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"WhatsApp" as a Learner Support tool for distance education: Implications for Policy and Practice at University of Zambia

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***Abstract* - One of the norms of distance education is that learners are the drivers of their learning and teachers merely facilitate the learning process. To this effect, learners are expected to be fully engaged in their studies throughout for them to perform well in their studies. However, the 'distance' factor inherent in distance education has been identified as one of the major challenges for learners studying in this mode. The geographical isolation significantly detracts from the need for social interactions that are usually afforded by face-to-face situations. Consequently, the void leads to isolation, confusion, stress and ultimately contributing to high failure rate and drop-outs from the academic programmes. In this study, we document the use of "WhatsApp" as a tool for learner support among postgraduate students on the distance learning mode within the University of Zambia. The study, through "WhatsApp", follows students where they are found and learns from them without disrupting their privacy and culture to inform Open Distance Learning policy and practice. It is now clear that the University should be proactive to encourage the creation of self-generated social networks to mitigate vexing emergent issues students face on the distance learning mode.**

Keywords: WhatsApp; Social Media; Learner Support; Distance Education; Ethnographic*; *University of Zambia

I. CONTEXT

This is an initial publication from a 2 year longitudinal study of a cohort of postgraduate students on a Masters in Education Management through the distance learning mode at the University of Zambia. The study is based on the first 6 months experience on the WhatsApp phenomenon as a Learner Support tool for distance learning.

The study is anchored within the Institute of Distance Education (IDE) of the University of Zambia (UNZA). The University is configured as a dual mode institution, meaning regular and distance education programmes running parallel to each other while sharing resources [1]. According to [2] and [3], the IDE is an important vehicle through which the University is increasing access to quality education. This is evident in the high level of enrolment of postgraduate students accessing university education via distance mode averaging 600 students per academic year since 2014. Despite the University having existed since 1966, postgraduate programmes have not been on offer through the distance learning mode until the year 2014. Instead, focus has been on undergraduate programmes [4].

In 2010, the University of Zambia (UNZA) entered into a collaborative relation with the Zimbabwe Open University (ZOU) to offer postgraduate programmes [5]. Among programmes on offer are the four namely: Master of Science in Counselling (MSCC); Master of Peace Leadership and Conflict Resolution (MSPL), Master of Education Management (MDEA) and Masters of Business Administration (MBA). Tables 1 and 2 display statistics of students in four selected programmes for the 2017/18 academic year.

Table 1: Sampled Postgraduate Programme Statistics for 2017/18

Programme	Number Registered	Number Examined	% Examined
1). MSPL Yr. 1	90	75	80
1). MSPL Yr. 1	75	75	100
2). MBA Yr. 1	76	55	72
2). MBA Yr. 2	45	44	98
3). MSCC Yr. 1	22	18	82
3). MSCC Yr. 2	19	19	100
4). MDEA Yr. 1	95	75	79
4). MDEA Yr. 2	117	116	99

Source: IDE, UNZA 2018 Student Performance Statistics [6]

Table 2: Postgraduate Pass Rate for 2017/18 Academic Year

	Semester 2, 2017		Semester 2, 2018	
	Year 1 (%)	Year 2 (%)	Year 1 (%)	Year 2 (%)
1). MSCC	100	100	100	100
1). MSPL	96	85	97	100
4). MDEA	96	85	96	98
4). MBA	96	87	96	92

Source: IDE, UNZA 2018 Student Performance Statistics [7]

Despite the good academic performance demonstrated by students, there are still worrying areas as noted in the high attrition rate of students in programmes such as MBA Year 1 of 28%, MDEA 21% and MSPL Year 1 of 20 % as inferred in table 1. In addition, whereas the Pass Rate is impressive in some programmes such as MSCC of 100%, there are still unresolved issues contributing to the lower Pass Rate in MDEA as noted in figure 2. One possible challenge that could be contributing to this increased student attrition and academic performance could be poor level of communication among students and between students and staff, as noted from anecdotal evidence over the years. In response to this challenge, one of the measures self-initiated by students included the use of WhatsApp as tool for learner support.

