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Attitude of Academic Librarians Towards Digital Transformation and the Effects on Library Performance: The Case of Cameroon

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Introduction

Academic libraries play a key role in tertiary education by providing the right information to a broader audience in the new and changing context of a global village. The attitude of the academic librarian in integrating information and communication technologies (ICTs) in library operations is mandatory in order to survive in the context of globalization. This requires a change in work patterns, new roles and responsibilities, improved collaboration, new and sustainable partnerships, and above all change of mindset. The adoption, acceptance, and use of ICTs is not only about information processing, packaging, organizing, and dissemination, it is also about changing the attitude of librarians to accept using ICT and to engage stakeholders and the entire library ecosystem for a resilient future. This implies that the attitude of academic librarians towards acceptance and use of ICTs will largely depend on synergizing the library ecosystem.

Integrating the use of technology in academic libraries in Cameroon has been slow due to poor library budgets, and the absence of state-of-the-art ICT infrastructure (Bawack, 2019; Shafack 2021). For Cameroon to reach emergence by 2035, the deployment of ICT infrastructure should be considered an absolute necessity rather than discretionally optional, therefore, libraries should bring all stakeholders on board to foster library services, engage the library community, and support the economic growth of the country.

Information and Communication Technology offers both opportunities and threats to academic librarians. To provide valued services, academic librarians are expected to quickly embrace ICTs to exploit several opportunities. Surprisingly, librarians have reacted in a variety of ways which reflect their attitudes towards the acceptance and usage of ICT.

According to Efedafiru (2013), academic libraries are expected to produce world-class information which should be made accessible through world-class information systems, characterized by the availability of state-of-the-art ICT infrastructure, and above all first-class librarians to provide world-class library operations. The mission of the academic library is no longer limited to support learning, research, and outreach, but to create a sustainable network of information for its immediate community, involving all library ecosystems.

The role of an academic library today can no longer be limited within its four walls as has been the case in the traditional set-up. The Internet is systematically generating an exponential growth of information electronically in diverse formats that need to be sorted and made

accessible. Managing information in the traditional approach is becoming more cumbersome, tricky, and almost impossible without the assistance of information and communication technology. Achievements in any innovation in the academic library mostly depend on the attitude of librarians towards acceptance and use of ICT.

In an academic library, effective services and administration will depend greatly on the availability and use of technology, while its implementation depends mainly on the librarian's attitude toward it. A positive attitude towards the adoption and use of technology could lead to improved performance, which means a positive impact on service delivery; therefore, understanding the attitude of academic librarians is important to assess their time spent in providing library services more critically, their perception of changes, challenges, use of technology, and the overall impact on service delivery within the context of a rapidly changing university library environment.

There is hardly any study available to explain the fundamental factors that could affect the attitudes of academic librarians toward the adoption and use of technology in academic libraries, particularly in Cameroon. Investigating these factors is of paramount importance as they help understand the dynamics of the attitudes of academic librarians and predict their possible acceptance and use of technology in innovating. It is hoped that the findings of this study will be used to identify the factors that would assist library managers, and decision-makers in evidence-based decision-making.

Objectives of the Study:

The main objective of this study was to investigate the effect of academic librarians' attitudes towards the adoption and use of information technologies in seven public universities in Cameroon with a view to establishing the extent to which this impacts service delivery. The specific objectives of the study were:

- i) To investigate the general attitude of librarians towards Changes in technology;
- ii) To investigate the effects of academic Librarians' attitudes towards changes in technology and their impact on service delivery;
- iii) To investigate the barriers to the effective use of modern technology in academic libraries.

Literature Review

Information and communication technologies provide varied and improved opportunities for managing, disseminating, and accessing information, but comprehending these opportunities requires positive attitudes from academic librarians. For academic libraries to change from traditional to technology-oriented operations and services, academic libraries should re-examine their attitude toward the adoption and usage of technology (Miller, 2015). On their part, stakeholders and academic library managers require a thorough understanding of the attitudes of librarians towards technological changes as a factor in achieving the mission of the academic library (Silva, Galbraith & Groesbeck, 2017).

