Older persons’ competence to use mobile phones: An exploratory study

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Mini-dissertation submitted in partial fulfilment of the requirements for the degree Master of Arts in Research Psychology at the Potchefstroom Campus of the North-West University

Supervisor: Prof H.B. Grobler
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Dr L.K.M Mmonwa, thank you for your tremendous support whenever I experienced bleak moments with my research. Your inspiring and encouraging words and the unconditional love you showed kept me going.

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SUMMARY

KEYWORDS: User patterns; knowledge; skills; attitude; Technology Acceptance Model

A vast body of literature shows that the populations of older persons aged 60+ are growing faster all over the world. South Africa has also shown a tremendous growth in the size of the older population, from 3.7 million in total in the year 2009, which is expected to count 4.25 million in 2015. Similarly, the level of mobile phone penetration in Africa and Sub-Saharan countries has grown significantly. This study aimed to explore older persons’ competence in using a mobile phone in the Tlokwe municipal area, South Africa. The current study formed part of the iGNiTe sub-study, which is a sub-study of a larger project (*An exploration of enabling context*) and focuses on the user patterns of mobile technology by older people by using both qualitative and quantitative data. The current study aimed to explore older persons’ competence in using mobile phones. Although the iGNiTe sub-study involved both qualitative and quantitative data-gathering methods, the current study only focused on the qualitative data aspect. This study is also the first to directly explore older persons’ competencies regarding the use of mobile phones in the South African context. The study incorporated the Multiple Intelligences Theory, Technology Acceptance Model and The Mobile Phone Technology Acceptance Model to explain older persons’ attitudes to and intentions for using a mobile phone as well as the knowledge and skills they possess regarding the use of mobile phones. The keywords that were used in different search engines included *older persons, mobile phones, competencies, skills, knowledge* and *attitude*. Participants included in the sub-study were older persons aged 60+ who met the inclusion criteria from a total sample of 128 older persons in three old-age day-care centres in the Tlokwe municipal area of the North West Province, South Africa. Since the current study only focused on the qualitative aspect of the sub-study, the study only used 48 participants who took
part in semi-structured interviews and the Mmogo-method® in the sub-study. The study used a descriptive research design to understand meaning and experiences of older persons’ competences in using mobile phones by using semi-structured interviews and the Mmogo-method®. The goal of this study was achieved by conducting a thematic analysis within a secondary dataset from the iGNiTe sub-study. Older persons’ competencies in using a mobile phone were extracted from the interviews. The data revealed that levels of competences revealed by older persons differed according to the individual’s experiences in using mobile phones. Both positive and negative impact of mobile phone complexities on older persons’ abilities to use a mobile phone were found in the current study. The study suggests that, based on the findings, mobile phones be made more learnable and adapted to the needs of different age groups.
FOREWORD

This dissertation is presented in article format in accordance with the guidelines set out in the Manual for Postgraduates Studies, 2013 of the North-West University. The technical editing was done according to the guidelines and requirements set out in Chapter Two of the Manual. The American Psychological Association (APA) 6th edition referencing style was used for section A, B and C.

The article will be submitted to the journal The Gerontologist. The guidelines for submission to the journal are attached in Annexure VIII, Journal submission guidelines.
DECLARATION

I, Khumbudzo Leburu, declare herewith that the dissertation entitled: Older persons' competence to use mobile phones: An exploratory study, which I herewith submit to the North-West University, Potchefstroom Campus, is my own work and that all references used or quoted were indicated and acknowledged.

Signature: _________________ Date: ________________

Miss Khumbudzo Leburu

Editor’s confirmation, signature and contact details

Signature: _________________ Date: ________________
Declaration

This is to declare that I, Annette L Combrink

Accredited language editor and translator of the

South African Translators' Institute

have language edited the mini-dissertation by

K Leburu (18035124)

with the title

Older persons' competence to use mobile phones: An exploratory study

[Signature]

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Date: 19 April 2015
OLDER PERSONS’ COMPETENCE TO USE MOBILE PHONES:
AN EXPLORATORY STUDY