According to [8]; [9] and [10], WhatsApp tool is a proprietary, instant messaging subscription service for smart phones and selected feature phones that uses the internet for communication. In addition to text messaging, users are able to share images, video and audio media messages using integrated mapping features. WhatsApp is an application available on the new generation smart phones like IPhone and Android. Users are not charged for a text sent through WhatsApp. This is because WhatsApp sends messages through an internet data connection. WhatsApp supports many different message types, from simple text to pictures to audio files and videos [11], [12] and [13].

Recent statistics puts WhatsApp usage at one (1) billion as at February 2016 [14]. It was founded by Brain Acton and Jan Koum former employees of yahoo. WhatsApp uses a customized version of the open standard of the extensible messaging and presence protocol (XMPP). Upon installation, it creates a user account using the phone number of the registering member as the username. WhatsApp is considered to be the most sought after messenger for Apple iOS, Android, Nokia S40 and Symbian 60, blackberry and window phone. WhatsApp can also be used on laptops and computers based on configuration applicable that involves users downloading an app player and this enables users to download the WhatsApp web version and use it comfortably without restriction [15].

A. *Statement of the Problem*

Research studies worldwide show that learner isolation leads to disconnection and social exclusion, causing high discomfort, reduction in learner participation and consequently high dropout rate among distance learners. WhatsApp on the other hand has been identified as a critical ingredient for mitigating the challenges of learner isolation. In Zambia, there exist no documented evidence that show the use of and lived experiences of distance education learners on WhatsApp. Consequently, this lack of research based evidence documenting the use of WhatsApp and lived experiences of learners contributes to failure to establish means of combating the unresponsive learner support scourge, leading to lowered quality of ODL offered to learners. The timing of the study is crucial, since it is conceived at a time when the UNZA is repositions itself as World Class University of the 21st century.

B. *Main Objective of the Study*

The main objective of the study was to explore the use of WhatsApp as a learner support tool by postgraduate distance students at University of Zambia.

C. *Study Objectives*

The following specific objectives guided the study:

i). Examine the time moments WhatsApp is in use.
ii). Explore the use of WhatsApp by postgraduate distance students;
iii). Explore the emergent themes on WhatsApp postgraduate group;
iv). Explore challenges faced by postgraduate students on WhatsApp.

D. *Significance of the Study*

The findings from this study enlightens educational practitioners on the value of WhatsApp as a tool for learner support. In addition, the study provides a unique contribution on how best to maximise the benefits inherent in the WhatsApp as a learner support tool for and by distance education students in developing countries such as Zambia.

II. THEORETICAL FRAMEWORK

The study is guided by two theories namely: [16] Michael Moore's (1989) theory of interaction and [17] George Siemens' (2004) theory of Connectivism. For [18] Moore's theory, he postulates that three interactions exist in distance education as follow:

1) Students and their lecturer are engaged in two way interaction.
2) Students interact with students by means of group discussions and group project work.
3) Students interact with the content by means of study modules and other materials.

In this study, we mirror the three types of interactions cited above using the "WhatsApp" and elicit discussion on the potential of "WhatsApp" as a learner support tool in distance education.

In addition, Siemens believes that learning in the 21st century is too complex to be processed through laws of behaviourism and cognitively. Instead there is need to rely on a network of people and increasingly technology to store, access, and retrieve knowledge and motivate its use [19]. See figure 1.

