Females' Usage Patterns of Information and Communication Technologies (ICTs) in the Vhembe District, South Africa

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Abstract—This paper explores and provides substantiated evidence on the usage patterns of Information and Communication Technologies (ICTs) by female users at Vhembe District in Limpopo-Province, South Africa. The study presents a comprehensive picture on the usage of ICTs from female users' perspective. The significance of this study stems from the need to assess the role, relevance and usage patterns of ICTs such as smartphones, computers, laptops, and iPods, the internet and social networking sites among females following the developments of new media technologies in society. The objective of the study is to investigate the usability and accessibility of ICTs to empower female users in South Africa. The study used quantitative and qualitative research methods to determine the major ideas, perceptions and usage patterns of ICTs by users. Data collection involved the use of structured self-administered questionnaire from two groups of respondents who participated in this study. Thus, (n=50) female students at the University of Venda provided their ideas and perceptions about the usefulness and usage patterns of ICTs such as smartphones, the Internet and computers at the university level, whereas, the second group were (n=50) learners from Makhado Comprehensive School who provided their perceptions and ideas about the use of ICTs at the high school level. The researcher also noted that the findings of the study were useful as a guideline and model for ICT intervention that could work as an empowerment to women in South Africa. It was observed that the central purpose of ICTs among female users was to search for information regarding assignment writing, conducting research, dating, exchanging ideas and networking with friends and relatives. This was demonstrated by a high number of females who used ICTs for e-learning (62%) and social purposes (85%). Therefore, the study revealed that most females used ICTs for social purposes and accessing the internet rather than for entertainment, a gesture that provides an opportune space to empower rural women in South Africa.

Keywords—Female users, Information and Communication Technologies, Internet, Usage patterns.

I. INTRODUCTION

OVER the recent years the internet together with smartphones, desktop computers, ipads, laptops, e-mail and social media as elements of the Information and Communication Technologies have had intense effect on the private and professional lives of South African citizens inclusive of females. These ICTs have offered the South African population an increasing number and range of

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opportunities for accessing information, chatting, gaining and exchanging knowledge and realising personal learning goals [19].

Smartphones with access to the internet have managed to exceeded traditional forms of communication such as landlines telephone as the most common voice communication technology– particularly due to the noticeable development in Information and Communication Technologies users in most developing countries [6]. Reference [19] argued that "Information and Communication Technologies introduced a range of new possibilities for the use and production of media, as well as for personal networking and communication, political activism, and economic development". The emergence of these technologies encourages a more active and interactive internet usage and this trend is developing further globally inclusive of South Africa. The discourse over using information and communication technologies for development is only just beginning a fundamentally new chapter: smartphones with access to the internet are penetrating even the remotest and poorest communities [15]. Whereas, [39] emphasized that currently media consumers are submerged with a great number of mediums to access information, thus includes print media, broadcast media new media and social media. Nevertheless, this has not guaranteed the accessibility and usage pattern of ICTs by all people in South Africa, especially females in rural parts of the country [12].

This paper examines the usage patterns of ICTs gadgets which comprise computers, internet, smartphones, emails and social networks, using a campus and secondary school survey to assess current female students' attitudes and perceptions on ICTs. The study also focuses on identifying the main purpose and reasons of using ICTs by females in Limpopo Province South Africa. It is of paramount importance for researchers to study the worth of Information and Communication Technologies because it is their usage by all members of society that often translates to positive personal and community development. "This has particularly been true where these technologies have been used to empower rural people including females of every age" [9]. In this study, data gathered was mainly used to examine the usage patterns of these technologies amongst females in the Vhembe District and to discover female's views and perceptions on the usefulness of Information and Communication Technologies.

Previous research on gender differences in the usage of Information and Communication Technologies are diverse [2]-[37]. Most females spent more time on the Internet than men

World Academy of Science, Engineering and Technology
International Journal of Information and Communication Engineering
Vol:9, No:9, 2015

[16]. Furthermore, females consistently displayed higher levels of attachment to their information and communication technologies gadgets [8]. While, in contrary [14], [24] have indicated that the main users of ICTs gadgets are young males whereas, females are marginal users, suggesting a gap between discourse and reality of female's empowerment on the usage of ICTs. Reference [37] noted that most females are likely than men to make and receive family-oriented and social-oriented calls. The need for this study was to close the gap with regard to the usage patterns of those ICTs by females in the Vhembe District of South Africa.