Attitude has been defined by Al-Asadi, et al. (2018) as “a person’s tendency to feel and behave in a particular manner toward an object, a person, or an organization” (p.6). Attitude comprises cognitive, affective, and behavioral aspects (Jain, 2014). Tu (2021) asserted that librarians’ attitudes should involve an appreciation of students’ needs, clientele focus, enthusiasm for working in the library, and above all, a manifestation of intellectual curiosity. Ubogu (2012) opines that the positive attitude of librarians should include a demonstration of the ability to adapt to a changing library environment, while Okoye (2013) rolls out nineteen attitudes expected of academic librarians to ease the adoption and use of technology. There are attitudes that affect both management and library services (Miller, 2015). In such cases, when employees understand the attitudes of their leaders, they, in turn, respond. Negative attitudes of management produce low employee morale, low productivity standards, and poor service delivery, while positive attitudes stimulate employee performance, increase productivity, and improve service delivery (Van, 2016).

The importance of attitudes towards information technologies and related changes in academic libraries is widely acknowledged by several authors. For example, studies by Ramzan and Al-Singh (2010) and Haliso (2011) revealed that the attitudes of academic librarians towards library technology are strong determinants of computer utilization. A study conducted by Rahman (2010) shows that conceptually and empirically, attitude towards a library system and attitude towards using the system are two different concepts that have very different effects on library professionals' use and acceptance of information technology. It means that the attitude of the academic librarian towards technology usage has a direct impact on service delivery. Rahman’s findings further revealed that the attitude of librarians toward using technology positively impacts their behavioural intentions and directly impacts service delivery. In another

study by Melchiondo (2007), attitudes towards the use of the Internet by academic librarians were strongly related to its usefulness, intention to use, and actual usage. Aharony (2009) suggests that librarians who perceive themselves as technology-oriented will find it easy to implement and integrate new technologies in their services to improve performance. Their positive attitudes toward Web 3.0, library 3.0, and other technologies play an essential role in successfully applying new technologies.

Adeyinka (2008) concluded that positive attitudes of librarians are key attributes in the successful adoption and use of information technology in academic libraries in Nigeria. Their attitudes are significantly influenced by prior experience and knowledge of ICT. He advised that academic libraries in developing countries should consider sending their librarians, who do not have sufficient ICT knowledge, to ICT training to remove fear and anxiety hindering them from developing a positive attitude to accept its usage.

Several scholars generally agree that the attitudes and their perceptions of academic librarians towards information technology, especially Internet and computer-based library systems, affect the implementation and usage of new technologies in libraries and, ultimately service delivery (El-Sherbini & Wilson (2007), Melchionda (2007), Kumar (2010) and Rahman (2010). If library staff develop negative attitudes towards technology, library services will not meet user expectations (Nielsen & Baker, 1986).

Given that the attitude of librarians affects library services, Unwana and Men (2017) surveyed the effect of academic library staff attitudes on the use of technology in two academic libraries in Abuja, Nigeria. Findings revealed that staff attitude and academic profile influence the usage of ICTs. Based on the findings, the study recommended that librarians should systematically update knowledge on the use of technology and carry out opinion surveys to learn more about users' information needs since it is dynamic. Most importantly, librarians should embark on changing mind-sets and adopt positive attitudes, as this provides them with insight into the value and productivity of their services. In this study, however, attitude has been used to represent perceptions of academic librarians on the value attached to technology in library services.

Methodology

The study was descriptive survey research. We used both quantitative and qualitative methods for data collection. A well-structured questionnaire and interview guide were personally designed in line with the objectives of the study. The population of the study comprised 150