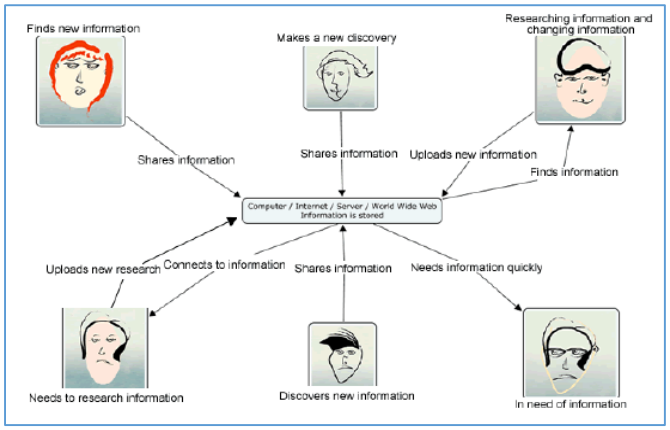

Fig. 1. Diagram of Connectivism

George Siemens [20] observes that Connectivism is a learning theory for the Digital Age. In Connectivism, learning is a process that occurs based upon a variety of continuously shifting elements. The starting point of learning is the individual who feeds information into the network, which feeds information back to individuals who in turn feed information back into the network as part of a cycle as can been seen in figure 1.

III. LITERATURE REVIEW

The related literature reviewed border on: social media as data mines, how to study from social networks, social networks and distance education, what makes social network succeed and what issues exist among distance education students, among others. We then provide knowledge gaps stemming from the reviewed literature to justify the current study.

Mefolere (2016) focuses on WhatsApp as an information sharing tool showcased its prospects, challenges based on review of literature. Anchored on network society and media convergence theory that viewed everyone as nodes in a network; relationship depended on happenings in media-centered communication space and the ability of social actors, in various contexts, to act on programs, modifying them in the sense of their interests. This dynamic landscape of continuous, diversified witnessing and reporting did not represent a crisis in journalism, but rather, an explosion of it. The profession seemed to be more alive than ever and going through a multiplication of both forms and content at amazing speed and all the actors involved seemed to benefit in one way or the other [21].

Bouhnik & Deshen (2014) interrogated WhatsApp use in a school environment between teachers and students. In their exploratory study, twelve half-structured interviews were carried out with teachers who use the application in order to communicate with their pupils. Findings indicated that WhatsApp groups are used for four main purposes: communicating with students; nurturing the social atmosphere; creating dialogue and encouraging sharing among students; and as a learning platform. The participants mentioned the technical advantages of WhatsApp, such as simple operation, low cost, availability, and immediacy. They also referred to educational advantages, such as the creation of a pleasant environment and an in-depth acquaintance with fellow students, which had a positive influence upon the manner of conversation. The participants also indicated academic advantages such as the accessibility of learning materials, teacher availability, and the continuation of learning beyond class hours. Nevertheless, there are also challenges and problems. Firstly, there is the technical difficulty that not all high school students possessed a Smartphone. Secondly, teachers opted to be annoyed by the flood of irrelevant and nonsensical messages. Also, educational difficulties arose on account of incompatibility of language between students and the students' assumptions that their teachers needed to be available on a 24/7 basis [22].

Yeboah & Ewur (2014) in their study focused on Impact of WhatsApp Messenger Usage on Students Performance in Tertiary Institutions in Ghana. This study sought to empirically identify the impact of social network (WhatsApp messenger) on the performance of tertiary students in Ghana from the perspective of the students. To achieve this, 50 students from five tertiary institutions were interviewed and 500 questionnaires were administered to students from same institutions. The study established that, WhatsApp instead of making communication easier and faster thereby enhancing effective flow of information and idea sharing among students, rather had impacted negatively on the performance of tertiary students in Ghana .The study among other things unveiled the following: WhatsApp took much of students study time , resulted in procrastination related problems, destroyed students' spellings and grammatical construction of sentences, led to lack of concentration during lectures, resulted in difficulty in balancing online activities (WhatsApp) and academic preparation and distracted students from completing their assignments and adhering to their private studies time table [23].

IV. METHODOLOGY

The study is driven by a qualitative paradigm [24] with an Ethnographic design [25] anchored on constructivism approach [26], given the WhatsApp phenomenon under investigation. The study is based on the initial 6 months experience on the use of WhatsApp as a Learner Support tool for distance learning. The design chosen allows for extended interrogation of the phenomenon under study at various points such as 6 months, 1 year, 1 and half years and finally at 2 years.