PART 1: ORIENTATION TO THE RESEARCH

1. Background and problem statement

This study is part of a sub-study (iGNiTe: Inter-Generational Networks through Information Technology), which was approved by the ethics committee of the Faculty of Health Sciences of the North-West University, Potchefstroom Campus on 13 November 2013 as part of a larger project (An exploration of enabling contexts: NWU-00053-10-S1). The aims of the larger project were (i) to understand and identify the impact of the broader environments (technology) which inform the intrapersonal, interpersonal and group level experiences of people; and (ii) to explore and describe the interpersonal context by means of identifying the definition of the relationship, relational qualities, needs and motivation for the interaction, and the circular processes according to which people mutually influence each other in a circular cause and effect manner and which make up an individual’s preferred relational/interactional style. Different themes emerged from the broader study, such as assistance-seeking behaviour of older persons (eyesight problems, memory loss and lack of information), as well as relation regulation. By relation regulation (Walter, Iliffe, & Orrell, 2001) in this context, the researcher is referring to older persons’ ability to socially interact in order to regulate their affect, action and thoughts (Lakey & Orehek, 2011).

iGNiTe is the sub-study under the above-mentioned larger project and focuses on the user patterns of mobile technology by older people through using both qualitative and quantitative data. The current study formed part of the sub-study (iGNiTe) and it aimed to explore older persons’ competence in using mobile phones. Although the iGNiTe sub-study involved both qualitative and quantitative data-gathering methods, the current study only focused on the
qualitative data. A secondary analysis of the qualitative data, which was saved into the internet database by the Honours students who were part of the data-collection process, was conducted to achieve the goal of this study. The system that was used automatically saved information sent from the mobile phones by the Honours students. The qualitative data was gathered by means of semi-structured interviews and the Mmogo-method®.

In this section of the research the researcher focuses on the orientation and problem formulation. The research question is stated and the goal is formulated. Furthermore, the methodology is discussed with additional reference to the ethical considerations underlying the study. Populations worldwide are growing older, with an estimated 13% of the world’s population being older than 60 years (Czaja & Hiltz, 2005). The population in South Africa has also grown from 44.8 million since 2001 to 52.98 million with an estimate of 66.4 million in 2030 (South African Statistics, 2014). Internationally and nationally, ageing populations put more pressure on health-care systems to provide for the needs of older persons. Katz, Holland, Peace and Taylor (2011) identified social, emotional and physical problems experienced by older persons who demonstrate a need for support. Physical challenges are those challenges that are physically related to older persons’ aging. Many physical changes occur, including less physical energy, less flexibility, memory problems, hearing problems, less ability to move, etc. (Shoaib, Khan, & Khan, 2011). Social problems include those that gradually limit older persons’ ability to participate in social activities, while emotional problems include loss of independence that causes frustration, feelings of uselessness and sadness as a result of loss of control over an individual’s life (Shoaib et al., 2011). To address the needs of older persons, families particularly bear the brunt of responsibility in the light of the lack of services and resources provided by government (Rourke, 2008). It is against this background that technological solutions such as
mobile phones could play a contributing role in addressing the needs of older persons in the communities in which they function (Van Biljon, Van Dyk, & Gelderblom, 2010). Mobile phones are regarded as mobile technology which is currently the most popular type of communication used worldwide (Renaud, Blignaut, & Venter, 2013). The level of mobile phone penetration in Africa and Sub-Saharan countries has shown a tremendous growth in its uptake (Calandro, Gillwald, Moyo & Stork, 2010). In South Africa, features such as electricity supply, easy maintenance, as well as affordability has made the mobile phone the most significant mode of knowledge exchange (Van den Berg, Botha, Krause, Tolmay & Van Zyl, 2008). Older persons also have access to mobile phones which they bought for themselves or through family members or relatives (Van Biljon et al., 2010). According to the Office of Communication (2006) it was reported that 49% of older persons owned a mobile phone and 82% made one or more calls per week. In addition, the Human Sciences Research Council (2014) indicated that the South African Media Landscape Report revealed that older persons are the fastest-growing group in terms of social network usage such as Facebook, with an increase of 44%.

Mobile technology can be seen as an important factor towards achieving promotion of independence functionalism (cognitive) and as an enabler of older people to maintain age in place. According to Rogers and Fisk (2006) older persons’ ability to communicate with their families through different user patterns contributes to their quality of life. Research also indicates that mobile phones in Africa have enhanced friendships and family interaction which has now, for many, resulted in tightening these social connections of close friends and family members (Ling & Horst, 2011). A study by Kurniawan (2008) showed that older persons use their mobile phones for safety and care reasons because they are often left alone at home. Mobile phones also help older persons better organise their lives or schedules as they can use alarms as reminders in
order to make it up for memory loss (Kurniawan, 2008). Older persons use the phone functions as a means of communication when they do not have money. For example, they leave missed calls and wait until people call them back in order to save the costs (Fernandez-Ardevol & Arroyo, 2012).