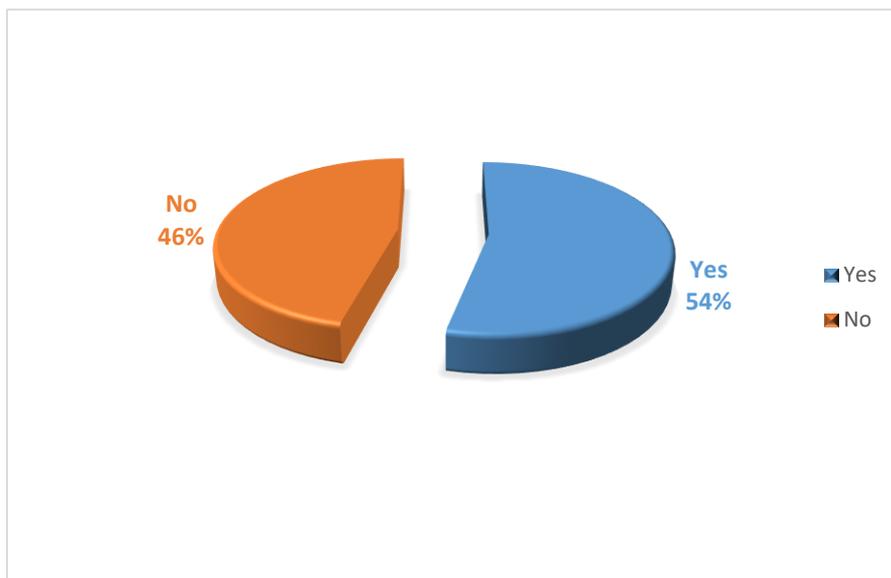
academic librarians from seven public universities in Cameroon. Quantitative data were analyzed using frequency counts and percentages in an Excel sheet. Interviews were conducted through face to face and via WhatsApp voicemail. Interviews were conducted in both the French and English languages. The French version was translated into English by the author before analysis.

Findings and Discussions:

Do Librarians have personal computers at home?

The first question was to know if academic librarians owned computers at home. Just about half (54%) of academic librarians owned computers at home. Owning a computer at home might indicate an acceptance of using technology, which is a positive attitude towards technology. Not having a computer at home might be due to lack of finance, but might also indicate a negative attitude towards technology, a significant cause of illiteracy.

Figure 1: Librarians who Owned Personal Computers at Home.

