Situation and variation of ICT use among Khartoum State Universities’ Staff Members

Abstract

The use of ICTs (computer and internet) among staff members has continuously been a promising issue in recent education research. Higher education institutions in developing countries, notably Sudan, are greatly concerned about the level of use and acceptance of ICTs particularly among staff members.

Theoretical framework

Understanding why staff members accept or reject computer and internet has been one of the most remarkable issues in the study of new technologies. In this research modified Technology Acceptance model (TAM2) introduced by Venkatesh, and Davis (2000) is used as a theoretical framework to examine the factors that influence staff member acceptance of ICT in their work activities. TAM and TAM2 both posit that an individual’s intention to use a system is determined by two primary belief factors: PU and PEOU. TAM2 however, incorporates two additional theoretical constructs: cognitive instrumental processes and social influence processes (Chismar & Wiley-Patton 2003). The model has been selected primary because it was originally developed for explanation of user acceptance of information systems (namely computer usage behaviour). TAM has also been known to be the most influential and frequently tested models and is widely applied model (Jong-Ae, 2005; Ma & Liu, 2004; Saga & Zmud, 1994). TAM has been well tested and proven to be quite reliable and robust in predicting user acceptance in many studies. Finally, TAM has been implemented and validated in wide range of areas include education context. In short, the model is selected because it fit well with the study objectives.

Method

Motivated by this concern and the existence of very few studies that adresses ICTs use among staff member in sudanese higher education, a survey was undertaken in which 778 Staff members of khartoum state’s universities (7 public and 7 private universities) were investigated using random sampling technique. The response rate of the distributed questionnaires was 67.7% (527 respondents)
from which the data was collected, coded and analyzed. Descriptive as well as inference (chi square test) analysis is performed using Statistical Package for the Social Sciences (SPSS V. 18.0) software. In this study concern and focus is given to the level, status, purpose, reasons of usage of ICTs. The study also examines the effect of staff members personal and demographic characteristic (on ICT usage).

Findings

The result indicated that while there is a high level of use of ICTs in general, there is low level of its use for teaching purposes among among staff members. The most prevailing level of use of the Internet is found to be the supplemental level. The frequency and intensity of use of ICTs is also revealed. The findings revealed that staff members utilized ICT for different reasons and purposes. The study found that many staff members apply personal resources to acquire ICTs tools and services which proves their understanding of increasing importance of use of ICTs in academic and teaching activities. Survey revealed that moderate infrastructure of ICT are available in these universities but there is difference between private and public universities. Although staff members in average possess a good experience concerning the use of ICT, their need for additional training was also reported by more than 20% of the respondents.

The use of ICTs among staff members was tested using chi square test which indicated that use of ICTs vary with gender, age, academic rank, discipline, profession, experience, training and type of universities (public/private). However, the variation in ICTs use between staff members is found significant according to discipline, experience, training, and type of university for both computer and internet use.

Conclusion: toward an improved conceptual framework

The research conceptual framework basically built upon TAM 2. However, some factors are omitted and other factors such as culture and personal characteristics are added to the model. The following Figure shows the conceptual framework that will be followed.

The literature is reviewed and modification is suggested to TAM2 to serve the study objective and make it more relevant to the study of acceptance of ICTs in Sudanese universities.
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Figure 1: conceptual framework of ICT use among academic staff members.

References

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