Despite the many advantages of older persons’ use of mobile phones, there are many challenges, externally and internally, that limit their use. Externally, older persons are excluded from marketing campaigns for mobile technology because the perception is that older persons are not technologically advanced and not a good market in which to promote new technology (Tang, Leung, Haddad, & McGrenere, 2012; Tacken, Marcellini, Mollenkopf, Ruoppila & Széman, 2005). Internally, older persons’ perceptions can limit their mobile phone use. Research has, for example, indicated that some older persons perceived mobile phones as a foreign gadget (Neves & Amaro, 2012; Salkowitz, 2008; Tapscott, 1997). The nature and regularity of technological upgrades prevent some older persons from using the complex features on their phones or their use is limited due to age-specific challenges such as poor vision (Conci, Pianesi, & Zancanaro, 2009; O’Connell, 2007; OfCom, 2006). In addition, the theory of the Technology Acceptance Model (TAM) as well as The Mobile Phone Technology Acceptance Model suggested by Davis (1989) and Kwon and Chidambaraam (2000) was chosen as they best fit and model the problem identified in the current study and explain the six core factors that influence the reason behind individuals’ acceptance of a technological product. Furthermore, the study also includes the theory of multiple intelligences (Gardner, 1983) which addresses the types of intelligences in relation to skills that older persons tend to apply when using mobile technology.

Very little research has been conducted on older persons’ mobile phone use in South Africa and specifically older persons’ competence to use mobile phones. A vast amount of
research has been conducted in American and European countries, focusing more on older persons’ attitudes towards various technologies, for example, information and communication, assistive technology, health technology, etc. (Broady, Chan, & Caputi, 2010; Mitzer et al., 2010) rather than older persons’ competencies. According to Bloom (1971) competence refers to older persons’ psycho-motor ability (skills), cognitive acquisition (knowledge) and their affective reactions (attitudes) when using their mobile phones. The findings of the study can be used to plan interventions to promote older persons’ knowledge of mobile phones so that older persons’ skills in using their mobile phones could be expanded, contributing to a positive attitude towards using their mobile phones. Findings already indicated that older persons’ cognitive acquisition takes place when learning new content is transferred systematically and is conducted in a person-centred manner (Bolton, 2014). If older persons’ competence to use mobile phones can be enhanced, they would be more likely to maintain their autonomy and independence longer (Oksman, 2006), which according to Zaaiman (2014) is one of the dimensions that older persons highlighted as contributing to their quality of life.

2 Research question

Based on the problem indicated, the question that guided this research was: what are the competencies of older persons regarding mobile phone use?

3 Aim of the study

Creswell (2007) refers to the aim of a study as the desired outcomes of the study by the researcher, which would include the researcher’s intentions, giving a picture of the whole research. The aim of the approved iGNiTe project was to map older people’s user patterns of mobile technology and to explore the role of such technology in intergenerational relationships
in the Tlokwe municipal area in Potchefstroom. The aim of this particular study is to explore the competencies of older persons regarding mobile phone use.

4 Literature review

The literature that was reviewed was obtained by using Google Scholar and Google Books. More literature was reviewed from the following sources: journals, books and dissertations, while the search engines included Science Direct, Google Scholar, Google Books, EPSCO host and the North-West University databases. Keywords that were used in the literature survey are: Older persons; user patterns of mobile phones; competence; knowledge, skills and attitude, theory of multiple intelligences, Technology Acceptance Model, The Mobile Phone Technology Acceptance Model.

5 Methodology

5.1 Research context

The research was conducted in three old-age day care centres in the Tlokwe municipal area of the North West Province, South Africa namely the Ikageng Centre, Potchefstroom Service Centre for the Aged and Promosa Centre. As stated in the orientation section the current study forms part of a sub-study (iGNIte), which was conducted under a larger research project. The primary data collection for the iGNIte sub-study was done by means of a quantitative questionnaire, as well as semi-structured interviews and the Mmogo® method. The criteria used for selection to participate were based on the criteria suggested by Kelly (2006) who posits that the selection of participants should be based on the discretion of the researcher as to which subjects would best suit the process of answering the research questions.
The following **inclusion criteria** were stated:

- Participants had to be over the age of 60;
- Participants had to be able to access a mobile phone frequently (either borrowed or owned);
- Both male and female participants were included;
- Participants had to be able to understand and speak Afrikaans, English or Setswana;
- Participants had to be able to engage in discussions about their experiences of mobile phone use;

**Exclusion criteria:**

- Participants who did not want to complete consent forms were excluded from the study
- Participants with visible cognitive impairment were not included.