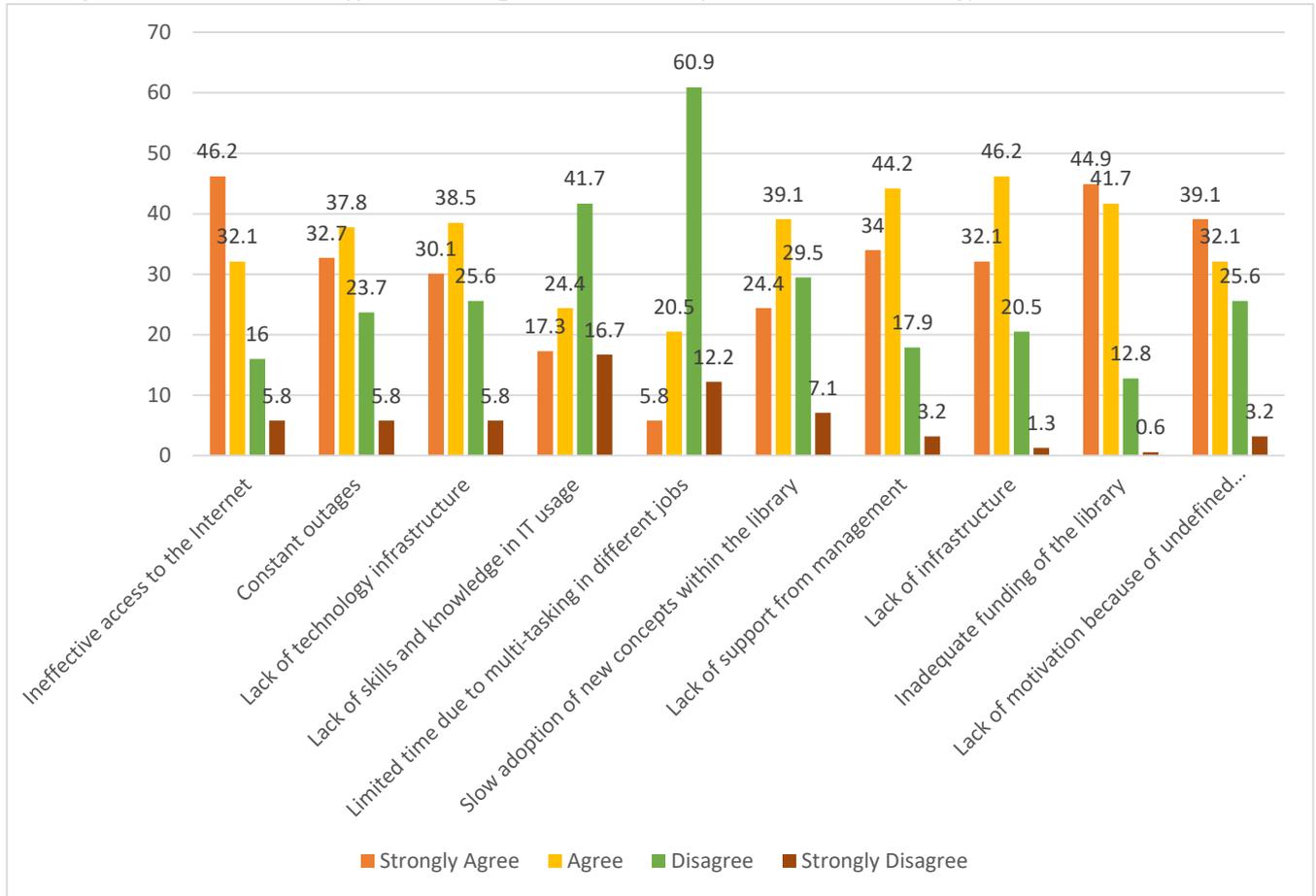


Source: Researcher's Field Work.

What are the Barriers to Effective adoption and use of Modern Technologies in Academic Libraries?

Concerning librarians' attitudes towards changes in Information Technology, respondents had to choose from a list of ten statements, barriers that hindered them from effectively adopting technology for service delivery. Figure 2 below shows the findings.

Figure 2: Barriers to Effective Adoption and Use of Modern Technology.



Source: Researcher’s Field Work.