A cohort under study is the 2017/18 first postgraduate students pursing a Master in Education Management through the distance learning mode at the University of Zambia. The cohort was selected on account of their activeness in the use of WhatsApp tool for learner support purposes.

A. Research Design

An Ethnographic research design with constructivism approach was applied focused on the initial 6 months experience [27]. The intention was to delve in the lived world of distance students while on WhatsApp and explore how they construct their reality in the quest to easy the communication challenge. The researchers remained silent participants during data generation period so as not to disrupt privacy but elicit discussion in a natural setting among WhatsApp targeted users.

B. Research Sample

A total of 82 postgraduate students pursing a Master in Education Management through the distance learning mode at the University of Zambia were purposively sampled due to their active engagement on the WhatsApp phenomena under study. The sample group happen to be in their first year of study during the 2017 Academic year.

C. Data Generation Procedure

The study followed the following ten steps:

1) Identified poor communication among distance students as a challenge;
2) Identified WhatsApp tool as a student driven solution to combat poor communication;
3) Reviewed related literature on the phenomenon;
4) Identified the appropriate methodological design to the phenomenon under study;
5) Identified sample purposively;
6) Attached principle researcher to WhatsApp group over time without disruption of natural setting (remained silent throughout the length of the study);
7) Developed a data capturing matrix with Date, Day, Time, Name, contribution, Theme and Interpretation as columns.
8) Documented discussion using data generation matrix; and
9) Concurrently analysed findings during data generation process.
10) Unearthed emergent themes from the lived reality of students on WhatsApp and about WhatsApp usage.

D. Analysis and Interpretation

The analysis of data in this study was concurrently done throughout the data generation process using Inductive Data Analysis. Emergent reflection notes were reviewed from time to time to identify the emerging themes and patterns. The data were coded and analysed thematically and the identified themes were cross-checked by the co-researchers and insiders to the WhatsApp group under study for validation purposes in line with Clarke and Braun [28].

E. Trustworthiness

The study applied Guba's four criteria as follows: (i) credibility, (ii) transferability, (iii) dependability, and (iv) confirmability [29]. Data generation process was triangulated using observation, reflective journal matrix and document review guide. The researchers used reflexivity approach to decipher meaning from generated data. In addition, data generation procedure and boundaries were documented for the purposes of ensuring transferability of the study findings to different settings. Further, given that the findings were presented verbatim coupled with participant checks on the research, the study meets the dependability and confirmability criteria as well.

F. Ethical Considerations

In carrying out this study, ethical issues as guided by Cohen *et al.* [30] such as anonymity of participants were considered. Therefore, pseudonyms were assigned in place of actual names, to assure confidentiality and privacy.

V. Findings and Discussion

A. Emergent Themes

Emerging from this study are the following themes: Group creation; Group mission statement; Group values; Group membership; Group Resource; Group maintenance; Group on-task; Conflict Resolution; Learner- Learner support; Learner-tutor interaction; academic support; and psycho-social support as documented in figure 2.