Participants who represented different socio-economic levels based on the Living Standard Measurement (LSM) scale were included in the larger project. This scale is a questionnaire that was developed for studying various aspects of household welfare and behaviour (Grosh & Glewwe, 1995). The scale allowed the project to focus on socio-economic levels of participants, rather than on racial classification.

The researcher formed part of the iGNiTe research team which consisted of researchers, master’s (research psychology) and honours (Psychology) students. The students were well-trained by NWU researchers beforehand on how to administer questionnaires and conduct semi-structured interviews, as well as the Mmogo-method®. As mentioned, the research was conducted at three service centres in the Tlokwe municipal area. The procedure of recruitment and conducting the research is discussed later in this proposal. Participants in the iGNiTe sub-
study were asked to answer questions on a questionnaire after which they could volunteer to participate in semi-structured interviews or the Mmogo-method®, which was presented as a focus group. For the current study the focus was only on the qualitative component of the sub-study. Therefore, for the purpose of this study, data was used from only the 48 participants who took part in the semi-structured interviews and the Mmogo® method. The sub-study had a total sample of 128 participants.

5.2 Study approach and design

The researcher followed a qualitative research approach. This approach was chosen based on its ability to draw on the participants’ opinions, experiences or perceptions (Nestor & Schutt, 2012). For the purpose of this study, meaning and experiences were obtained by means of semi-structured interviews and the Mmogo® method. A descriptive research design was followed. Furthermore, secondary analysis of the original data was done to answer the research question. Secondary data analysis is the use of the primary dataset with the aim of addressing a research question distinct from that which the primary dataset collected (Hewson, 2006). This study therefore addressed the following question: what are the competencies of older persons’ regarding mobile phone use?

5.3 Participants and sampling

In the original study, purposive and convenience sampling was done. For this study purposive sampling was chosen since it allows the researcher to select units that form part of the sample based on the researcher’s judgement of which units will be most useful or representative (Babbie, 2010). Purposive sampling was based on the inclusion and exclusion criteria mentioned above under 4.1.
A total number of one hundred and twenty-eight (128) participants took part in the sub-study project. At Potchefstroom a total number of seventy-one participants took part in the study (quantitative and qualitative), while Promosa had a total of 20 participants (qualitative and quantitative) and at Ikageng there were a total of 37 participants (qualitative and quantitative). However, not all these participants were included in the study, as the study only focused on the qualitative part of the sub-study. Semi-structured interviews, as one method of data gathering, were used in the study to obtain the necessary information from participants. Semi-structured interviews were conducted on the basis of a loose structure (topic guide) made up of open-ended questions defining the area being explored (Quinn, 2007). In Potchefstroom the individual interviews consisted of fifteen participants (thirteen female and two male). In Promosa two individual interviews (two females) were conducted and in Ikageng twelve female participants took part in individual interviews.

The Mmogo-method® sessions, as second data-gathering method, consisted of a total number of nineteen participants. This method is a visual data-gathering method that uses a question to prompt participants to build something relevant to the question by using malleable clay, beads and straws (Roos, 2012). The Mmogo-method® consisted of six participants (four female and two male) in Potchefstroom, six participants (six female) in Promosa and seven female participants in Ikageng. Therefore, a total sample of 48 participants who took part in the Mmogo-method and individual interviews from the sub-study was used in the current study whereas the remaining 80 participants whose data had been collected quantitatively were excluded.
5.4 Research procedure and recruitment

Ethical approval for the sub-study was obtained from the Research Ethics Committee of the Faculty of Health Sciences of the North-West University, Potchefstroom Campus under the larger project: NWU-00053-10-S1. Permission was obtained from the three old-age centres’ authorities. The communities had already identified well-known gatekeepers who were requested to invite older persons to participate in the study. Detailed information regarding the research and its procedure was provided to them by the project leader. In Potchefstroom, invitations were also extended in a form of posters around the community, verbal announcements and announcements at service centre meetings during the week days. In Promosa and Ikageng invitations were done verbally and through gatekeepers. All details regarding the date, time and place were conveyed through gatekeepers with all participants who showed interest.

