UTILIZATION OF MOBILE DEVICES IN ACCESSING INFORMATION BY LECTURERS AND STUDENTS IN PUBLIC UNIVERSITIES IN KENYA

BY

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BACKGROUND OF THE STUDY

- Mobile devices are gadgets that utilize the innovative use of cellular communication for transportable and instantaneous access to information (Coates et al., 2010).
- Mobile devices include, iPods, MP3 player, Personal Digital Assistants (P.D.A), Universal Serial Bus (USB) Drive, E-Book Reader, Smart Phone, Ultra-Mobile Personal Computer and Laptop / Tablet PC (Adeeb & Hussain, 2012). Personal Digital Assistants (PDA) and smartphones are mobile devices that are agents of real-time communication(Chang et al., 2014).
- The hallmarks of mobile devices are their portability, flexibility, simplicity of use and their unique ability for integration with other technology systems (Alder & Fotheringham, 2012). Smartphones and other mobile devices offer librarians new opportunities in the delivery of services for users including instruction, systems, reference, and access to resources.
- Mobile library technology is important and in order for academic libraries to stay relevant in the mobile era, it could be essential for them to adopt mobile library technologies in order to maximize access to e-resources, stimulate library services and satisfy the users' necessities in a fast and smart manner (Madhusudhan & Dar, 2017).

Problem Statement

- In the past few decades, mobile devices have appeared gradually and their impact on higher education has been incremental. In developed countries, over relatively short periods, mobile devices have had a major and in some instances revolutionary impact on higher education.

- In Kenya, the impact of mobile devices on higher education, particularly in public universities is not adequately quantifiable. Principally, this is because not much has been done locally in terms of research to evaluate how mobile devices have impacted public Universities. As such, little is known on how mobile devices will transform in the next decade with respect to the Kenyan academic front.

- The argument question is whether their impact will be gradual and incremental or sudden and revolutionary. There is a case for both points of view. Since Kenyan students have been using devices such as laptops and mobile phones for the last two decades, one might argue that the impact of the use of mobile devices on the students' behavior in general and on higher education in particular has been relatively gradual.

- This study sought to create an ascertained harmonization of the two schools of thought by examining the utilization of mobile devices in public universities in Kenya with particular reference to selected public universities.

GENERAL OBJECTIVE

This study aimed at utilization of mobile devices in accessing information from public university li

in Kenya with a view to enhancing the exploitation of library resources.

The following specific objectives guided the study:

i. To identify the various mobile devices available in public university libraries in Kenya

ii. To determine how mobile devices are utilized in accessing information from public university libraries in Kenya

iii. To establish the benefits of mobile device utilization in accessing information from public university libraries in Ken

iv. To identify the challenges faced in the utilization of mobile devices in accessing information from public u libraries in Kenya

v. To determine viable ways of enhancing the utilization of mobile devices in public university libraries in Kenya.

JUSTIFICATION

This study was driven by the reality that the challenge for education is continuing to grow as students in the digital and mobile age are approaching learning from a very different perspective than their predecessors.

Students are increasingly using digital tools, constructing, and sharing knowledge in new ways. Students are beginning to demand more flexibility, alternative modes of delivery of instruction and more multimedia-enriched and interactive course materials.

Thus, institutions of higher learning must rethink current pedagogical strategies, how they view technology and how they deliver learning resources. Ultimately, shifting paradigms to more innovative learning resources delivery will benefit both students by increasing achievement and learning outcomes and universities by helping them remain competitive with alternative educational outlets.

SCOPE OF THE STUDY

- This study centered its scope on utilization of mobile devices at the University of Nairobi and Kenyatta University main campuses. It involved both students and staff of the University of Nairobi and Kenyatta University in providing relevant information on utilization of mobile devices at the universities libraries.

Limitation of the Study

The study experienced the following limitations:

i. Due to many types of mobile devices available in this era of digital world, the researcher only used commonly used mobile devices in this study.

