



**Proliferation of Social Media in Academic Libraries: Use of WhatsApp as a Platform for Providing Library Services**

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## **Proliferation of Social Media in Academic Libraries: Use of WhatsApp as a Platform for Providing Library Services**

### **Background to the Study**

WhatsApp is an encrypted instantaneous messaging application that was developed by Brian Acton and Jan Koum in 2009 (Anderson, 2016) but owned by Facebook since 2014 (Ansari and Tripathi, 2017). It is an Internet-based application available for both **personal computer (PC)** and smartphones that is capable of sending text messages, multimedia messages, documents, audio messages, images, contacts, and user location to other users. WhatsApp **does not carry advertisements on its platform that are a source of discomfort to many** users in other social media technologies (Aharony, 2015), and had over 1.5 billion users by August, 2019 (Lee, 2019).

The popularity of WhatsApp, more especially amongst the younger generation (Nyasulu and Chawinga, 2019), makes it an ideal platform for providing library services. Moreover, Ansari and Tripathi (2017) discovered that users' attitudes towards the use of WhatsApp in providing library services are favourable as they view it as a vehicle for the provision of better services. There is also evidence that WhatsApp is increasingly being deployed in libraries. In India, for instance, WhatsApp has successfully been used by a number of academic libraries to market library services including newly acquired resources, to offer services to clients, to keep in touch with potential users, and as a communication tool amongst librarians (Sahu, 2016). In the context of Malawi, Kamuzu College of Nursing (KCN), Lilongwe University of Agriculture and Natural Resources (LUANAR), The Polytechnic and Mzuzu University (MZUNI) libraries, were all planning to provide their services through WhatsApp (Chaputula and Mutula, 2018). The use of WhatsApp in providing library services has several benefits. These include increasing the engagement and interaction among library staff and their users, helping in gathering feedback to enhance user services, increasing utilisation of library content, maximising utilisation of the documents, and facilitating collaboration and enhancing communication between the library staff and its client base (Ansari and Tripathi, 2017).

### **Context of the Study**

Mzuzu University Library was established in 1998 to serve the information needs of staff and students of its parent institution. The Library services close to 6,000 undergraduate and postgraduate students pursuing **various** programmes through **Face to Face** and Open, Distance

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3 and eLearning (ODeL) modes plus over 200 academic members of staff (Mzuzu University  
4 Enrolment Statistics, August 2019; Mzuzu University Staff List, August 2019).  
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8 Mzuzu University Library introduced the Reference Desk in 2013 to assist in facilitating access  
9 to information and adequately serve the blossoming student population. The Reference Desk  
10 started using social media tools to better serve the needs of its clients. WhatsApp is one of the  
11 social media applications that were introduced in 2017 when the Library received a donation  
12 of 12 tablets from a US-based donor.  
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### 18 **Statement of the Problem**