Following the granting of permission to proceed with data collection, the exact time and venues were communicated to all centres’ authorities concerned. The participants were informed by the centre’s authorities of the specific dates that data gathering would take place. The students were part of the research team which consisted of master’s (Research Psychology) and honours (Psychology) students, who were well-trained on how to obtain informed consent, administer questionnaires and conduct semi-structured interviews. The research team assembled at 9am at the location agreed upon to be fully briefed about the day’s schedule. When the research team arrived at the participants’ locations, namely the Potchefstroom Service Centre for the Aged, the Promosa Centre and the Ikageng Centre participants were gathered for a research briefing session. The briefing session was facilitated by the project leader and each participant was provided with a consent form. Once permission to collect data had been granted, honours students administered questionnaires by using both mobile phones and printed copies. Honours
students also had a helpdesk where participants would go to get assisted with any challenges they had regarding the use of mobile phones. Participants who indicated that they had access to mobile phones and who volunteered were referred to the researchers and master’s students for either semi-structured interviews or Mmogo-method® sessions. Participants had to volunteer and choose in which part of the data-collection method they would like to take part, in order to prevent them from being part of both data-gathering methods where repetitive questions would be asked.

The semi-structured interviews, of which the questions were based on a literature study, were tape-recorded. However, before tape-recording the interviews, consent was obtained from participants. Questions were asked (see Annexure I on CD) and probing done for in-depth information. The Mmogo-method® occurred at the centres where participants felt secure and where supportive personnel in the form of nurses and social workers were available. The primary researcher explained how the Mmogo-method® works after the consent form had been read to participants. Informed written consent was also obtained from these participants as the method also included photo taking for the purpose of visual data. Participants were provided with malleable clay, beads, a piece of cloth and straws and they were kindly requested to make a visual representation of how they use their cell phones. When participants were through with their representation models, probing was done by the master’s students and primary researcher for a deeper understanding regarding what they had built. Once the whole data-collection process (semi-structured interviews and Mmogo-method® session) had been completed,honours students had a free help-desk where they assisted participants with mobile phone problems.
5.5 Data collection

Data had already been collected during the sub-study and although a specific question was not asked on competency, this aspect was addressed in this study by doing secondary analysis in order to answer the question: what are the competencies of older persons’ regarding mobile phone use.

5.5.1 Semi-structured interviews

Data was collected by means of semi-structured interviews at the three service centres with specific questions. The researcher was trained in this method during her master’s year in Research Psychology. In two of the three centres interpreters were used to translate from Afrikaans to English and also from English to Setswana. Older persons were asked to reply to the questions of the interview schedule set by the student as a way of gaining a more detailed picture (Nieuwenhuis, 2007), and a better understanding of the topic explored (Willig & Stainton-Rogers, 2008). Interviews were approximately 20 to 30 minutes long and were recorded at the centres using a tape recorder with participants’ consent as it is recommended by Greeff (2011) and Kelly (2006).

5.5.2 Mmogo-method®

The Mmogo-method® is a projective technique that has the ability of allowing unconscious meanings to emerge (Roos, 2012). Volunteering participants were invited to participate in the data-gathering process to attain a deeper understanding of their patterns of mobile phone use. Participants were provided with malleable clay, beads, a piece of cloth and straws and the following request was made to them: Please use the material provided in front of you and make anything that illustrates how you use your mobile phone. Following the models
they would have presented, they were asked to explain what they had made and the reasons for making that model. Probing questions were: Tell me what you have made? And please tell me more about your representation? These questions enabled the researcher to have a better understanding of the information provided by the participants, as it clarified the meaning behind the representation.

5.6 Data analyses

A secondary data analysis of the visual and textual data was conducted. The visual data, which are the photos of visual representations (see example in annexure IX on CD) was analysed by using the textual data to explain the visual representations (Roos, 2012). Textual data was analysed using thematic analysis to analyse the data allowing themes to emerge as described by Braun and Clarke (2006). In step 1, data was organized; in step 2 data was read and re-read to get a sense of the data as a whole. During this process, the student listed the data available, performed some necessary editing to make filed notes retrievable and generally “cleaned up” the data by discarding irrelevant data. The stage also involved writing memos in the margins of field notes or transcripts. In step 3, themes were generated. The researcher identified salient themes, recurring ideas or language and patterns of belief relevant to the focus of the study. The student also looked at the visual data, connecting possible symbolic values (see example on Annexure XI on CD) that might have been attached to representations by participants. A fellow student also conducted the same procedure. In step 4, data was evaluated for its usefulness and centrality in illuminating the questions being explored and how central the data might be to the story that was unfolding about the phenomenon being studied. Research questions were used to constantly confirm the relevance of the themes. Further confirmation was done by the supervisor and
another student who participated in the sub-study. Step 5 is the final phase where results of the research were reported.