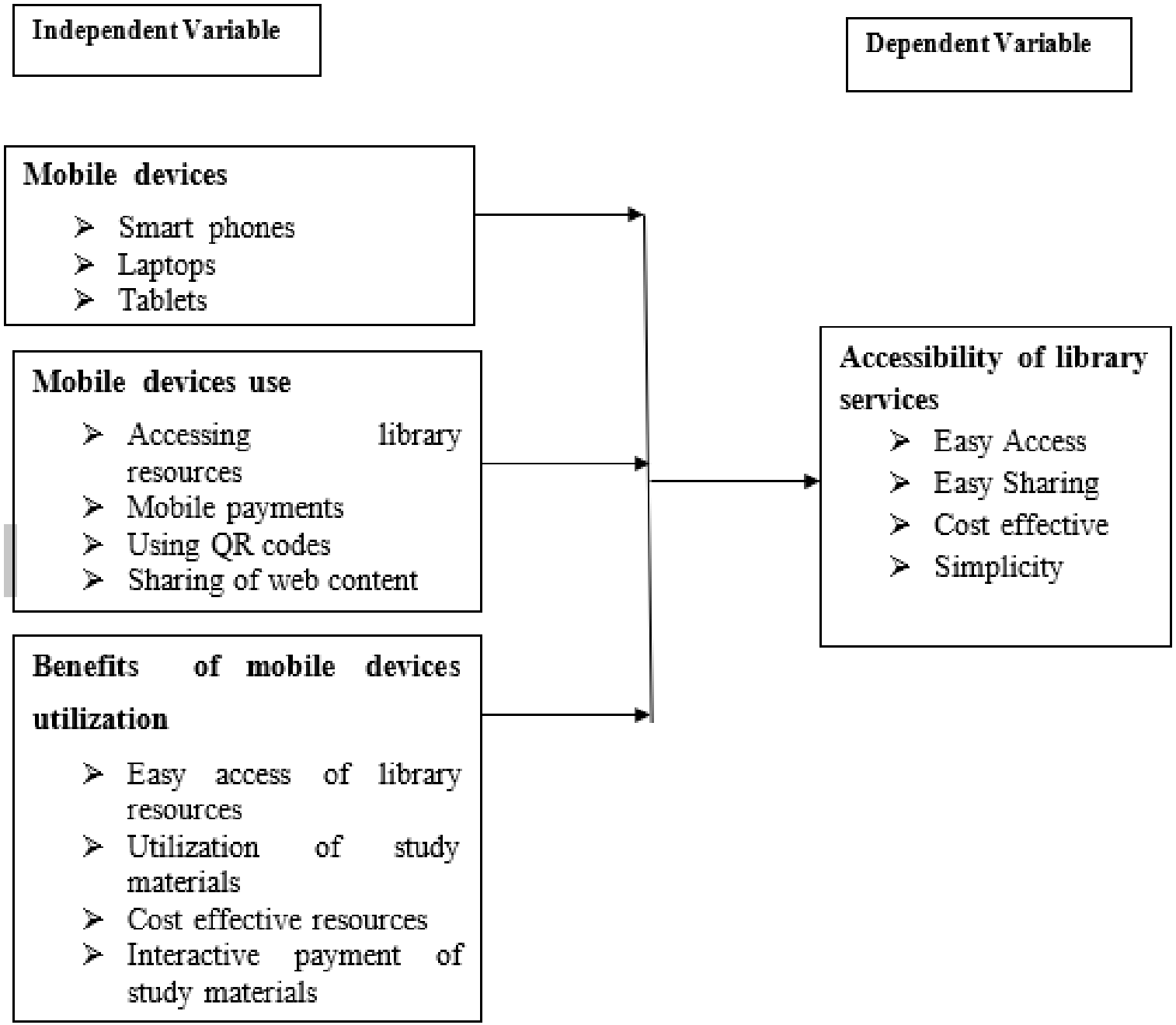
ii. Uncooperative respondents who were however assured of confidentiality in regard to the information that they would provide.

THEORETICAL FRAMEWORK

This study was based on the Technology Acceptance Theory developed by Davis (1986). The Technology Acceptance Theory postulates that an individual's attitude towards behavior is influenced by his/her belief. Notably, the model deals with the acceptability of an information system/tool, how it can be used to predict acceptability of the system/tool, and modifications to be made for acceptability.

Lu, Yu, Liu and Yao (2013) study on Technology Acceptance Model for wireless Internet applied the technology acceptance model and established that the attitude towards using it is jointly determined by perceived near-term and long-term usefulness and perceived ease of use (PEOU).

CONCEPTUAL FRAMEWORK



RESEARCH DESIGN

- This research adopted a descriptive research design

- which is used to investigate single entity in-depth in order to gain insight into larger cases. It uses smaller samples for in-depth analysis.

- In this study mixed method of both quantitative and qualitative was used in this study.

TARGET POPULATION

Table 3.1: Sample Size

Target Group	Target Population		Total	Sample Size (10% of the target)		Total	Sampling technique
	UoN	KU		UoN	KU		
Students	630	990	1620	63	99	162	Stratified random sampling
Academic staff	20	37	57	2	4	6	Stratified random sampling
Library Staff Members	34	57	91	3	6	9	Purposive sampling
ICT staff	18	20	38	2	2	4	Purposive sampling
Total	702	1104	1806	70	111	181	

SAMPLING TECHNIQUE

- Simple random sampling and purposive sampling techniques were used to select the respondenses in these study.

