology
- College Social and Management Science
- College of humanities
- College of Science and Information Technology
- University Library

From each of the above stratum, respondents were randomly selected based on simple ballot system. The selection cut across all the levels within the academic cadre i.e. From assistant lectureship to professorship. The researchers were able to administer a total of two hundred and eighty six (286) questionnaire out of which 214 questionnaire were retrieved and used for the study. This represents 75% of the total population.

The instrument used for the study was a self-constructed questionnaire tagged information technology and Job satisfaction Questionnaire (ITJSQ). The instrument had four sections A-D with 10 items. Section A focused on demographic information, section B was on IT resources availability; section C elicited responses on IT utilization and section D dealt with job satisfaction. Section B-D questions were structured on four point likert-type rating scale

Validity of the instrument was determined through consultations with IT experts; researchers in information studies and psychology resulting in useful additions, corrections and suggestions. Reliability came through the pre-testing of the instrument. Using the cronbach alpha test, a reliability co-efficient of ($\alpha = 0.73$) was obtained for the section on IT availability, ($\alpha = 0.71$) for the section on IT utilization and ($\alpha = 0.72$) for the section on job satisfaction. Data were analysed using mean and standard deviation for the research questions and Pearson’s product moment correlation test for the hypotheses formulated for the study.

V. Results

The result showed that 212 (74%) of the respondents were males and 74(26%) were females. About 80% of the respondents are below the age of 50 years. The staff spread showed that 80% of them were lecturer grade I and below. This implies that the academic staffs at TASUED are bottom heavy. This is consistent with the age of the University. Only 82 or (29%) of the staff possess doctoral degree.

Research question 1

What is the level of IT availability by academic staff of TASUED?

<p>| TABLE I |
| IT RESOURCES AVAILABILITY OF ACADEMICS OF TASUED |</p>
<table>
<thead>
<tr>
<th>IT Resources</th>
<th>$X$ mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internet</td>
<td>3.62</td>
<td>1.13</td>
</tr>
<tr>
<td>Computers</td>
<td>3.61</td>
<td>0.92</td>
</tr>
<tr>
<td>Photocopiers</td>
<td>2.98</td>
<td>1.11</td>
</tr>
<tr>
<td>Databases</td>
<td>2.72</td>
<td>1.32</td>
</tr>
<tr>
<td>Printers</td>
<td>2.51</td>
<td>1.41</td>
</tr>
<tr>
<td>Audio-visuals</td>
<td>2.46</td>
<td>1.29</td>
</tr>
<tr>
<td>Local area network</td>
<td>2.26</td>
<td>1.46</td>
</tr>
<tr>
<td>Fax machine</td>
<td>1.72</td>
<td>1.27</td>
</tr>
<tr>
<td>Modem</td>
<td>1.47</td>
<td>1.28</td>
</tr>
<tr>
<td>Microfilm</td>
<td>1.37</td>
<td>1.23</td>
</tr>
<tr>
<td>Microfiche</td>
<td>1.31</td>
<td>1.15</td>
</tr>
</tbody>
</table>

The result showed that IT resources availability for the academic staff at TASUED was high with regards to internet ($x = 3.62; SD = 1.13$) computers ($x = 3.61; SD =
1.91) photocopiers (x = 2.93; SD = 1.11) CD-ROM/Online databases (x = 2.72; SD = 1.32) printers (x = 2.51; SD = 1.41) audio-visuals (x = 2.46; SD = 1.29) and local area network (x = 2.26; SD = 1.48), the less available IT resources are microfiche (x = 1.31; SD = 1.15) microfilm (x = 1.37; SD = 1.23) modem (x = 1.47; SD = 1.28) and fax machine (x = 1.72; SD = 1.27).

Research question 2

What is the level of IT utilization by academic staff at TASUED?

Table II

<table>
<thead>
<tr>
<th>IT Resources Utilization by Academic Staff at TASUED</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internet</td>
<td>3.46</td>
<td>1.03</td>
</tr>
<tr>
<td>Computers</td>
<td>3.17</td>
<td>1.05</td>
</tr>
<tr>
<td>Photocopiers</td>
<td>2.63</td>
<td>1.07</td>
</tr>
<tr>
<td>Databases</td>
<td>2.47</td>
<td>1.23</td>
</tr>
<tr>
<td>Printers</td>
<td>2.25</td>
<td>1.27</td>
</tr>
<tr>
<td>Audio-visuals</td>
<td>2.19</td>
<td>1.43</td>
</tr>
<tr>
<td>Local area network</td>
<td>1.82</td>
<td>1.24</td>
</tr>
<tr>
<td>Fax machine</td>
<td>1.21</td>
<td>0.92</td>
</tr>
<tr>
<td>Modem</td>
<td>1.13</td>
<td>1.09</td>
</tr>
<tr>
<td>Microfilm</td>
<td>1.75</td>
<td>0.78</td>
</tr>
<tr>
<td>Microfiche</td>
<td>1.56</td>
<td>0.72</td>
</tr>
</tbody>
</table>

IT resources utilization by academic at TASUED was high with regards to internet (x=3.46; SD=1.03) computers (x=3.17; SD=1.05), photocopiers (x=2.63; SD=1.07), CD-ROM/Online databases (x=2.47; SD=1.23), audio-visuals (x=2.25; SD=1.27) and printers (x=2.19; SD=1.43). The less utilized IT resources were microfiche, microfilm, modem, fax machine and local area network. This result is consistent with that of level of availability.