19 Several studies conducted in Malawi have reported usage of mobile instant messaging tools  
20 and social media applications such as WhatsApp in academic activities and libraries. A study  
21 conducted by Chawinga (2016) reported the general uses of social media in academic  
22 institutions. Another study conducted by Nyasulu and Chawinga (2019) reported the use of  
23 WhatsApp for academic activities. However, no study has reported usage of WhatsApp in  
24 Malawian academic libraries, particularly the service which was recently introduced at the  
25 Mzuzu University Library. This means that very little is known about the service offering and  
26 its effectiveness. This study was therefore undertaken to address the existing knowledge gap,  
27 and addressed the following objectives:  
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- 36 • To identify services that are offered using WhatsApp at the Mzuzu University Library  
37 Reference Desk.
- 38 • To assess the effectiveness of the services offered through WhatsApp.
- 39 • To determine factors that affect the delivery of services offered through WhatsApp at  
40 the Mzuzu University Library Reference Desk.  
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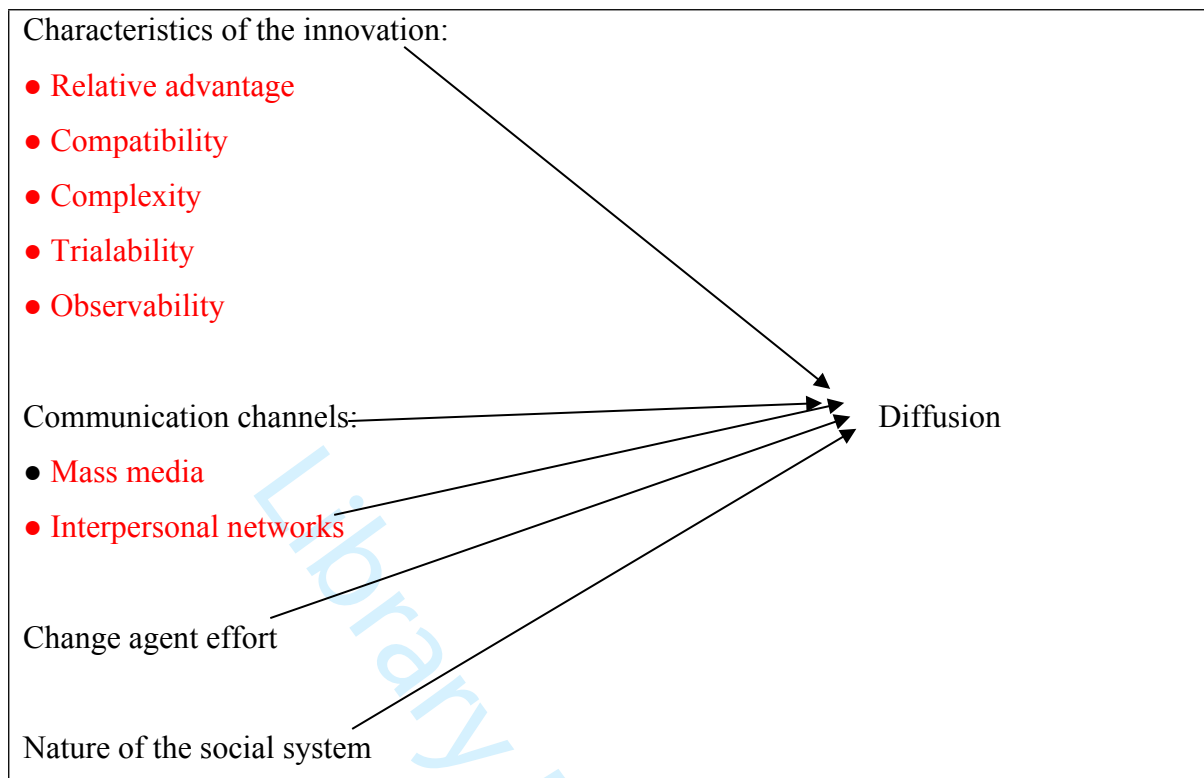
### 46 **Theoretical framework**

#### 47 **Diffusion of Innovation (DOI) Theory**

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52 Diffusion of innovation (DOI) theory outlines the processes or procedures through which an  
53 innovation is popularised from the originator to user (Rogers, 2003). DOI theory was  
54 developed by Everret Rogers in the 1960s (Bianchi, Di Benedetto, Franzò and Frattini, 2017),  
55 and has become one of the prominent theories for explaining trends in technological acceptance  
56 and use.  
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5 Both the innovation, which Rogers (2003, p.12) has described as “an idea, practice, or object  
6 that is perceived as new by an individual” and diffusion, which is a method “through which an  
7 innovation is communicated” (Rogers, 2003, p. 5), are key attributes in understanding the  
8 theory. The DOI posits that diffusion of technologies within an ecosystem is a phased process,  
9 driven by a smaller section of people often described as the early adopters making up between  
10 13-14% of all potential users. The early adopters comprise of risk takers and sometimes  
11 influential people in the society that tend to shape people’s opinion. The rest of the population  
12 adopt the technology much later.  
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20 The DOI further notes that four other key issues are important in the proliferation of a  
21 technology. These are the innovation itself, the communication channels used to popularise the  
22 technology, time, and the social system (Rogers, 2003). With regard to the innovation, it has  
23 been suggested that people are open to using an innovation if it is ‘perceived as being better  
24 than the idea that it supersedes’ (Rogers, 2003, p.229). It is therefore imperative that whoever  
25 is marketing a particular technology or innovation should focus on the benefits that are  
26 associated with use of that technology while at the same time using a communication channel  
27 that reaches out to the intended audience to ensure rapid diffusion or uptake. The issue of time  
28 comes into play when one considers that different people respond to different ideas differently.  
29 While others are quick to respond, others do so at a relatively slower pace (laggers).  
30 Consequently, promoters of new technologies need to carefully study the social system they  
31 are operating in to ensure that they carefully plan on how they can go about popularising their  
32 innovations to ensure good uptake.  
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**Figure 1: Diffusion Elements in the Rogers Framework (Source: Chaudhuri, 1994)**