6 Trustworthiness

The significance of trustworthiness in research is that it helps the researcher to evaluate its worth (Lincoln & Guba, 1985). In that way, the researcher is able to establish credibility, transferability, dependability and confirmability. The study used crystallisation instead of triangulation since crystallisation allows the researcher to get a complex and deeper understanding of the study (Nieuwenhuis, 2007). This was obtained by means of two datasets that were obtained through semi-structured interviews and the Mmogo-method®; and analysis techniques (visual and textual thematic analysis). Below is the discussion of the principles and strategies that were applied through crystallisation:

<table>
<thead>
<tr>
<th>Principles</th>
<th>Strategies</th>
<th>Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Credibility</td>
<td>(a) Data collection</td>
<td>Different data-collection methods were used in the sub-study, namely semi-structured interviews and the Mmogo-method®. The research process and findings were discussed among the research team who took part in the whole process.</td>
</tr>
<tr>
<td></td>
<td>(b) Peer examination</td>
<td></td>
</tr>
<tr>
<td>Dependability</td>
<td>(a) Variety of methods</td>
<td>There was a clear audit trail of the sub-study in the form of the procedures that were followed, the different methods that were used, the questions that were asked and how data was analysed. The method of secondary data analysis was clearly...</td>
</tr>
</tbody>
</table>
(b) Rich and detailed description

The different data-gathering methods allowed the researcher to access rich data to create a holistic picture of the findings in multiple ways (Braun & Clarke, 2006; Roos, 2012).

(c) Paradigms

The research is inductive in nature (Nestor & Schutt, 2012). Specific theoretical frameworks were identified, which served as basis for the study.

<table>
<thead>
<tr>
<th>Transferability</th>
<th>Confirmability</th>
<th>Reflexivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Although data was kept in original form and thick descriptions were given, transferability where similar judgments in similar other studies are made, was not intended due to the small scale of the study.</td>
<td>The researcher coded and re-coded the available data and themes were presented with supportive direct quotes from the original datasets.</td>
<td></td>
</tr>
</tbody>
</table>

7 Ethical considerations:

- Consent:

Ethical clearance was obtained for the sub-study (iGNiTe) under the larger project (*An Exploration of Enabling Contexts*) of which this study forms part under ethical number: NWU-00053-10-S1. Permission was also obtained from relevant authorities of the three centres before
commencing with data collection. The managers of the community or service centres for the aged acted as gatekeepers to introduce the researchers to the prospective research participants. Contact had been established with community gatekeepers and the aim of the research was explained to them. They were asked if they would be willing to invite older people with whom they had contact to participate in the research on 24 to 25 February 2014. On the day of the data gathering, the researchers were introduced to the participants by the gatekeepers, and the participants were given a detailed explanation of the nature and aim of the research, namely to map their mobile cell phone usage patterns and to explore the role of intergenerational relations in it. Consent from participants was obtained after the procedure had been described to them by the chief researcher of the project (see Annexure II for example on CD).

Translators, who were part of the project and understood the content and context of the research after it was explained to them by the project leader, were available in the Mmogometh® to translate the English/Afrikaans written consent forms for Setswana-speaking participants. This ensured that the questions which were asked during interviews were understandable to the participants by explaining them in the languages that they understood. The study was therefore conducted in all three languages in order to accommodate all participants, i.e., Afrikaans, English and Setswana.

• **Dignity and respect**

As the participants were part of a vulnerable group, during data collection in the sub-study the researcher did her utmost to treat them accordingly. The researcher protected the dignity of participants as it was the researcher’s responsibility to do so by addressing them in a respectful manner as another way of creating a conducive comfort zone and not forcing them to
take part in the study against their will (Allen, 2008). The researcher treated the participants as experts, also learning from them.

- **Confidentiality and anonymity**

  Before conducting interviews, permission to record the interviews and focus groups was requested from participants. The participants were assured that no names would be indicated in the final document. Participants were reminded that the information would be treated with confidentiality, meaning that an appeal was made to participants not to discuss the information outside the research context. All data of the sub-study is stored on drop box to which only the team has access. No names are indicated on documents. The electronic data and hard copies will continue to be kept in a locker at the University. The data that the researcher will work on will be password-protected on her computer and will be stored at the NWU afterwards until such time as it needs to be destroyed.