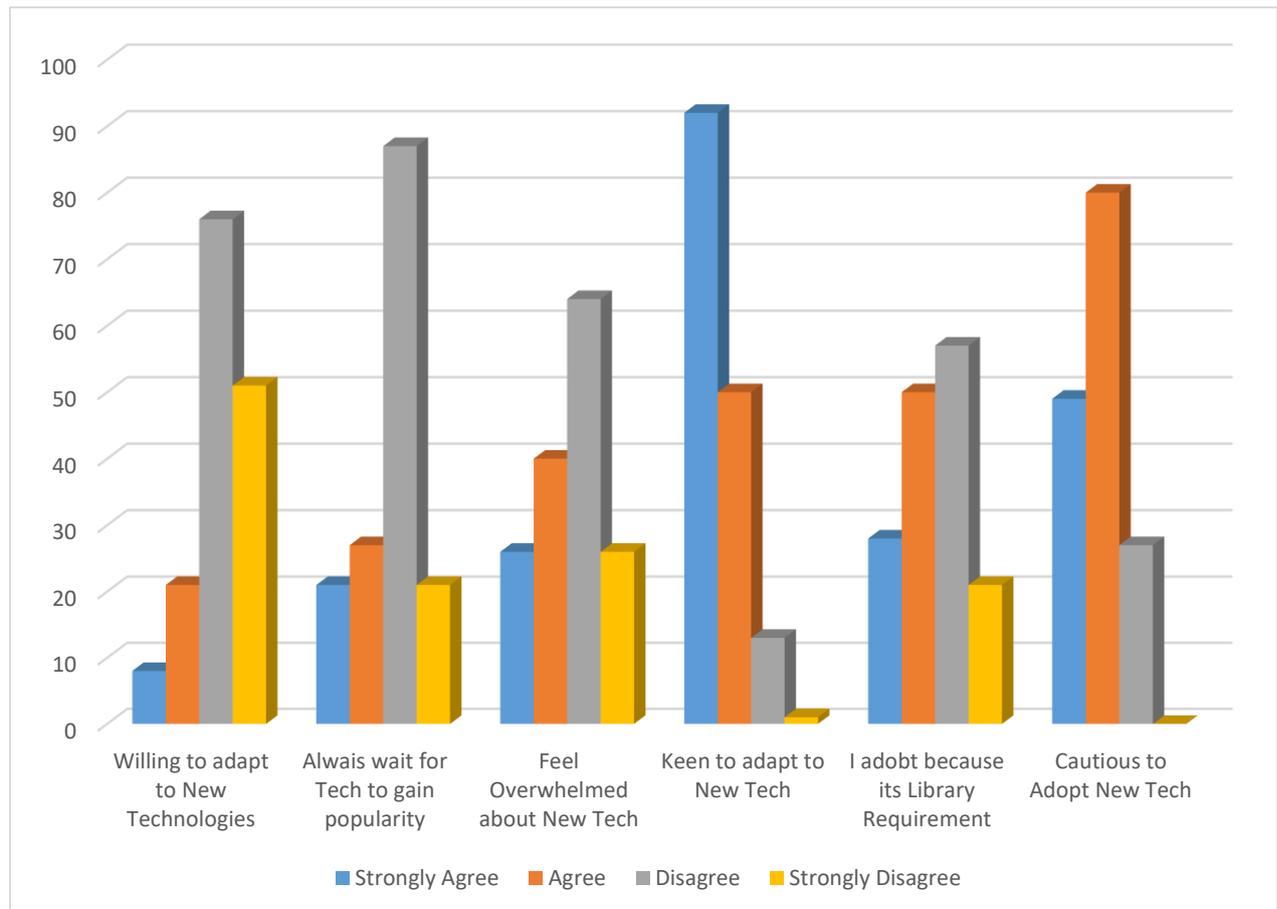
Data in Figure 2 indicates that lack of technology infrastructure’ and ‘ineffective access to the Internet’ respectively were barriers to the use of information technology. More than half of librarians responded that the lack of technology infrastructure like the Internet was a barrier to technology usage. With the absence of technology infrastructure, the librarian might not develop the zeal or interest in using technology for service delivery. Ineffective access to the Internet (78.3%), inadequate funding for the library (86.6%), and lack of support from management (44.2%) were among the major barriers to the effective use of technologies for library services. Other reasons like constant outages of electricity supply (70.5%), lack of library infrastructure (78.3%), and lack of motivation (71.2%) were mentioned as causes for the slow adoption of technologies in the library. Figure 2 further depicts that, half of the respondents lacked skills and knowledge in the usage of ICT which constituted a barrier. It should be noted that one of the basic needs of an academic librarian is to have access to state-of-the-art technology infrastructure to facilitate access and dissemination of relevant

information and digital library holdings. Shafack (2021) supports this finding by affirming that the state of ICT infrastructure in public universities in Cameroon is still wanting. According to interviews with chief librarians, most academic libraries did not have stable Internet or Wi-Fi because of a lack of infrastructure. In the digital information environment, coupled with distance learning in tertiary education, library resources are expected to be accessed electronically, thus the presence of ICT infrastructure will facilitate this library service. Interviewees affirmed the findings by stating that to date, some librarians do not show interest in using computers or the Internet at work because of the absence of technology infrastructure. This finding provides a clear picture of the relationship between Perceived Usefulness and Perceived Ease of Use as predicted by the Technology Acceptance Model. Specifically, Davis' (1989) model stipulates that though some libraries have technology infrastructure, the decision for the academic librarian to use these technologies will depend firstly on how the librarian perceives the said technology as useful and if they find it easy to use. Davis' theory is contradicted by a chief librarian who said that academic librarians in her library had accepted the use of technology. Unfortunately, the ease of use and usefulness are geared towards personal work rather than library tasks for which they were employed. Furthermore, all interviewees reported that Internet connectivity and access were poor, and it frustrated the zeal of those librarians who were willing to provide digital services. Frustration would determine the librarian's attitude, it would slow down library services, and consequently would negatively impact staff performance. Inadequate funding would slow library operations, meaning that activities cannot be done when required. It will adversely affect academic libraries that follow modern library trends.

Academic Librarians’ Attitude Towards Changes in Technology.

The study investigated librarians’ attitudes towards changes in library services due to technology in Figure 3 below:

Figure 3: Attitude of Librarians Towards Changes in Technology.