### Strengths of the DOI Theory

The DOI theory postulates that diffusion of an innovation is “a general process, not bound by the type of innovation studied, by who the adopters [are], or by place or culture” (Rogers, 2003, p. 16). The implication is that the process through which an innovation diffuses through the social system has universal applications to all fields that develop the innovations. This makes the model ideal or tied to the study of specific innovations.

Furthermore, the DOI theory is well established and has been used extensively in studies focussing on the diffusion of information and communications technology (Prescott and Conger, 1995). For instance, Wang and Doong (2010) have used the theory in their study focussing on the diffusion of mobile music service in Taiwan while Nath, Hu and Budge (2016) have used the DOI to study the acceptance of information and communications technologies (ICTs) in the public health sector of New Zealand. Similarly, Rupa (2015) used the DOI theory in the study of dissemination of news through social media that includes WhatsApp.

## Weaknesses of the DOI Theory

Despite its popularity, researchers such as Newell, Swan and Galliers (2001) and Fich-man and Kemerer (1997) have criticised the DOI theory arguing that it is biased towards the technological aspect of the innovation adoption process. The two scholars contend that other contingent issues beyond the technical features of an innovation should be considered as well to ensure that a deeper understanding emerges. In spite of this, the DOI theory has been used to support this study as it was observed to have more strengths than weaknesses.

## Methodology

This study used the case study as its underlying methodological research design. Use of the case study allowed for a more detailed examination of the issues studied (Creswell, 2014). The study further deployed a convergent parallel mixed methodological approach whereby qualitative and quantitative data sets were collected simultaneously and merged during presentation and discussion of findings (Teddlie and Tashakkori, 2009).

With regard to qualitative data, the researchers conducted in-depth semi-structured interviews with five librarians that were either working or had worked at the Mzuzu University Library Reference Desk for a period of not less than 6 months. The interviews were conducted using interview protocols. Records of the interviews were captured through use of mobile phone voice recorders while backup notes were documented in notebooks using a lead pencil. The data collected was transcribed in MS Word and thereafter analysed thematically.

Quantitative data were realised through a detailed content analysis the researchers conducted of WhatsApp posts for the tablets deployed to the Reference Desk. The data collected were systematically documented on coding schedules and analysed using scientific calculators. Results were presented in a table.

The researcher used two main methods to validate the data collected. Firstly, the interview protocol was circulated to peers who commented on its suitability. Feedback received from the peers were used in modifying the interview protocol to make it effective. The study findings were further validated using the member checking method. Teddlie and Tashakkori (2009) have described member checking as a fundamental method for gauging the reliability of the

investigator's interpretation of the research data. According to Punch (2005), member checking can be implemented immediately after collecting the data **and/or/ in the course of data analysis**. If implemented soon after data collection, the process involves taking the 'interview transcript to the interviewee before analysis to check that the record is accurate' (p. 255). When implemented in the course of data analysis, the exercise involves taking the study findings to those being studied for confirmation, verification and validation. Member checking as a data validation technique in this study was implemented during data analysis. All interviewees were given the draft research report through e-mail to verify accuracy of the records. Feedback received was incorporated in the final report. The researchers also pilot-tested the coding schedule used in document analysis before deployment. Weaknesses observed during the exercise were used to amend the instrument before it was used.