- The respondents were lecturers, students, senior library staff members and I.C.T staff

RESEARCH INSTRUMENTS

QUESTIONNAIRES

- The questionnaires had structured and open ended items that were distributed to collect primary data from all the sample participants.
- The closed –ended questions were used to reduce the wide variation in the respondenses thus ensured consistency in the answers for easy comparison while open ended questions enabled the respondents to give their opinions.
- The choice was informed by the fact that open ended questionnaires were easy to construct and allowed greater depth of response.

DATA ANALYSIS AND PRESENTATION

- The collected data was organized and prepared for analysis by coding and entry in the Statistical Package for Social Sciences (SPSS, Ver.28).
- The researcher used both descriptive statistics and inferential statistics. Data was presented by use of tables and percentages.

DATA ANALYSIS, PRESENTATION AND INTERPRETATION

Kumar (2014) added that a response rate of more than 70% is excellent who stated that the return rate above 70% as excellent.

Table 4.1: Response Rate

Group	Sample size	Response	Response rate
Users (students)	162	131	81%
Academic Staff	6	6	100%
Library Staff members	9	9	100%
ICT staff	4	4	100%
Total	181	150	83%

Table 4.2: Gender Distribution of Users

Table 4.2 shows that the male users formed 51.1 percent (F=67) while female users formed 48.9 percent (F=64) of the users. Therefore, the gender distribution approximately equal leaning towards the male respondents.

Gender	Frequency	Percent
Male	67	51.1
Female	64	48.9
Total	131	100.0

Table 4.3: Gender Distribution of Lecturers

Table 4.3 shows that the male users formed 33.3 percent (F=2) while female lecturers formed 66.7 percent (F=4) of the lecturers. The female gender had more representation than the male in regards to lecturer respondents' distribution.

Gender	Frequency	Percent
Male	2	33.3
Female	4	66.7
Total	6	100.0

Table 4.4: Gender Distribution of Senior Library Staff Members

Shows that the male library staff members formed 44.4 percent (F=4) while female library staff members formed 55.6 percent (F=5) of the respondents. Therefore, the gender distribution of library staff members neared equal proportions for both genders leaning towards the female respondents

Gender	Frequency	Percent
Male	4	44.4
Female	5	55.6
Total	9	100.0

Table 4.5: Gender Distribution of ICT Staff

Shows equal gender representation for both that the male and female ICT staff respondents. Therefore, there was no gender bias as the survey captured the opinion of both genders.

Gender	Frequency	Percentages
Male	2	50.0
Female	2	50.0
Total	4	100.0

Table 4.6: Age Distribution of Users

Shows that majority of the users ranged between 20 years and below forming 95.4 percent (F=124). The age groups between 21-25 years and 31-35 years each had two (F=2) respondents which formed 1.5 percent each. The age groups between 36-40 years and above 40 years each had one (F=1) respondent which formed 0.8 percent each.

Age Group	Frequency	Percent	Valid Percent
20 Years and Below	124	94.7	95.4
21-25 Years	2	1.5	1.5
31-35 Years	2	1.5	1.5
36-40 Years	1	0.8	0.8
40 and Above	1	0.8	0.8
Total	130	99.2	100.0
Missing System	1	0.8	
Total	131	100.0	

Table 4.7: Age Distribution of Lecturers

Shows the age distribution of lecturers. The age group that had the highest representation was between 21 and 29 years (50 percent, F = 3). This was followed by the age group between 30 and 39 years that had 33.3 percent (F=2) and finally followed by age group between 40 and 49 years which had 16.7 percent (F=1).

Age Group	Frequency	Percent
21-29 Years	3	50.0
30-39 Years	2	33.3
40-49 Years	1	16.7
Total	6	100.0

Table 4.8: Age Distribution of Senior Library Staff Members

shows the age distribution of senior library staff members. The age group that had the highest representation was between 21 and 29 years (77.8 percent, F = 7). This was followed by the age groups between 30 - 39 years and 40 – 49 years each having a representation of 11.1 percent (F=1).

Age Group	Frequency	Percent
21-29 Years	7	77.8
30-39 Years	1	11.1
40-49 Years	1	11.1
Total	9	100.0

Table 4.9: Age Distribution of ICT Staff Members

Shows the age distribution of ICT staff. The age group that had the highest representation was between 21 and 29 years (75.0 percent, F = 3). This was followed by the 30 - 39 years age group having a representation of 25.0 percent (F=1).