Reference [13] revealed that "the gender gap is currently more evident in developing countries such as Africa, where 16% fewer women than men use the Internet, compared with only 2% fewer women than men in the developed world". [13] further highlighted that "the gender gap is currently more evident in developing countries such as Africa, where 16% fewer women than men use the Internet, compared with only 2% fewer women than men in the developed world". Whereas, [19] noted that in year 2010 a total Internet user population in developing countries was 1.4 billion, 800 million were men and 600 million were women. However, this paper elucidates the usage patterns of ICTs by females in the Vhembe District-Limpopo Province. Henceforth, "the gender divide is one of the most significant inequalities to be improved by the digital revolution, and cuts across all social and income groups. Throughout the world, females face serious challenges that are not only economic, but social as well as cultural, obstacles that limit or prevent their access to the use of, and benefits from ICTs" [1] In South Africa, both women and girls of different backgrounds have access to smartphones with the Internet connections which they use while in classrooms, standing in shop queues or other public places on a day to day basis. Young girls seem to own smartphones at a younger age than in previous years [33]. Indeed, "these technological developments are rapidly changing the modern mass media landscape in the world" [4]. This development has also been affecting how females use ICTs in South Africa. The need for this study was to examine the use of these ICTs by females in the Vhembe-district Limpopo province.

II. THEORETICAL BACKGROUND

With the advent of ICTs and the internet is changing how females interact with family, friends and relatives and doing their daily routine work. The study conducted by [25] highlighted that Information and communication technologies have become pervasive that everybody with the Internet might use them effectively. Reference [3] quantified that ICTs are crucially significant for sustainable development in developed and developing countries such as South Africa, America and others. Whereas, the influence of such on females' first became evident during the preparatory processes surrounding the Fourth World Conference on females that took place in Beijing in 1995. In spite of all the debates [36] noted that the development and dissemination of ICTs or new media technologies was undertaken to encourage females across the world to participate into the information society. This was administered by women's organisations through e-mail that many of them were just learning to use at the time. Unfortunately, it did not change the minds of the females, even though it encouraged them to increase their efforts to provide better accommodation and facilities. It did however, illustrate how effectively and efficiently women could reach out and support each other in a time of crisis, a very empowering moment for women worldwide. Furthermore, ICTs allowed the introduction of the concept of females as key contributors in the field of media both at the level of technology and policy making [11]. Questionnaire for this research focused on addressing the usability of these ICTs by females, perceptions and views of females towards the use of those ICTs, and also the accessibility of ICTs those females in Vhembe District have utilised. This paper brings a clear insight on the usability of ICTs especially by female citizens of the Vhembe District-Limpopo Province.

A. Theoretical Perspective

This study was anchored on uses and gratification theory. Reference [17] argued that communities use the media for their own benefit. The theory emerged towards the early years of 1970s Kartz and his colleagues, Jay Blumler and Michael Gurevitch continued to expand the idea on the reasons why citizens use the media. This group of scholars recommended that this theory was concerned with the 'the social and the psychological origins of media users, the needs which generate expectations from mass media or other sources which lead to differential exposure resulting in need gratification and other consequences, perhaps mostly unintended ones' [17]. At the same time, other scholars began to highlight that this theory presents a rather general approach to understanding media uses and results, and purposes the key concepts and links to societal processes that are inadequately defined [20], [22], [34].

The primary strength of uses and gratification approach is its intrinsic ability to interface interpersonal and mediated communication of individuals [27], [29]. This empirical study reflected that media users take initiative in selecting the type of the media such as ICTs, new media technologies and social networking sites to satisfy their needs or desires. Media, in this case ICTs compete with other forms of communication such as newspapers, television, radio and magazines for selection, attention and use to gratify needs of the female users [28].

1. Females' Usage Patterns of ICTs in South Africa

This paper provides an idea around the usage patterns of ICTs and the Internet by females in the District of Vhembe. Reference [7] argued that 'for years the Internet has been used for the purpose of seeking information, entertainment, products, transactions, games or surfing e-mails'. The important aspect is that users of ICTs both males and females are not confined to a single space such as a building, organisation or country. But are scattered all over the world where they have access to a computer, a modem and the Internet. Some of other aspects that can be accessed via the

World Academy of Science, Engineering and Technology
International Journal of Information and Communication Engineering
Vol:9, No:9, 2015

internet are e-mail, information, e-shopping, e-learning, e-marketing, online chat, downloading software and many more benefits. Reference [32] stated that the disadvantage of the using ICTs is that they expose personal information, pornography and spamming of females. Therefore, Information and Communication Technologies and communication tools replicate the biases, contradictions, and prejudices of society. While the same tools can be used for educating and mobilising people to challenge social biases and prejudices detrimental to females. At the same time, ICTs are instrumental in subverting patriarchal social institutions as well as promoting gender equality and women's empowerment [7]. Moreover, [13] stated that "the total users of information and communication technologies such as the Internet in developing countries were 1.4 billion in 2013 which 800 million were men and 600 million were women". In the same view, it is imperative to note that females have less time available to seek out ICT connections or spend time online than men, as suggested by the findings of time use surveys conducted in a number of countries South Africa inclusive. This support the idea that females use ICTs for communication (mainly e-mail) and e-shopping, while men spend time browsing the Internet, downloading software, and reading newspapers [19]. This is due to the fact that females use most their time nurturing the family and less choice when it comes to spending their money [18]. Even community access, often seen as the key to internet diffusion in the developing country such as South Africa, may not be outside the financial reach of many females nor can it be assumed that females have access through associations or Non-Government Organisations [18]. In most cases females that have ICTs or new media access in developing countries are those that are highly educated and have a profession in the society [19]. Moreover, both theoretical perspectives and previous empirical studies suggest that society use media such as broadcast, print, internet, ICTs, smartphones and computers to gratify their needs and these ICTs have an influence in the lives of the citizens particularly females. The objective of this paper therefore, is to discover the usage patterns of ICTs by females in the Vhembe District.