The researcher solicited and obtained authorisation from the Mzuzu University Directorate of Research before collecting data from the research subjects. The researcher also obtained written consent of all interviewees to conduct and record the interviews. The results of the study were further anonymised to conceal respondents' identities. All this was done to ensure that the study adhered to good research ethical principles.

### **Research delimitations and limitations**

WhatsApp is a relatively new mobile phone application although it has rapidly grown in popularity in the short time span in which it has been in existence. Consequently, only a few studies including those detailing its deployment in the academic library sector are in existence. Therefore, the literature review part of this study was mainly based on social networking applications in libraries and other studies that tout the potential of WhatsApp as a vehicle for providing library services other than actual use.

A study by Chaputula (2016) indicated that some academic libraries in Malawi that included Mzuzu University were planning to introduce mobile library services that were to include the use of WhatsApp mobile application. However, the study did not specify how the application would be used, and the kind of services that would be offered using it. This is the first study focussing on the use of WhatsApp in providing library reference services to be undertaken, not only at Mzuzu University Library, but the entire academic library sector in Malawi. Therefore, the findings only apply to the study setting much as they may also mirror what is taking place in related libraries.

## Literature Review

Studies focussing on the use of WhatsApp abound in the literature, signaling a growing interest of researchers on the topic. Besides detailing how the application is used, the studies further discuss the benefits accrued through its usage but also tackle challenges associated with usage of the mobile application.

Two Nigerian-based studies showed that WhatsApp can effectively be used in providing library services. Odu and Omini (2017), for instance, examined the use of mobile phone applications in the utilisation of library services at the University of Calabar Library in Nigeria. Data was drawn from a sample of 225 users using a questionnaire. Results of the study showed that there is a significant relationship between use of WhatsApp and the utilisation of library services. However, the findings did not reveal the services users accessed through the application (app). In another study, Okoroma (2018) investigated the usage of social media for the delivery of modern reference services in Nigerian academic libraries. The findings of this study were based on data collected from library personnel that were involved in offering reference services in academic libraries way back in 2011. The datedness of the data could have a bearing on the findings considering the rapid pace at which technology is moving these days. Findings indicated that usage of social media applications in the offering of reference services was widespread amongst the libraries studied, with 68.8% of all libraries reporting usage of at least one mobile app. Findings further revealed that Facebook (42.2%) was the most used app while WhatsApp (21.9%) accounted for the second highest usage. Considering that WhatsApp has grown exponentially ever since this study was conducted, evidenced by the fact that over 1.5 billion users were recorded by August, 2019 (Lee, 2019), it is assumed that usage could be much higher now if the app is still used for the purpose.

In a more recent study, Chigwada, Chiparausha and Musarurwa (2016) used mixed methods approach to study the adoption and usage of social media technologies at the Bindura University of Science Education in Zimbabwe. The study found that WhatsApp was one of the six mobile apps that included Facebook, LinkedIn, Skype, Twitter, Live Chat and Skype that were used in library service delivery. Study findings further noted that WhatsApp and the other mobile apps were used mainly for communication in the form of making announcements and provide news. Nevertheless, the study did not specify to whom these uses were directed to (library staff or users). Moreover, the usage of WhatsApp in the provision of reference services was not reported in this study. However, limited time to manage mobile and social media