Hypothesis 1

There is no significant relationship between IT availability and job satisfaction of academic staff at TASUED.

Table III

<table>
<thead>
<tr>
<th>IT Availability and Job Satisfaction of Academic Staff at TASUED</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>R</th>
<th>Sig.</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internet</td>
<td>175</td>
<td>25.9886</td>
<td>7.4917</td>
<td>-</td>
<td>0.349</td>
<td>p&lt;0.05</td>
</tr>
<tr>
<td>Computers</td>
<td>175</td>
<td>61.5029</td>
<td>14.1754</td>
<td>0.071</td>
<td>1.05</td>
<td></td>
</tr>
</tbody>
</table>

Significant at 0.05 level, Decision: Not significant.

The study found that IT availability has no significant relationship with academic staff job satisfaction at TASUED. The study showed a correlation coefficient value r = -0.071; p=0.05. This means there is no significant relationship between IT availability and job satisfaction of academic Staff at TASUED. The hypothesis is therefore accepted.

Hypothesis 2

IT utilization has no significant relationship with job satisfaction of academic staff at TASUED.

Table IV

<table>
<thead>
<tr>
<th>Relationship between IT Accessibility and Job Satisfaction of Academic Staff at Covenant University</th>
<th>Variable</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>R</th>
<th>Sig.</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internet</td>
<td>175</td>
<td>23.7086</td>
<td>6.1905</td>
<td>0.1</td>
<td>0.179</td>
<td>p&lt;0.05</td>
<td></td>
</tr>
<tr>
<td>Computers</td>
<td>175</td>
<td>61.5029</td>
<td>14.1754</td>
<td>0.071</td>
<td>1.05</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Significant at 0.05 level, Decision: Not significant.

The analysis revealed no significant relationship between IT utilization job satisfaction of academic staff at TASUED. The study showed a correlation coefficient value r = 0.102; p>0.05. This also indicates that the hypothesis was accepted.

VI. Discussion of Findings

The study found that IT resources such as internet, computers, photocopiers, CD-ROM and Online databases, printers, audio-visuals and local area network are very much available for use at TASUED, while availability of fax machines, modems and microforms were discovered to be less. This is an indication that the University had invested appreciably on information technology for its staff. This result corroborates the finding of this study on the utilization of IT resources which showed that staff highly utilized computers, internet, photocopiers, CD-ROM and online databases, audio-visual and printers.

The University needs to ensure that its staff uses its local area network. Less utilization of and availability of some IT resources may be due to non acquisition of those resources. This finding is consistent with McMurtrey, Grover, Teng and Lightner (2002). This result also suggests that level of available IT corresponds with level of its utilization.

The study also showed that IT availability had no relationship with job satisfaction of academic staff at TASUED. It also revealed that IT utilization also had no relationship with job satisfaction of the academic staff. The import of these findings is that available IT and their utilization by the academic staff did not translate to job satisfaction for them. Availability of and use of job related facilities and technologies would not necessarily guarantee workers satisfaction. These results is in consonance with the findings of Korunka and Vitouch (1999) and Liaqua, Schumacher and Li (1995) who reported that job satisfaction in higher education arise from intrinsic factors such as responsibility, human ability, personal growth and advancement. However, the result contrasted with (McMurtrey et al, 2002) which revealed that task automation helped increase work satisfaction, thereby increasing turnover.

VII. Conclusion

This study has shown that at TASUED, IT resources are available to all categories of academic staff who actually utilize this wide range of resources. The level of institutional investment on IT in TASUED is appreciable but there is room for improvement since some IT
resources were identified as less available and utilization of some IT resources are inadequate. Availability and utilization of IT resources according to this study is not positively related with job satisfaction of academic staff at TASUED. The correlates of job satisfaction, this study has revealed, goes beyond availability and use of IT resources. It is crucial to state here that academic institutions need to meet the psychological requirements of staff to guarantee their job satisfaction. That ultimately, job satisfaction of academic staff is not contingent on extrinsic factors such as work based facilities.

VIII. Recommendations

Sequel to the findings of this study the following recommendations are made:

 Availability, accessibility to and utilization of IT at TASUED should be improved upon through the provision of under-utilized, less-accessed or unavialable IT resources as revealed in the study.

 The University management should consider periodic training of academic staff on the use and application of IT resources in order to increase level of utilization.

 The University management could promote job satisfaction of its academic staff through the deployment improved academic culture and use of modern IT resources in lecturers’ offices and at lecture rooms to ensure efficiency.

 Personal ownership of IT resources should be promoted through an institutional support mechanism that will improve accessibility and utilization.

 The University management should improve upon its relationship with staff individually and as a group and ensure that they have a say in the administration of the institution.

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