2. Social Networking Sites, Females and Technologies

The relationship between female youths and information and communication technologies has been studied before [38]. This paper focuses the usage patterns ICTs by female students at the Vhembe District of Limpopo Province. References [5], [21], [30] argue that technology plays the important role of mediating and enabling communication in the society. Reference [5] further asserts that technology is becoming more mobile and accessible by people globally. This is becoming a driver of strategy and communication that ever before. The study explains the usage patterns of ICTs by female in Vhembe District.

In additional, [26] develops [5] arguments and reviews the research on the use and role of instant messaging in female life, and how short messages SMS is a key part of society females and communication. In contrary, [30] noted that new media technologies such as social networking websites and ICTs can facilitate the flow of information between networks by hosting online chartrooms and private online association areas. Whereas, [10] examined services and sites that teenagers engaged with ICTs, particularly the internet, e-mail, and cell phones had found fascinating. It is revealed by the study that ICTs were not only part of students' lives but they were their lives. The study furthermore, stated that female students do not see ICTs as tools to get work done; rather, they see it as an entertainment and communication portal.

The study conducted by [35] indicates that schools in the United States of America that have greater access to ICTs or new media technologies tend to discover more creative uses for it, communicated by e-mail more often with females and students and engaged more frequently in professional activities such as on online communication with other teachers and scholars. Whereas, [31] conducted a similar study that showed that "adolescents find ICTs to be an enabler of communications, and that loneliness was not related to spending time online, rather to gender and their perception regarding their online relationships". Moreover, these findings do not contradict the awaited finding of this study that access to ICT has no influence on the approval of social networking sites since the respondents (females) to this study are anticipated to have equally free access to the internet.

The above studies appear to entitle and prove that females around the world are using ICTs, new media technologies and social networking sites for their own benefits. What is evident from the literature is that "females use ICTs to interact with their peers and reunite with friends and relatives, as well as to meet new people" [23]. However, this study outlines the usage patterns of information and communication technologies by females in the Vhembe District of Limpopo-Province.

III. RESEARCH METHODOLOGY

To ascertain the usage patterns of ICTs the study employed both quantitative and qualitative research method for data collection. Anonymous participant's questionnaire was distributed to the participants. This was a structured and self-administered questionnaire consisted of 28 questions that were the mixture of open-ended and close-ended questions for data collection. The questionnaire was designed to examine the age group, educational level, ICTs ownership; time spent using ICTs and for what purpose these ICTs are used by communities, particularly females at high school and University level in the Vhembe District. This questionnaire was also used to also examine the attitudes, perceptions, feelings and intentions of the female that are using ICTs. Reference [40] argues that all investigations flow better when the initial questions are simple and easy to answer. A questionnaire is a formalised set of questions with simple and easy questions for obtaining information from respondents.

A. Procedure

A self-administered questionnaire was disseminated to female learners at Makhado comprehensive school to assess their usage patterns of ICTs and the Internet. Respectively, the

World Academy of Science, Engineering and Technology
International Journal of Information and Communication Engineering
Vol:9, No:9, 2015

same questionnaire was administered to female students at the University of Venda. The questionnaire was written in English because the participants were school learners and university students respectively. This sample was suitable for the study because most of the females in the above mentioned group in Vhembe District were active users of information and communication technologies. In this study, participants were females aged between 13 to 35 years. Moreover, it took the participants 20-30 minutes to fill out the survey and all 100 questionnaires were returned and analysed. SPSS instrument was used to analyse quantitative data.

B. Participants of the Study

As previously explained, the sample size was potentially 100 respondents, of these responses 32 were from females aged between 13 and 17 years and 68 were from females aged between 18 and 35 years. All the respondents were black females from the Vhembe district in Limpopo Province and were the users of ICTs and new media technologies. Out of 100 participants (32%) were females between the ages of 13-17 while (68%) were respondents between the ages of 18-35 years. The younger ones were learners from High school levels while the older were University of Venda students. Further, (63%) of the respondents were females on their adolescent' stage while (33%) were respondents on their adult stage. (4%) were missing variables. As indicated it means that the study was more dominated by females' adolescent respondents. This means that there were many adolescents' users of ICTs and new media technologies than female adults. Total of (50) of the respondents were high school learners and another (50) were University female students.