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3 applications, knowing the best time to make posts, difficulties in engaging the audience,  
4 privacy concerns and monetary cost of using mobile and social media applications were  
5 identified as some of the major factors faced in using mobile and social media technologies.  
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10 Abok and Kwanya (2016) examined how Kenyan academic libraries can exploit social media  
11 to offer their services by using the Technical University of Kenya Library as a case study. Data  
12 was collected from students and librarians through interviews. Findings indicated that many  
13 academic libraries in Kenya are using a number of social media applications, WhatsApp  
14 included, to among other purposes, share information resources, market library resources and  
15 services, provide reference services, and facilitate formation of professional networks. Some  
16 of the benefits associated with the use of WhatsApp in academic libraries in Kenya include  
17 saving of time for searching, accessing and using information, reduction in costs of  
18 accommodating clients, and increased visibility of library products and services. However,  
19 inadequate ICT infrastructure, lack of human capital, and absence of appropriate policies were  
20 discovered to be hampering the offering of library services using WhatsApp and other social  
21 media applications.  
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32 Chaputula and Mutula (2018) carried out a mixed methods study that investigated the offering  
33 of library services with the aid of mobile phones in three Malawian universities. Results of this  
34 study indicated that only one of the five libraries studied had fully implemented the offering of  
35 information services with the aid of mobile phones while the rest were planning to introduce  
36 the same focusing on WhatsApp. Results of this study also showed that there were some factors  
37 that were affecting the use of mobile phones in offering library services. The most prominent  
38 ones included poor network quality, high cost of mobile telecommunications services, and  
39 shortage of skilled library and technical staff. These challenges are similar to those that came  
40 up in an earlier study conducted by Abok and Kwanya (2016) in Kenya.  
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50 In yet another study, Sahu (2016) employed a social survey approach to examine how librarians  
51 are adopting social media tools to promote a number of library activities. An online  
52 questionnaire was administered to a sample of 45 engineering college librarians, attracting a  
53 response rate was 88.9%. The study findings revealed that WhatsApp was one of the heavily  
54 used social media tools in the libraries studied. The application was used as a way of attracting  
55 new acquisitions in terms of library collections and enrolment of new users, provision of  
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3 customer services, and for communication among librarians. The research concluded that while  
4 use of social media tools was blossoming in libraries, it had not yet reached maturity.  
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## 8 **Results and Discussion**

### 9 **Services offered using WhatsApp at the Mzuzu University Library Reference Desk**

10 The study found that Mzuzu University Library launched the WhatsApp service in 2018  
11 although the “exact date is not known”. According to one of the librarians interviewed, the  
12 service was started “when Mzuzu University Library received tablets from a donor based in  
13 the United States [of America]” as part of the recovery effort of the fire disaster the Library  
14 experienced in the night of 18 December 2015.  
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22 An analysis of the interviews conducted shows that there were many reasons that were behind  
23 the establishment of the WhatsApp **Reference Service**. One librarian indicated that “a lot of  
24 people don’t like coming to the library and hence the library wanted to reach out to them.”  
25 **Another one** stated that “the library is aware that each and every person has a mobile phone  
26 which they can use to access information from the library while they are in their homes.” Yet  
27 another librarian said that the aim was “to assist people who feel shy when requesting  
28 information physically [inside the library].” One more librarian indicated that “Odel [Open,  
29 Distance, and eLearning] users only access information through WhatsApp since they do not  
30 have libraries where they can get information when they are at their homes.”  
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40 Although a number of reasons were given as the reason behind the establishment of the  
41 WhatsApp service, all of them seem to be converging on one main theme: The library’s desire  
42 to serve people from a distance. This is in line with current global trends in library service  
43 provision whereby libraries are deploying various ICT gadgets to **not only** reach out to distant  
44 users but also provide **round-the-clock** accessibility to library services. This finding reflects  
45 other findings obtained in a study conducted by Abok and Kwanya (2016) where it was  
46 discovered that academic libraries in Kenya use WhatsApp in service provision. Some of the  
47 benefits accrued through the use of WhatsApp include saving time for searching, reduced cost  
48 of providing sitting space for patrons, and improvements in marketing of information services.  
49 It is hoped that effective use of the WhatsApp service in the Mzuzu University Library could  
50 lead to the realisation of similar benefits.  
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The study has established that there are a large number of services that are offered through the WhatsApp service. One librarian commented that WhatsApp is used for “downloading information especially examination past papers, books and other research works from the institutional repository”. What happens is that students make requests for examination past papers and e-books which are downloaded from the Mzuzu University Institutional Repository and open source websites respectively. After downloading, the items are sent to the students through WhatsApp. Another librarian stated that the service is used for “screen shooting portable document format (pdf) documents for sharing with users” and “to find information from electronic journals.” Yet another librarian observed that “the services offered include answering users’ queries and inquiries using WhatsApp at the Reference Desk.” This could be termed general research advice. Other services offered through the WhatsApp service include “citation and many other things”, “providing information services such as pdf documents”, “answering clients queries”, “teaching users how to search information”, and “downloading information for research for 3rd and 4th level students.”