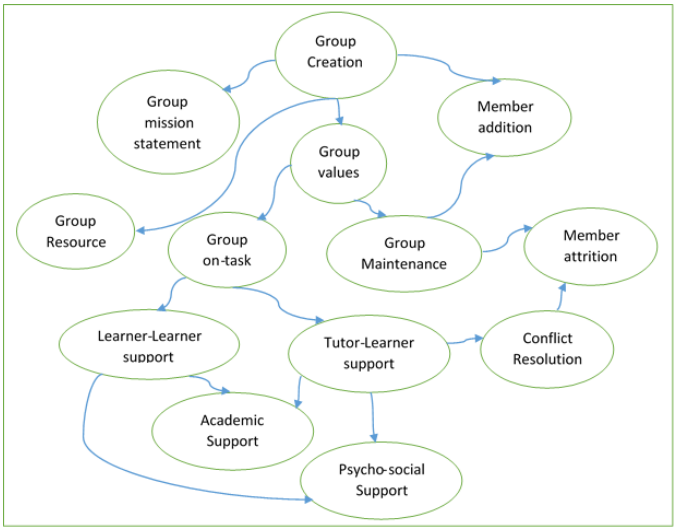

Fig. 2: Emergent Themes

In figure 2, the target WhatsApp group was observed to be anchored on group mission statement, shared group values. Once the WhatsApp group had been created, group members freely shared various resources equally. Group resources were in audio, video, pictorial and print formats. The sources of the resources were mainly learners and in some instances tutors. The shared resources appeared to provide academic and psychosocial support among learners

In generating themes as depicted in figure 2, a data capturing matrix was used as reflected in table 3. The matrix had the following columns: Date; Day; Time; Name of Learner, Contribution; Emergent Theme and Interpretation of the verbatim response. What is shown is only a sample as the matrix had 162 entries which made it not practical if it was all displayed.

Table 3: Sample WhatsApp data capture matrix

Date	Day	Time	Name	Post	Theme
19.02.18	Mon	10:07	2478ti	Group created	Group estab. & maintance
20.02.18	Tue	09:46	3423ou	Icon changed	Group estab. & maintance

WhatsApp Time moments

WhatsApp members were active throughout the week with Thursdays being the peak and Saturdays as the least active days as can be seen in figure 3.

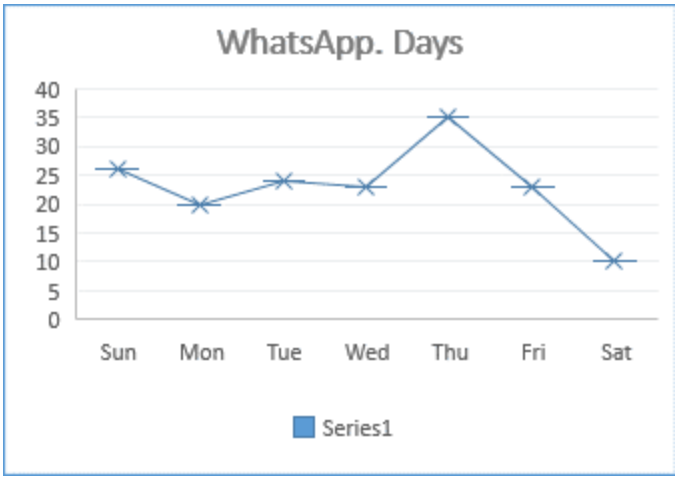

Fig. 3: WhatsApp sharing days

What is clear is learner were actively engaged throughout the week with less activity on Saturdays. In addition, learners were active on WhatsApp group throughout the 24hr cycle with 18:00 – 20:59 being the peak and 00:00 – 02:59 as the least active time periods as reflected in figure 4.

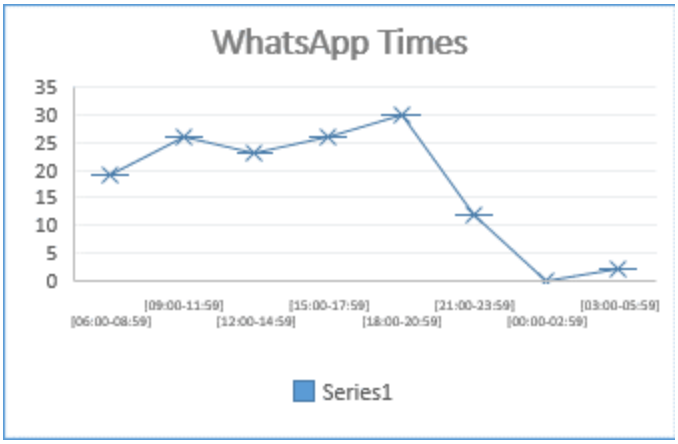

Fig. 4: WhatsApp sharing time

In figure 4, major contributors are in the minority represented by 2 out of the 82 members.