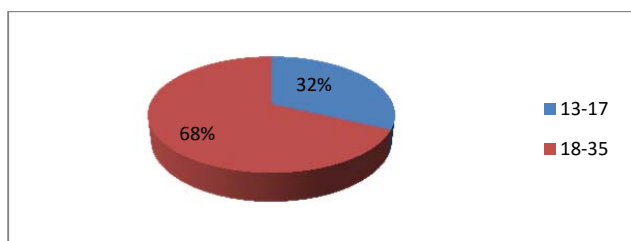## IV. RESEARCH FINDINGS

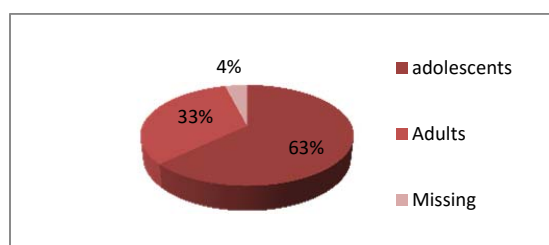Fig. 1 The age of the respondents

Fig. 2 Group level of respondents

As indicated in Fig. 1 (32%) of the respondents were females between the ages of 13-17 while (68%) were respondents between the ages of 18-35 years. The younger

ones were learners from Makhado high school levels while the older were University of Venda students.

As reflected in Fig. 2 about (63%) of the respondents were females on their adolescent' stage while (33%) were respondents on their adult stage. (4%) were missing variables. As indicated by the results, it means that the study was more dominated by females' adolescent respondents. This means that there were many adolescents' users of ICTs or new media technologies than female adults.
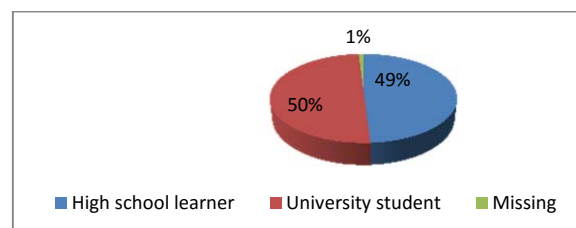

Fig. 3 The respondents' educational level

As indicated on Fig. 3 the questionnaires were 100 and divided into 50s. (50%) were University students and 50% were high school learners from two different schools. Total of (49%) of the respondents were high school learners and 50% were University students. (1%) of respondent did not respond to the question.
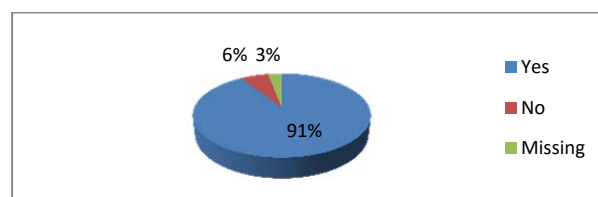

Fig. 4 The respondents' ownership of ICT gadgets

As reflected in Fig. 4 (91%) of respondents were owners and had access to ICTs and the Internet. However, (3.0%) of the respondents did not give any response to the question. (6%) of the respondents showed that they did not own any ICT gadgets such as computer and laptops that enable them to access internet and social networks. Therefore, this reflected that most of the respondents had ICTs gadgets to access the Internet and e-mail for them to communicate with other people at the time of the study.
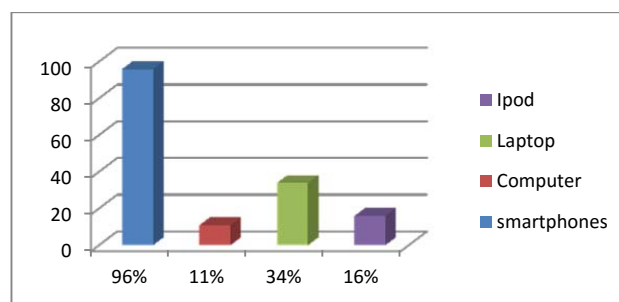

Fig. 5 ICTs tools that are owned by the participants

World Academy of Science, Engineering and Technology
International Journal of Information and Communication Engineering
Vol:9, No:9, 2015

Fig. 5 reflects the respondent's ownership of ICT gadgets such as laptops, computers, IPods and smartphones. A total of 100 respondents were asked about which ICTs gadgets they owned. As indicated (96%) of the respondents had their own cellphones. (11%) responded that they owned computer systems. The findings further show that out of 100 respondents, only (34%) owned laptops. The respondents showed that out of 100 of them, (16.0%) owned an IPods. As reflected by the results, a large number of respondents had ownership of cellphones with (96%), followed by those who owned computers (89%). Most of the respondents owned cellphones as compared to other ICT gadgets.
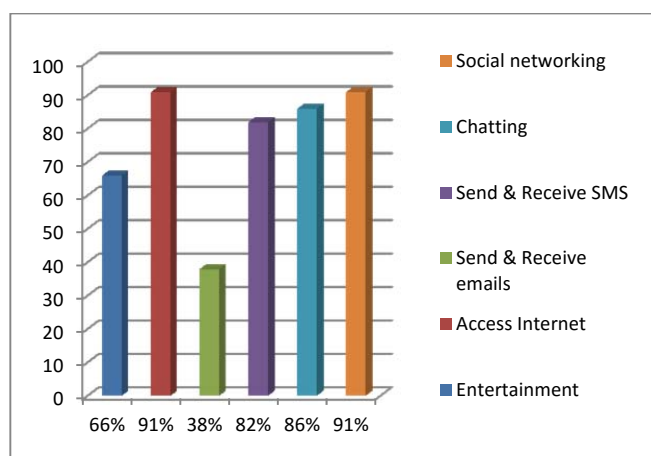
Fig. 6 The respondents' main reasons for using ICT gadgets