With regard to the main users of the services provided through WhatsApp, one librarian indicated that the “main users are students, especially ODeL students who are far away from campus.” However, responses given by two other librarians show that the range of patrons is broader as one librarian said “ODeL, Face-to-Face students, and lecturers” patronise the service whilst another one stated that “staff members including ODeL students and Face-to-Face students” patronise the service. One other librarian stated that “generic students especially level ones” patronise the service and another librarian was of the opinion that “ODeL students outnumber face to face students.” These findings show that the WhatsApp service has a large number of patrons that include students (Face-to-Face and ODeL) and academic staff. Much as this is the case, ODeL students seem to be the main users of the service.

The researcher conducted a content analysis of the two tablets deployed to the Reference Desk to determine the kind of queries that are received. The findings are presented in Table 1.

**Table 1: Services offered through WhatsApp at the Reference Desk**

Program of study	Level of study	Total number of queries received	Types of queries received	Number of queries responded to	Number of queries not responded to	Number of respondents satisfied	Number of respondents not satisfied

BAE	Unknown	60	56 eBooks + 4 Exam papers	40	13	40	13
	1	214	57 eBooks + 157 Exam papers	122	6	122	6
	2	147	20 eBooks + 127 Exam papers	100	0	92	8
	3	37	4 eBooks + 33 exam papers	6	0	4	2
	4	18	6 eBooks + 12 exam papers	18	0	18	0
<b>Totals for BAE</b>		<b>476</b>		<b>286</b>	<b>19</b>	<b>276</b>	<b>29</b>
BSCE	1	19	6 eBooks 13 +Exam papers	9	1	9	1
	2	1	1 Exam past paper	1	0	1	0
	3	26	26 Exam papers	26	5	18	6
	4	24	24 Exam papers	24	0	24	0
<b>Totals for BSCE</b>		<b>70</b>		<b>56</b>	<b>6</b>	<b>51</b>	<b>6</b>
BRET	3	28	28 Exam papers	28	0	28	0
	4	24	24 Exam papers	24	0	24	0
<b>Totals for BRET</b>		<b>52</b>		<b>52</b>	<b>0</b>	<b>52</b>	<b>0</b>
BTRS	1	22	3 eBooks + 19 Exam papers	22	0	22	0
	2	7	1eBook + 6 Exam papers	7	0	7	0
	3	9	9 Exam papers	9	0	9	0
<b>Totals for BTRS</b>		<b>38</b>		<b>38</b>		<b>38</b>	
BLIS	2	23	6 eBooks + 15 Exam papers	19	1	19	1
Tourism	1	6	6 Exam papers	5	1	5	1
Land Mgt.	Unknown	1	1 eBook	1	0	1	0
BNSM	Unknown	4	4 eBooks	4	0	4	1
	2	6	6 Exam past papers	6	0	6	0
Forestry	1	6	6 Exam papers	6	0	6	0
Unknown	Unknown	1	1 eBook	1	0	1	0
UCE	Postgraduate	11	5 eBooks + 6 Exam papers	11	0	11	0
BICT	2	<b>8</b>	8 past papers.	8	<b>0</b>	<b>8</b>	<b>0</b>
MLIS	Masters	<b>9</b>	9 e-books	9	<b>0</b>	<b>9</b>	<b>0</b>

Security Studies	4	1	1 e-book	1	0	1	0
MSWRM Masters		2	2 e-books	2			
<b>Totals</b>		<b>712</b>	<b>115 eBooks +597 Exam Past papers</b>	<b>608</b>	<b>104</b>	<b>593</b>	<b>119</b>