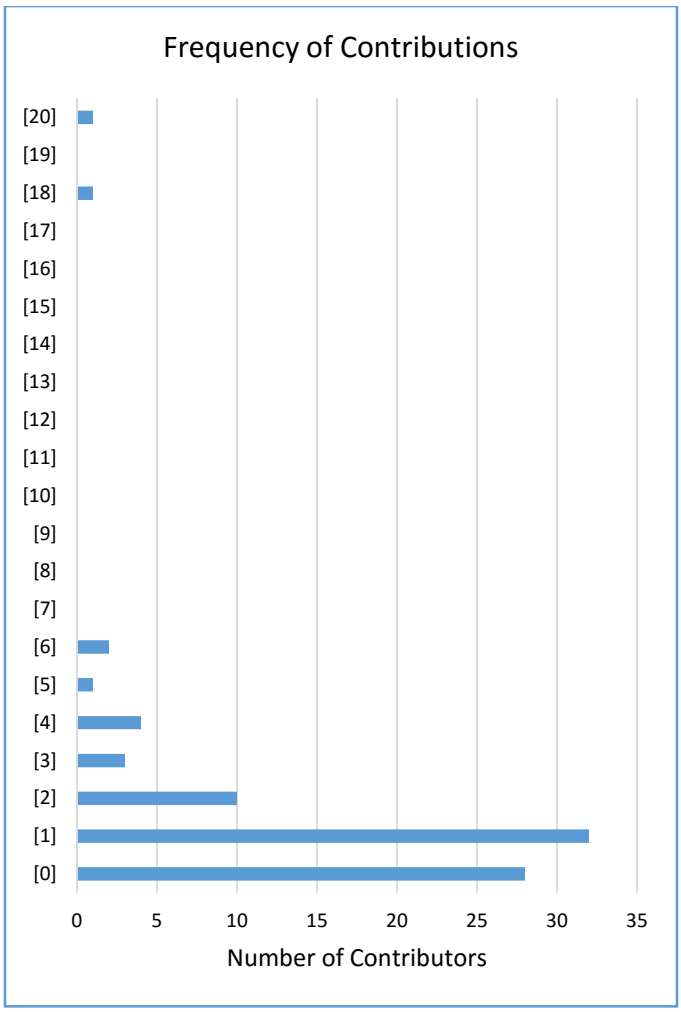

Fig. 5: WhatsApp Contributors

Figure 5 shows that 28 students never contributed anything on WhatsApp group during the 5 months' period (19th Feb – 8th July, 2018). At the same time 32 WhatsApp members contributed once while 10 members contributed twice, 3 members contributed 3 times, 4 members contributed 4 times, 1 member contributed 5 times and 2 members contributed 6 times each respectively. On a positive note 2 members contributed highest 38 times combined as shown by figure 5.

A free rider syndrome also noted by [31] Baker (2011) and [32] Roberts & McInnerney (2007) emerged, represented by 28 WhatsApp members who remained silent during the 5 months' period of data capturing phase. When interviewed, one sampled free rider observed that various reasons existed that made a number to remain silent. For instance, 3681ra observed that:

> Most of the views shared represented my views. As such, there was no need to keep reciting the same information. At the same time, silence is golden especially when sharing could result in conflicts (3681ra, 2018).

During 'off-season' moments, participants tended to become dormant and less active while the few who contributed tended to share mundane posts. In addition, level of contributions increased during critical moments of academic life such as during Registration, Continuous Assessment, Residential session and Examination. Two major focus areas of contribution were academic support and psychosocial support related posts as can be inferred in table 4.