Fig. 6 reflects clearly that the respondents that used social networking were (91%) and accessing the Internet were (91%). It also reflects that (66%) of respondents' used ICT gadgets for entertainment purposes and (38%) used them for sending and receiving emails from relatives, colleagues and friends. (82%) of respondents used ICT gadgets such as smartphones to receive and send short messages (SMS). From data gathered on this section, it is clear that there were more females using ICTs for social purposes and accessing internet than sending and receiving emails.

Very few of the respondents (up to 2%) to the study showed that they used ICT gadgets and the Internet for e-faxing while (4%) indicated that they used them for e-marking. This means that there were few females in Vhembe District that used ICTs for marketing jobs and faxing documents to certain individuals. As indicated on Fig. 7 there were a high number of females that used ICTs for e-learning (62%). While, (27%) of the respondents used ICTs for e-mailing messages. (7%) of the respondents used ICTs and internet for e-shopping on the internet. The majority of respondents (85%) use ICTs for social networking with friends, relatives and family.

Fig. 8 indicates the result of the study when respondents were asked to reveal their main purposes of using information and communication technologies. These elements were investigated independently but combined during the analysis. The result shows that (52%) of respondents used ICTs for studying. It further indicated that (59%) of females used ICTs

to do research for their studies. The study composed both high school and university students; therefore (67%) of the respondents reflected that they used ICTs for writing assignments. (52%) of the respondents used ICTs and internet to exchange ideas with friends and relatives that are members of a social networking site, The respondents showed that they used ICTs to maintain the exiting friends while (58%) of the respondents used ICTs for dating. As reflected on the tables above, most females (high school learners and university students) in Vhembe used ICTs for writing assignments, dating and maintaining exiting friends in real life.
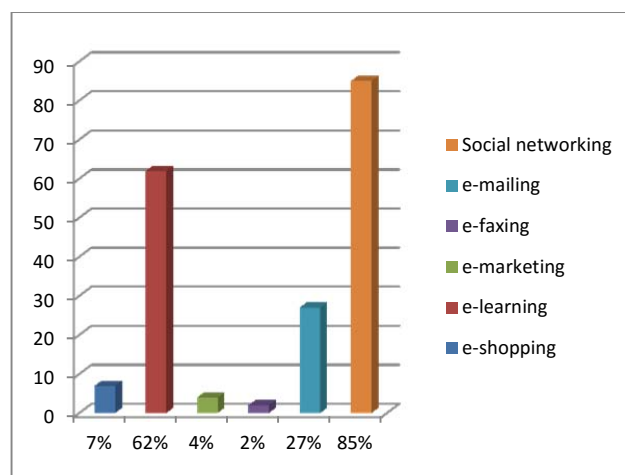

Fig. 7 Respondents reasons of using Information and Communication Technologies (ICTs)
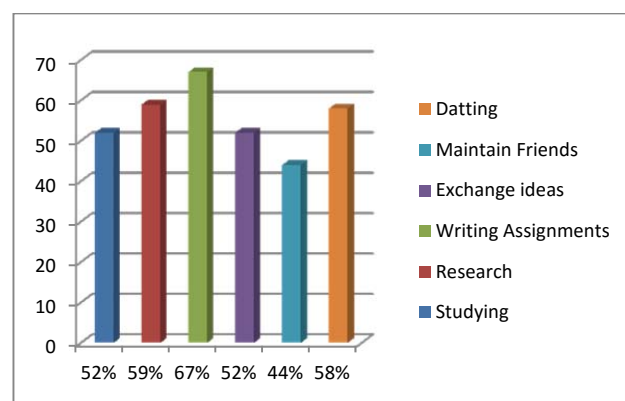

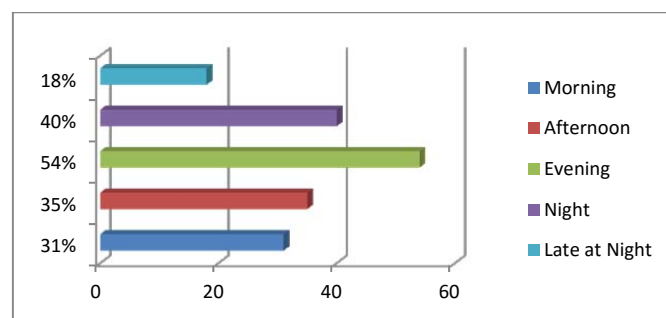Fig. 8 The respondents' main purpose of using ICTs