An analysis of the data captured in Table 1 shows that the total number of requests received through WhatsApp at the Reference Desk was 712. Most of the queries received were in a form of examinations past papers (597) and e-books (115). These findings correspond with those obtained through interviews that identified examinations past papers and e-books as the main services accessed through WhatsApp. The results further indicated that the majority of the queries 476 (66.9%) originated from BAE (Bachelor of Arts Education) students with those in Level 1 (214, 45%) and Level 2 (147, 30.9%) making the most requests. BScE (Bachelor of Science Education) students made the second highest number of queries 70 (14.7%). Although the study did not establish how students accessing services through WhatsApp were pursuing their studies, the BAE and BScE programmes have more students pursuing their studies through the open, distance and eLearning mode (Mzuzu University Enrolment Statistics September 2019, 1). It is, therefore, possible that most of these queries were filed by ODeL students as the librarians interviewed indicated as the main users of the service.

### **Effectiveness of the services offered through WhatsApp**

The researchers posed a number of questions to the librarians that were aimed at gauging the effectiveness of the WhatsApp service. As the study had already established that ODeL students were the main users of the WhatsApp service, the researchers sought to find out why and when students do not use the service. In this regard, one respondent stated that “generic students rarely use WhatsApp because they come to the library on their own to ask questions they may have at the Reference Desk or download [materials they need] themselves.” It was also indicated that ODeL students do not use the WhatsApp service much “when they are on campus because they think it is not necessary.” This implies that perception about the effectiveness of the WhatsApp service is determined by the programme of study, time and location.

The researchers further sought to find out the type of feedback librarians managing the Reference Desk get pertaining to the effectiveness of the WhatsApp service. It was found that

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3 mixed reactions are expressed by users of the service, and this is determined by one's  
4 experience, with others exhibiting positive views whilst others displaying negative sentiments.  
5 On the positive side, one librarian remarked that "students give positive feedback  
6 congratulating Mzuzu University Management for starting the WhatsApp Service." Another  
7 librarian commented that "students appreciate due to lower cost of accessing information from  
8 the library through the use of WhatsApp." Yet another librarian stated that "students express  
9 thankfulness when they are assisted." On mixed feedback, it was noted that "users are  
10 appreciative of the service but they complain that they receive feedback very late." Another  
11 librarian remarked: "In most of the cases if they are satisfied, they appreciate, but in most of  
12 the cases they do not give feedback." On the negative side, the following findings were made:  
13 "We receive negative comments when you [librarian] take days to respond to the queries."  
14 Another librarian said that "not many students give feedback when assisted." Although the  
15 feedback received on the operation of the WhatsApp service is mixed, much of it leans on the  
16 positive side.  
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29 Results obtained from the content analysis show that majority of the users are satisfied with  
30 the services they access through the WhatsApp service. For instance, one of the users after  
31 getting what s/he was looking for commented saying "thank you so much, assignment  
32 *yaphweka* [made simple]." Others simply say "you are welcome", "thanks", "thanks a lot for  
33 the assistance", "am so thankful for the support. These notes will indeed assist me. God bless  
34 n good afternoon", etc. It should also be noted that some of the users hardly give feedback  
35 whilst a small number express dissatisfaction sometimes with the slow pace of responses. For  
36 instance, one user wrote, "still waiting, sir". The librarian responded by saying "hello madam.  
37 I have been trying my best to search for the book but I can't find a downloadable one". Overall,  
38 much of the feedback received is positive.  
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48 Librarians were further asked to rate the performance of the WhatsApp service. Again, findings  
49 show mixed views pertaining to the performance of the service. One librarian indicated that  
50 the service is "timely and helpful". Another librarian commented that the service "is good."  
51 Yet another librarian indicated that the service is "not quite good since only a small percentage  
52 [of users] were beneficiaries." Still, another librarian commented that the service is "still in the  
53 developing stage." The feedback received shows that the service has a lot of potential but still  
54 needs some perfecting. Just as it has been noted in other mobile library services (Chaputula  
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3 and Mutula 2018), the WhatsApp service may be facing some of these challenges probably  
4 because it may not have reached the maturity stage.  
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8 Results of the content analysis focussing on the interactions between librarians and users using  
9 WhatsApp revealed that a total of 712 requests were received. Further analysis of the data  
10 shows that 608 (85.4%) of the requests received were responded to. On the contrary, only 104  
11 (14.6%) of the requests received were not responded to. This signifies that the majority of the  
12 requests were attended to. It is therefore not surprising to note that most of the respondents 593  
13 (83.3%) were satisfied and only a small number of respondents 119 (16.7%) were not satisfied.  
14 These findings signify that the service was better managed hence effective.  
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### 22 **Factors affecting the delivery of services offered through WhatsApp at the Mzuzu** 23 **University Library Reference Desk**