Source: Researcher’s Field Work.

Findings reveal that attitude plays a significant role in the adoption of new technology. Almost all respondents were keen to adopt new concepts in the library. Half of the respondents adopted new ideas due to library requirements, but the majority were willing to adopt new concepts even if it meant not conforming to the library requirements. Based on these findings, it can be accepted that the rate of use and adoption of technology and the capacity to adapt to changing paradigms in library services in academic libraries is directly linked to librarians’ attitudes, which, however, varies from one individual to another or from one group to another. These

findings further reveal that most librarians are cautious about adopting new concepts like technology at work. For example, just a minority is proactive because they do not wait until new technologies gain popularity among other colleagues before accepting them. Similarly, less than half of librarians always feel overwhelmed by changes in technology that affect service delivery. This partially positive attitude can be ascribed to academic librarians' awareness of the importance of technology in performing library services. It is evident in proactive people who do not wait for technology to gain popularity before accepting its usage. To further describe librarians' attitude towards technology, some interviewees said that staff attitude depends on the generation. For example, the younger librarians who are termed media-born embrace technology changes with excitement and quickly adopt it with a lot of enthusiasm. At the same time, the older generation (staff) are reticent and technophobic. The finding reinforces Khan and Bhatti's (2012) assertion that librarians' attitudes towards technology are essential and must be positive to capture the attention of online users, support distance learning, and share knowledge by providing access to electronic resources.

Two theories have provided substantial support to the above findings. They are the Diffusion of Innovation theory (DoI) by Rogers (2003) and the Unified Theory of Acceptance and the use of Technology (UTUAT) by Venkatesh, et al. (2013). The above findings have highlighted that academic librarians fall under two groups: early majority and late majority, as propounded by Rogers. Similarly, using the Unified Theory of Acceptance and Use of Technology (UTAUT) lens, the above findings reveal that academic librarians would develop a positive attitude towards technology based on four conditions. First, the extent to which the librarian believes that using the technology will help him provide library services (performance expectancy), secondly how easy it is to use the technology in services like accessing digital resources (effort expectancy), thirdly the perception and views of the technology by professional peers (social influence), and fourthly an enabling environment. The availability of ICT infrastructure and facilities would facilitate the use of technology (facilitating conditions). These conditions, if met, will stimulate a positive attitude of librarians and a consequential positive impact on library service. However, for librarians to provide optimum library services, which is a priority objective of academic libraries in particular and the university in general, academic libraries should not only emphasize library infrastructure and skills of librarians but also the attitudes of librarians, and their ability and willingness to use technology to provide library services. When this is done, the attention span of library users will be maintained, libraries will become more useful, library visits will increase, there will be interaction and

collaboration between librarians and patrons, and both patrons and librarians will be involved in a continuous learning process. When this is achieved, a higher level of cognition will be stimulated, a positive attitude will be generated, and service delivery will be optimal and appreciated, especially if all the skills required for library services are acquired. With these, the impact on service delivery would be positive and sustainable in the entire library ecosystem.

Conclusion

The attitude of academic librarians towards change related to the use of technology is generally positive though the positivity is related to personal rather than professional purposes. Perceived usefulness of ICT, perceived ease of use of ICT, and perceived confidence in ICT applications emerged as the key factors in determining the attitude of the academic librarian. Several barriers have caused a retrogressive attitude of some academic librarians. They include: lack of technology state of the art infrastructure; lack of training; peer influence; insufficient funding; poor Internet connectivity and ineffective access to the Internet; inadequate funding; lack of support from management; constant outages of electricity; lack of basic library facilities; lack of motivation; lack of skills and knowledge in IT. Training and knowledge are the sine qua non of a positive attitude toward ICT usage. The resistance of some librarians, especially the older generation towards ICT usage is widening the digital divide. In Cameroon, it is time to bridge this gap. Most academic libraries in public universities of Cameroon are not yet automated, chief librarians should start thinking seriously about it now. It is getting late. Formation and motivation are major strides that will increase anxiety and reduce fear of using ICT. A positive attitude could tremendously enhance efficiency and personal development if all stakeholders pay attention to these threats.

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