Fig 9 The preferred time to access ICTs

World Academy of Science, Engineering and Technology
International Journal of Information and Communication Engineering
Vol:9, No:9, 2015

When the respondents were asked to reflect their preferred time to access internet, most respondents (54%) said they accessed internet in the evening. (40%) of the respondents on Fig. 9 responded that they accessed internet in the evening. (35%) responded that they accessed internet through ICTs in the afternoon, while (31%) of the respondents accessed internet through ICTs in the morning. (18%) of them said that they accessed internet late at night. This means that most females accessed ICTs and the Internet in the evening when they are done with the business of the day.
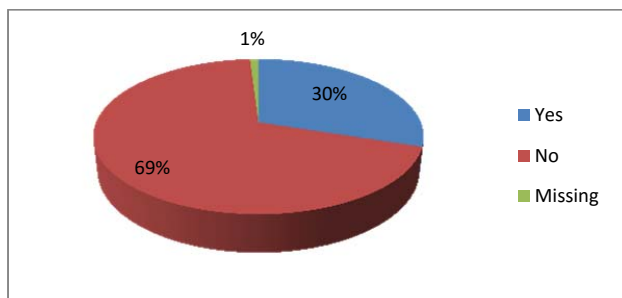

Fig. 10 Respondents communicating with strangers in real life

As reflected on Fig. 10 (30%) of the respondents used social networking sites and ICT gadgets to communicate with strangers in real life while, the majority by (69%) communicated with people they knew and were aware of. This means that most females respondents during the time of the study communicated with people they knew through ICTs.
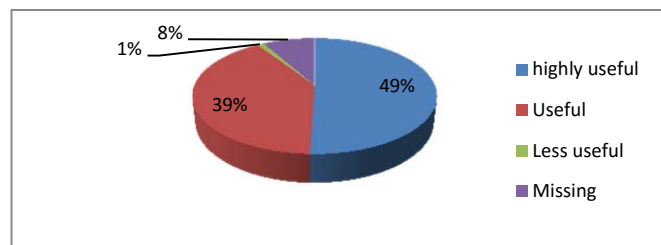

Fig. 11 Usefulness of ICTs

Fig. 11 illustrates the usefulness of ICTs to respondents. Out of (92%) of respondents, the majority (49%) said that they the usage of ICTs to access information was highly useful. while (39%) of respondents found ICTs information useful. (1%) found it less useful and (3%) of respondents found it not useful. (8%) of the participants did not respond to the question. This means that the majority of the respondents used ICTs due to the fact that it was highly useful and benefited them.
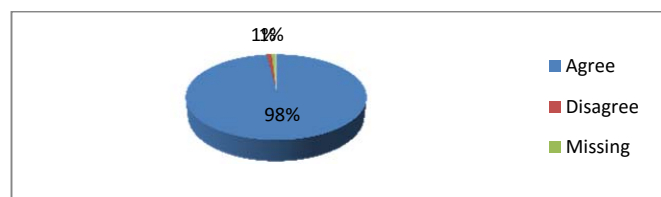

Fig. 12 The view of the respondents about the usage of ICTs

The data collected and analysed on Fig. 12 shows that (98%) of the respondents agreed that using ICTs was enjoyable and entertaining while (1%) disagreed and another (1%) of the participants did not respond to the question.
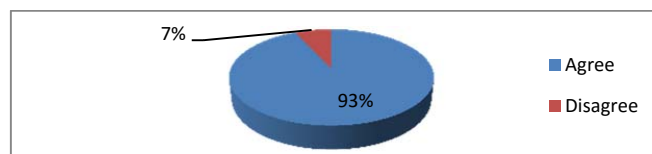

Fig. 13 ICTs and internet are good source for timely information

Fig. 13 shows the respondents view of ICTs and the Internet as good source for timely information. The majority of respondents (93%) agreed that ICTs and the Internet were good source of timely information. While, (7%) respondents disagreed that ICTs provide timely information.
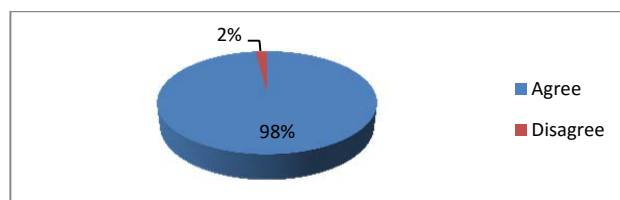

Fig. 14 The respondents view about ICTs helping them to connect with friends and relatives