24 The researcher asked respondents to indicate the factors that are affecting the delivery of  
25 services through WhatsApp. An analysis of the responses shows that the factors fall into three  
26 main categories: Technical, human resource, and service-related factors. However, the  
27 technical-related factors were many, and were frequently cited by almost all the librarians  
28 interviewed.  
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36 Some of the technical-related factors raised were that the “computer does not have enough  
37 space to enable us to download information.” [Here reference was made to the desktop  
38 computer stationed at the Reference Desk which librarians use to download some of the content  
39 requested by users before transferring to the tablet for onward delivery to users through  
40 WhatsApp]. Still, on the same, another librarian stated that “it seems like the space of the  
41 computer is running out so it gives us problems to download.” Other technical-related  
42 comments received focused on the tablet and network connectivity. With regard to the tablets,  
43 one librarian indicated that “one tablet had challenges in connecting to the network” whilst  
44 another librarian observed that “one tablet has developed a fault and users who used to access  
45 library services [through that line] cannot reach library staff.” Yet another librarian  
46 emphatically stated that “gadgets [tablets] are not enough.” A number of other comments were  
47 raised in relation to the network. One librarian complained that “in most cases the network  
48 drags and this makes us take more time to respond to users’ queries.” Another librarian said,  
49 “Internet connectivity becomes very slow when providing responses to user queries.”  
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3 Similarly, a number of service-related factors were raised by the respondents that affected the  
4 operations of the WhatsApp service. One librarian bemoaned the nature of requests received  
5 indicating that they are repetitive, thus saying: “Students ask for the same service each and  
6 every day instead of doing it on their own i.e. downloading examinations past papers today and  
7 they come tomorrow to ask for the same information.” Findings displayed in Table 1 have  
8 shown this to be true. A probable explanation to this scenario is what was expressed by another  
9 librarian who indicated that “some people do not understand what we provide at the Reference  
10 Desk.” Considering that a number of other services such as “general research advice” and  
11 “proper citation styles” are offered, if this explanation does not hold then it is possible that  
12 users do not find the other services to be of value to them. Another service-related factor that  
13 came up in the study is the failure to receive and respond to user queries on time due to network  
14 challenges. It was also noted that some students do not share their numbers because they are  
15 shy. On the human resource factors, it was noted that staff is inadequate which makes it difficult  
16 for them to serve clients at the Reference Desk in addition to those who post their requests  
17 through WhatsApp. It was further noted that the staff have challenges in search techniques  
18 which need to be addressed. Similarly, a study conducted by Chaputula and Mutula (2018) that  
19 investigated the offering of library services using mobile phones in public universities in  
20 Malawi noted that technical, human resource and service-related factors need to be overcome  
21 to ensure smooth delivery of services through mobile phones.  
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### 38 **Conclusions and recommendations**

39 The study investigated use of WhatsApp as the platform for offering reference services at  
40 Mzuzu University Library in Malawi. The researcher conducted interviews with librarians and  
41 also did a content analysis of WhatsApp posts. Data was analysed thematically. Findings  
42 revealed that WhatsApp has successfully been used to deliver a number of user and reference  
43 services to students and staff. Notwithstanding this, a number of technical, human resource and  
44 service-related factors were discovered to be affecting the delivery of services hence need to  
45 be addressed. It is therefore recommended that Mzuzu University Library Management should  
46 take steps to address these challenges to ensure efficient and effective service delivery.  
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