- **Risks and benefits**

  Possible risks were that participants could become tired or might not feel well. These risks were minimized by conducting the research at the relevant centres where participants felt secure and where supportive personnel in the form of nurses and social workers were available. Participants did not have to travel far on their own and a light meal was provided. Participants did not have to participate in both Mmogo sessions and interviews in order to minimize the time they had to spend on the research.

  The participants benefited directly from the study by having the opportunity to talk about their difficulties using mobile phones and having a technical support team available at a help-desk to help them with any difficulties they might have in operating their phones. Indirectly the
participants will benefit, as the information that they have shared will provide insight into their competence to use mobile phones, so that supportive strategies could be developed. Once the dissertation is completed, results will be communicated to the different centres and participants by means of information sessions.

- **Remuneration and costs**

  Participants were informed that no monetary incentives were to be offered to them and they did not have to pay for anything that would be needed or used on that day. Food parcels were offered on the day of data collection.

- **The right to participate or withdraw**

  The participants were made aware of their rights to participate or not to participate in the study or withdraw from the study at any time during the research process without penalisation.

**Credibility of researcher**

**Training**

The researcher was trained by a NWU researcher through practical sessions on how to conduct interviews and the Mmogo® method and on dealing with participants. The project leader explained the research project to the authorities and participants prior to the data-collection process.

**Data-handling**

Data was recorded without mentioning names. During the research process the recorded and transcribed data was stored in a storeroom at the North-West University where only the
research team could access it. Electronic data was only made available to the research team. No names of participants were indicated on the electronic data or hard copies.

8 Choice and structure of report

The article format is followed with the title: *Older persons’ competence to use mobile phones: An exploratory study*

Section A:

Part one: Orientation of study

Part two: Literature review

Section B: Article

Section C: Critical reflection (conclusion, limitations and recommendations)

Section D: Addenda

The journal *The Gerontologist* has been identified as the journal for submission of the article.
References


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PART II: A LITERATURE REVIEW ON COMPETENCIES OF OLDER PERSONS REGARDING MOBILE PHONE USE

1. Introduction

Globally life conditions for persons over the age of 60 years have increased especially in the industrialized world (McMurtrey, Downey, Zeltmann, & McGaughey, 2011). Older persons are living rather a better life as compared to the past. Since the technological penetration thirty years ago it is expected that this group must be on the same level with the population below their age regarding technological competence. However, there is still some significant evidence of a technology-divide between youth and older persons (McMurtrey et al., 2011). It is well-known that mobile phones have become a means of communication for different age groups, including older persons over the age of 60 years (Koutsourelakis & Chorianopoulos, 2010). However, other studies show that there is a portion (53%) of older persons in the United States who can use mobile phones fairly well, while the remaining percentage is of those that cannot use technology (Zickuhr & Madden, 2012). In general, mobile phones are now used for various daily tasks (Sjolinder, 2006). These mobile phones, however, require special needs, including skills and knowledge in order to utilise them (Koutsourelakis & Chorianopoulos, 2010). The knowledge about these mobile phones is important for autonomous usage (Sjolinder, 2006). If older persons also have to have access to this technological product, this will require older persons’ physiological and cognitive needs being met (Sjolinder, 2006).

Few studies have been done on older persons’ levels of performance or skills and knowledge with regards to the use of mobile phones (Feist & McDougall, 2013; Koutsourelakis & Chorianopoulos, 2010; Malik, 2011). Lim (2010) asserts that the lack of skills and knowledge
has an association with mobility and sensory change related to aging. Apart from changes in mobility and sensory awareness, experience and cognition are also the utmost important contributors that the mobile phone will require in order to determine the ability to use it (Lim, 2010). Due to a lack of studies conducted on older people and mobile phone competencies particularly in the Sub-Saharan context, this chapter intends to explore South Africa’s current status with regards to the following concepts: older persons, older persons and technology, as well as their competencies in using a mobile phone. The chapter also includes theoretical frameworks that supported the study. Firstly cognitive theory explains how older persons’ physiological decline informs their knowledge and skills of using a mobile phone. Secondly, Technology Acceptance Model (TAM) and Mobile Phone Technology Acceptance Model (MPTAM) explain what determines older persons’ attitudes towards mobile phone usage.