As already demonstrated in Fig. 14, (98%) of the respondents agreed that ICTs helped them to be connected with friends and relatives. (2%) disagreed that information and communication technologies helped in order to connected with friends and relatives. This is apparent that the majority females used ICTs and social networking sites to be connected with friends and relatives.
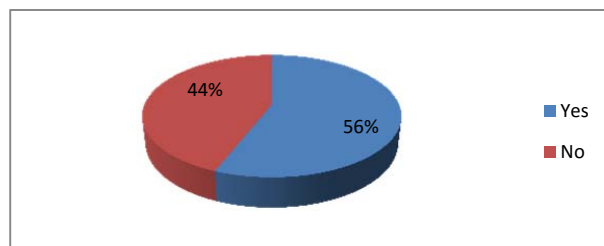

Fig. 15 The respondents' problems when using ICTs to access internet and information

From Fig. 15 it is evident that (56%) of the respondents did face problems when using ICTs to access internet and information. The minority of the respondents (44%) indicated that they did not face any complications when using ICTs to access the Internet and information. As illustrated in Fig. 14 few respondents experienced some problems when using ICTs to access internet and information needed.

World Academy of Science, Engineering and Technology
International Journal of Information and Communication Engineering
Vol:9, No:9, 2015

V. DISCUSSION OF FINDINGS

The data on this study reflected that the respondents had ownership and access to information and communication technologies (ICTs) together with the Internet. It is clear that females were using those ICTs gadgets for the purpose of social networking, conducting research, writing assignments and chatting with friends and relatives. This may have been influenced by the fact that the respondents were high school learners and university students. The respondents illustrated that ICTs were good because they informed them about current information in the country. The study also reflected that most respondents used ICTs to network with other people and e-learning. The results of the study also indicate that majority of the respondents got the information they needed from using ICTs. A close-ended question was asked to the respondents to express their idea about how useful the information on the ICTs was. The findings show by 93 per cent of respondents that ICTs and the Internet were good sources for timely information. Female respondents in the Vhembe district also believed that ICTs were user-friendly because it helped them to connect with friends and relatives.

The study indicates that most females in Vhembe District have an access to ICTs or New Media Technologies, with 96% of them owning smartphones with internet connections. In this study 98 per cent of respondents agreed that ICTs gadgets helped them to connect with relatives and friends. This reflects that one of the reasons for using ICTs by females was to get connected with the society such as friends and relatives who are in a distance. The study further confirmed that females were using information and communication technologies to exchange ideas, communicating and sending messages to the relatives. The study further discovered that females in the Vhembe district also used ICTs to maintain the exiting friends and for dating. In discussing the findings, it was also confirmed that females in the Vhembe District sometimes use ICTs and social networking sites to do research and e-shopping. The study also indicated that females in the Vhembe District trusted the information they accessed on the internet through ICTs. This discussion, thus confirmed the main purpose of using information and communication technologies by females in the Vhembe was to chat, communicate and conduct research. This study also confirms that most of the females in Limpopo used ICTs and accessed the Internet in the evening when done with their daily work.

VI. CONCLUSION

This study data offers some fundamental insight and conclusions regarding the usage patterns of Information and Communication Technologies such as smartphones, laptops, iPods and desktop computers. The study sought discovers the main use of ICTs by females in the Vhembe District. The paper established the understanding of the main purpose of the usage of ICTs by females in the Vhembe District. It has documented that most females indeed have an access to the Internet and ICTs gadgets. While, use them for accessing for the purpose of social networking, conducting research, writing assignments, dating, chatting with friends and relatives. The study also established that this new media technology provides its users in this case females with good and timely information.