Table 4: Peer Academic Teaching/Learning phenomenon

Date	Day	Time	Name	Contribution	Theme
06.03.18	Tue	14:00	0151to	Shared Staff managers' functions would guide you… promoting, firing etc. This can't be at the lower level.	Peer Academic discussion
06.03.18	Tue	14:00	0151to	Similarly, line managers allocate staff to classes, induct new staff...this can't be at a higher level.	Peer Academic discussion
06.03.18	Tue	14:00	0151to	So, thinking of Pvt schools only and excluding Gvt schools could be going *off side in my view.	Peer Academic discussion
06.03.18	Tue	14:00	0151to	I can see the roles of snr teachers HOD (if it is in a sec sch) etc and in the other hand I see the roles of the Snr mgt such as the PS etc who are involved in promotion, dismissals (though on behalf of the tsc)	Peer Academic discussion
06.03.18	Tue	14:00	0151to	But a head teacher, in a Zambian context is a manager and may fire thru a recommendation. … just a hint	Peer Academic discussion

As noted by [33], WhatsApp is critical tool for communication among learners and their tutors. In this particular study, Resources sharing on the group was one of the positive feature as can be seen in table 5.

Table 5: Sample of Resource sharing Phenomenon

Date	Day	Time	Name	Contribution	Theme
21.02.18	Wed	20:02	3423bi	Shared subject related documents with the group.	Group Resource sharing
21.02.18	Wed	20:09	3423bi	Human Resource Development module (69 pages).	Group Resource sharing
21.02.18	Wed	20:09	3423bi	Mass Recruitment of lectures/ job opportunities (3pages)	Group Resource sharing
21.02.18	Wed	20:29	3423bi	MDEA 508 module (160 pages)	Group Resource sharing
21.02.18	Wed	21:06	3423bi	MBAZ 501 Business economics module (161 pages)	Group Resource sharing
22.02.18	Thu	10:31	4050la	Shared subject related 5 documents	Group Resource sharing
22.02.18	Thu	10:32	4050la	Education Act (400)	Group Resource sharing
22.02.18	Thu	10:32	4050la	Education reforms of 1977 (112pgs)	Group Resource sharing
22.02.18	Thu	10:32	4050la	Educating our Future (195pgs)	Group Resource sharing
22.02.18	Thu	10:32	4050la	Focus on Learning (210pgs)	Group Resource sharing
22.02.18	Thu	10:32	4050la	Guidelines on Re-entry Policy (26pgs)	Group Resource sharing

Peer-peer was the most pronounced type of service followed by Tutor-Learner academic support as well as can be inferred in table 6.

Table 6: Learner-Learner & Tutor- Learner Academic Support

Date	Day	Time	Name	Contribution	Theme
08.03.18	Thu	20:25	5924en	Attention family. There is a request from XXSu that the following students should submit the short assignments, Bo...,Be..., Al..., Ma..., We..., Ir..., He..., Ja..., Ko..., Mu..., Mw..., Ny..., Si... Mo...'	Peer Academic support
14.03.18	Wed	14:00	7857yy	Left group	Group attrition
15.03.18	Thu	13:31	0011su	Afternoon colleagues. I still do not have MDEA 502 assignment 1 from the following people: Ben, Bom, Ali, Mar, Eme, Web, Hel, Ire, Jan, Kol, Fred, S yn, Nje, Len & Mot. Kindly visit mr XXX and let him help you if you submitted. You certainly need these marks. Good day to you all.'	Tutor Academic support

Whereas academic and psychosocial support services were highly pronounced, administrative support was missing. The absence of administrative support resulted in frustration and conflicts among learners due to the unresolved challenges whose solutions were perceived to be in the hands of the

inactive administrators. Presence of teaching staff and administrators appeared to have created an impression that the raised needy issues by students would be attended to accordingly. This become a source of conflict once students' queries were not attended to. See Table 7.