Age Group	Frequency	Percent
21-29 Years	3	75.0
30-39 Years	1	25.0
Total	4	100.0

Table 4.10: Working Experience of Lecturers

Shows the distribution of work experience for lecturers. The modal experience range was between 4-6 years forming 66.6 percent (F=4). This was followed by the experience of 1-3 years and 7-9 years each forming 16.7 percent (F=1).

Working Experience	Frequency	Percent
1-3 Years	1	16.7
4-6 years	4	66.7
7-9 Years	1	16.7
Total	6	100.0

Table 4.11: Working Experience of Senior Library Staff

Shows the distribution of work experience for senior library staff. The modal experience range was between 4-6 years forming 66.6 percent (F=6). This was followed by the experience of 1-3 years and 7-9 years forming 11.1 percent (F=1) and 22.2 percent (F=2) respectively.

Working Experience	Frequency	Percent
1-3 Years	1	11.1
4-6 Years	6	66.7
7-9 Years	2	22.2
Total	9	100.0

Table 4.13: Users Response on Ways of Utilizing Mobile Devices in Libraries

Shows the ways in which users use mobile devices in university libraries. The most use was in accessing library resources (80.7 %, F=106). Other users included making mobile payments (6.7 %, F=9) and using QR codes for searching publications (6.7 %, F=9). The least use of mobile devices in university libraries included sharing of user-generated web content (3.4 %, F=4) and cloud computing (2.5 %, F=3).

Ways of Utilizing Mobile Devices	Frequency	Percent
Accessing library resources	106	80.7
Mobile payments	9	6.7
Using QR codes to search publications	9	6.7
Facilitation of cloud computing	3	2.5
Sharing of user-generated web content	4	3.4
Total	131	100.0

Table 4.14: Benefits of Mobile Device Utilization in Libraries

As for the first item in the Likert scale, it is evident that majority of the users were of the view that mobile devices greatly made it easy to access library resources (51.5 percent, F=67). Another 44.6 percent (F=58) of the users thought that mobile devices improved the accessibility of library resources to a small extent.

No.	Utilization	Greater extent	Some extent	Not at all	Mean
a)	Easy access of library resources	67(51.5%)	58(44.6%)	5(3.8%)	2.48
b)	Exposure to diverse study content	71(54.2%)	51(38.9%)	9(6.9%)	2.47
c)	Convenient utilization of study materials	61(46.9%)	57(43.8%)	12(9.2%)	2.38
d)	Availability of cost effective resources	53(40.8%)	47(36.2%)	30(23.1%)	2.18
e)	Interactive payment and usability of study materials	31(23.8%)	61(46.9%)	38(29.2%)	2.00

Table 4.15: Do you encounter challenges while utilizing mobile devices in the Library?

Shows that 78.6 % of the respondents encountered challenges in utilizing mobile devices in university libraries.

Response	Frequency	Percent
Yes	103	78.6
No	28	21.4
Total	131	100.0

Table 4.16: Main challenges in using mobile devices in university libraries

Insufficient mobile - accessible resources (37.5%) and inadequate technical support for mobile access (38.5%). The other challenges noted by the users included: limited capacity of mobile devices (15.6%), incompatible library resources (7.3%) and negative educator perception (1.0%).

Challenges	Frequency	Percent
Insufficient mobile-accessible resources	49	37.5
Inadequate technical support for mobile access	50	38.5
Limited capacity of mobile devices	20	15.6
Incompatible library resources	10	7.3
Negative educator perceptions	1	1.0
Total	131	100.0

Table 4.17: Ways in which challenges of using mobile devices in university libraries can be countered

Solutions	Frequency	Percent
Improving mobile accessibility to library	44	33.6
Sufficient training of library technical staff on m-resources	21	16.4
Creation of numerous mobile devices access points.	33	25.0
Investment by the library on development of mobile support infrastructure	18	13.8
Mobile utilization campaigns to improve educator perceptions	9	6.9
All	6	4.3
Total	131	100.0

RECOMMENDATIONS

- The study recommends that universities should put up mobile device resource centers such that mobile device users can get technical assistance
- The universities should invest in good Internet connectivity covering the whole university area including student residencies.
- The university should also install adequate power sockets in and outside the libraries to enable mobile device users to be able to use the library resources without power limitation.
- The public universities should Create a Library Application (App) with the library e-resources.
- The university should also ensure effective and reliable Wi-Fi on-campus since lack of internet was identified as one of the challenges why students may not be able to access the library mobile technology.

THE END

THANK YOU