REFERENCES

[1] D. Boyd, "Why youth (heart) social network sites: The role of networked publics in teenage social life. MacArthur foundation series on digital learning youth, identity, and digital media volume". *Cambridge, MA: MIT Press*, pp. 97-98, 2007.
[2] A. Bianchi, and J. G. Phillips, "Psychological predictors of problem mobile phone use". *Cyber Psychology & Behaviour. 8,* 39-51, 2005.
[3] A. Crede, and R. Mansell, "Knowledge societies in a nutshell: Information technologies for sustainable development". Ottawa, Canada: *IDRC,* 1998.
[4] I. O. Edogor, A. A. Jonah, and L.I. Ojo, "Influence of social media on youths' usage of traditional mass media in Nigeria". *New Media and Mass Communication*, Vol.31, pp. 55-56, 2014.
[5] K. Dennis, "Technologies of civil society: Communication, participation and mobilization", *innovation,* 20(1), 19-34, 2007.
[6] V. Feldmann, "Mobile overtakes fixed: Implications for policy and regulation", Geneva: International telecommunications union. Retrieved May10, 2015, *Paper.pdf*, 2003.
[7] P. J. Fourie, Media studies: Media history, media and society. Vol (1) Cape Town: Juta & Co, 2007.
[8] H. Geser, "Pre-teen cell phone adoption: Consequences for later patterns of phone usage and involvement". Sociology in Switzerland*: Sociology of the Mobile phone,* 2006.
[9] L. Ginger, "Women's use of information and communication technologies in Mozambique: a tool for empowerment". Maputo: *MAE,* 2009.
[10] J. Goodman, "Click first, ask question later: Understanding teen online behaviour"*, Aplis,* 20(2), 84-86, 2007.
[11] N. Hafkin, Moving Beijing forward: gaps and challenges-gender responsive information society. *GAD/Eve,* 2004.
[12] D. M. Hughes, "Globalization, information technology, and sexual exploitation of women and children, rain and thunder: A radical feminist journal of discussion and activism". *Issue #13,* winter 2001,
[13] International Telecommunication Union, World Telecommunication Development Report. Geneva: *International Telecommunication Union*, 2013.
[14] K. Johnson, "Telecentres and the gender dimensions: an examination of how engendered telecentres are diffused in Africa" *Unpublished MSc thesis.* George Town University: Georgetown, 2003.
[15] M. Jones, and G. Marsden, Mobile interaction design, New York: *John Wiley & Sons*, 2006.
[16] R. Junco, D. Merson, and D. W. Salter, "The effect of gender, ethnicity, and income on college students' use of communication technologies". *Cyber psychology, Behaviour, and Social Networking.* 13, 6, 619-627, 2010.
[17] E. Kartz, J. G. Blumler, and M. Gurevitch, "Utilization of mass communication by the individual". In J. G. Blumler, and E. Kartz, (Eds), the uses of mass communications: current perspectives on gratifications research, pp. 19-32, 1974. Beverly Hills, CA: Sage.
[18] G. Kirkman, "The global information technology report 2001-2002". *Readiness for the networked world.* Oxford University Press, 2002.
[19] T. Kreutzer, "Generation mobile: Online and digital media usage on mobile phones among low-income Urban youth in South Africa": Centre for film and media studies faculty of the humanities, *University of Cape Town*, February 2009.
[20] G. E. Lometti, B. Reeves, and C. Bybee, "Investigating the assumptions of uses and gratifications research". *Communication research,* 7, 127-165, 1977.
[21] B. Lock, and J. Brown, "Social networking lifting off", *Finweek*, Johannesburg, June 2007

[22] D. McQuail, "The uses and gratifications approach: past, troubles, and future". *Mass communicative,* 2, 73-89, 1979.

[23] J. W. Payne, "Invitation to harm. The Washington Post", F-1. *Unpublished report*. July, 2006.

[24] F. L. Payton, V. Kvasny, R. Mbankin and A. Amadi, "Gendered perspectives on the digital divide IT education and workforce", *proceedings of the 9th international conference on social implications of computers in developing countries*. Sao Paulo, 2007.

[25] Pew Research Centre, "New media, old media: How blogs and social media agendas relate and differ from traditional press", *analysis report/blogosphere,* 2012.

[26] A. Quan-Haase, "Instant messaging on campus: Use and integration in University students' everyday communication", *the information society*, 24, 105-115, 2008.

[27] A. M. Rubin "Uses of daytime television soap opera by college students". *Journal of broadcasting & electronic media*, 29, 241-258, 1985.

[28] A. M. Rubin, A.M. "Media uses & effects: a uses and gratifications perspective": in J. Zillmann, & D. Bryant, (Eds), media effects: advances in theory and research, London: *Erlbaum*. pp. 571-601, 1994.

[29] A. M. Rubin, and R. B. Rubin, "Interface of personal and mediated communication: fifteen years later". *Electronic journal of communication*, 11(1), 2001.

[30] J. Sandars, "The use of new technology to facilitate learning through personal networks", *world based learning in primary care*, 5, 5-11, 2007.

[31] K. Subrahmanyam, and G. Lin, "Adolescents on the net: internet use and well-being", *adolescence,* 42(186), 659-677, 2007.

[32] U. C. Sharma, D. Chawla, N. A. Raman, and P. Madaan, "Internet usage by the faculty members & the students in professional colleges at Mathura region: An empirical study". *Int. J. Inf. Dissemination and technology*. 1 (2): 77-85, 2011.

[33] A. Stephen, Communication technologies and women's empowerment. New Delhi: *Rajat,* 2006.

[34] D. L. Swanson, "The uses and misuses of uses and gratification". *Human communication research*, 3, 214-221, 1977.

[35] J. Valadez, and R. Duran, "Reading the digital divide: beyond access to computers and the internet", *the high school journal,* 31-44, feb/mar 2007.

[36] A. S. Walker, "Celebrating 25 years of networking. Women in action, *Isisinternational-manila*, 2:1999.

[37] R. Wei, and V. Lo, "Staying connected while on the move: Cell phone use and social connectedness". *New Media Society, 8,* 53-72, 2006.

[38] E. J. Wilson, "The information revolution and developing countries, Cambridge", *MA: MIT Press*, 2004.

[39] A. M. Wolfe, "Online versus traditional news sources: a student perspective". *Elmira College,* 2010.

[40] R. Wimmer, and J. Dominick, Mass media research. An introduction. Belmont: *Wadsworth*, 1997.

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