Table 7: Tutor-Learner Psychosocial Support

Date	Day	Time	Name	Contribution	Theme
21.03.18	Wed	15:04	3215in	Yes you are right. No need for you to worry you will have the results by weekend even before. I have been busy on the Copperbelt. Now l am in Mkushi. I will be at XXX University this weekend before l get back to Lusaka next week. Thus have been very busy.	Tutor Academic support
21.03.18	Wed	09:27	0022ch	Please don't worry l am still working on your assignments and the grading will be corrected.	Tutor Academic support
21.03.18	Wed	09:41	5771si	Morning colleagues. Your results are not lost. The system has just been muted while working on the grading system. As lecturers we are able to see your results. Right now I can see your results.	Tutor Academic support

The online phenomenon noted is consistent with Hashish, Hamouda & Taha who argue that the interactive nature of the teaching process is built on a social relationship between teachers and students [34]. Thus, conflicts in the relationship between students and teachers may occur for a several reasons. Effective and constructive management of conflict can decrease its negative effects on the learning environment, students, and educators.

In attempting to resolve conflicts group values in form of group rules were reposted to remind members. What's App group Rules were set and easily broken by members leading to formation of other sub-groups once reprimanded by other members. In addition, WhatsApp group experience appeared to follow the cycle of group development process such as formation, norming, storming and performing. Further, clashes within the group were observed during storming and norming phases of the group development process.

Further, during the documented period of this study, learners exhibited information seeking-sharing behaviour consistent with Siemens' Connectivism learning theory [35]. For an example of information seeking-sharing behaviour see table 8.

Table 8: Information seeking-sharing behaviour

Date	Day	Time	Name	Contribution	Theme
08.07.18	Sun	14:09	5868je	Afternoon members of this august group. I received an email concerning residential timetable but am not able to view it or download. Can anyone who has the timetable post if possible? Thanking you in anticipation	Peer Support
08.07.18	Sun	18:42	7849mi	MDEA year 1 residential session timetable posted	Peer Support
08.07.18	Sun	18:47	3574si	Thank you so much mum. Goodnight.	Peer Support
08.07.18	Sun	20:12	1145ph	Hai family, looking forward to seeing each other!	Peer Interaction
08.07.18	Sun	21:08	8716jz	Indeed its been long mweh	Peer Interaction
08.07.18	Sun	21:41	3574sl	Yes indeed. Its next Sunday arrival day. Goodnight	Peer Interaction

Consistent with Siemens' theory, in this study, learners demonstrated learning as a process that occurred based upon a variety of continuously shifting elements. The starting point of learning was the individual learner who fed information into the network, which later fed information back to individuals who in turn fed information back into the network as part of a cycle. Related to Siemens' theory is that of Michael Moore's [36] on transactional distance and interaction [37]. In the current study, consistent with Moore's theory, learners actively interacted and transacted largely among themselves, i.e. peer to peer interaction, followed by peer to content and lastly peer to tutor.

VI. Conclusion

The WhatsApp acted as a catalyst to enhance quality interaction among learners in real time across geographical divide. Discussions on WhatsApp were active 24/7. Thus, it is no wonder that learners' academic performance in the cohort under study was meritorious. WhatsApp tool demonstrated attributes of accessibility, closeness, friendliness, usefulness as could be attested throughout the life of this study among learners. In general, given the challenge of poor learner support traditionally linked to distance education, institutions of higher learning should consider adopting WhatsApp as an indispensable learner support tool. It is now clear that the University should be proactive to encourage the creation of self-generated social networks to mitigate vexing emergent issues students face on the distance learning mode.

VII. Study Policy Practice Implications

If WhatsApp is to thrive as a learner support tool for distance education, then consider the following:

1) Incorporate the use of social media such as WhatsApp in Open and Distance Education policies.
2) Provide an enabling environment that promote the use of social media such as WhatsApp among learners and staff.
3) Let learners be the initiators, creators, administrators of WhatsApp groups tailor-made for learner support. Such an approach would preserve the informal setting within which WhatsApp groups thrive.
4) Let institutions be proactive to take keen interest in WhatsApp group discussions and provide solutions where possible without intimidating the learners when contentious issues are raised. Such as environment encourages the success of WhatsApp group.
5) Empower learners with online sharing skills and online Conflict resolution strategies as well.

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