2. Older persons

Older persons refer to individuals from the age of 60 years in the South African context (Cheng & Siankam, 2009; Kimokoti & Hamer 2008; Lombard & Kruger, 2009). The older person population is dramatically increasing in the world today. This population has been growing faster since the year 2000, especially in the African countries (Shrestha, 2000). Countries including USA, Japan and the European continent are also experiencing the same dramatic growth of the older population (Plaza, Martin, Martin, & Medrano, 2011). It is also true that improvements are being made with regards to living and health conditions of these older persons with the purpose of allowing them an equal opportunity to an improved quality of life. Plaza et al. (2011) add that older persons now live longer than previously, and aging is now globally a reality to many. Subsequently, older persons are experiencing a great change in almost all aspects of their lives with great potential, from living a healthy, active life (Ministry of
Labour and Social Affairs, 2008). Pillay and Maharaj (2003) argue that, although the African continent has been predominantly populated by youth, there has also been an increase in the population of older persons. Older persons’ proportion in the African countries was 9% when compared to the other parts of the world, while in the remaining parts of the world it made up to 22%, a percentage expected to increase on the African continent by 20% in 2050 (United Nations Developmental Programme, 2012). Among other African countries there is South Africa with the older persons’ population from the age of 60 years (Cheng & Siankam, 2009; Kimokoti & Hamer, 2008; Lombard & Kruger, 2009), currently making up 8.4% of the country’s population (Statistics South Africa, 2014). This population was 3.7 million in total in the year 2009 and is expected to count 4.25 million in 2015, with women representing the largest proportion of older persons in South Africa (Statistics South Africa, 2009). Such increased rates of older persons have brought about change in the age structure of the African population as a whole, and thus requires a considerable change in the inclusion of older persons’ developmental needs during programme planning or policy-making (Pillay & Maharaj, 2003). The developmental needs include support that is influenced by physical, social and emotional challenges (Katz, Holland, Peace, & Taylor, 2011).

Among other challenges older persons face is their retirement from work; chronological changes; and living alone because of children who have moved away from them, for example, children living abroad (Lindley, Harper, & Sellen, 2009). When children relocate to new working places, older persons are often left alone in their homes to take care of themselves (Department of Economic and Social Affairs, 2011). Not only do older persons have developmental needs, but there is a notable contribution that they make, especially in African countries as compared to the European countries as well as other parts of the world and such
contributions include taking care of the children left in their care following a parental loss or grandchildren’s parents not being able to raise their children due to work reasons, as well as taking care of the sick at home and providing financial support (Help Age International, 2008). Recent research shows that older persons in the Sub-Saharan Africa are more poverty-stricken when compared to the entire population at a 5% increase of GDP growth (Nair, 2014). Such conditions are expected to increase the level of financial support even in the years to come (Nair, 2014). According to Wachipa (2006), similarly, older persons in South Africa are pensioners who rely on the state’s assistance in overcoming the dependency burden as many have retired and cannot afford to live an independent and quality life. Therefore, they rely on the state for social grants (Wachipa, 2006). The social grants have reportedly been showing some significance in the lives of older persons aged 60+ years since it is perceived to be a reliable source of income that they use to purchase food and access public health services (Case & Menendez, 2007; Moller & Devey, 2008; Schatz, 2007). However, research also shows that the amount of social grants aimed at assisting individual South African older persons often has to be shared among household members as older persons live with their children or grandchildren in many instances (Bohman, Vasuthevan, Van Wyk, & Ekman, 2007; Ogunmenfun, 2008). In some instances older persons live alone in a single room, shack or wooden rooms that do not guarantee safety and security (Bohman et al., 2007; Makiwane & Kwizera, 2006; Tati, 2009).

However, there is a small portion of older persons (6.5%) receiving housing subsidies (Tati, 2009). With a vast proportion of older persons living alone in unsafe households, they reportedly showed some fear within their communities as they can hardly leave their houses at night (Bohman et al., 2007). In addition, Hutton (2008) adds that the increase in the rate of older persons’ population and their vulnerability has brought attention to many social policy-makers in
some parts of the world and as a result, care services requirements by this group have become key elements in programme planning of many countries. This is because of the expected shift in the burden of communicable and non-communicable diseases, from 11.7% to 76.8% world-wide (Harwood, Sayer, & Hirschfeld, 2004; WHO, 1998).

Since a number of older persons are faced with chronic challenges, their daily functioning ability gets reduced, for example, mobility and eyesight (Hutton, 2008). This in turn could have a negative impact during emergency situations that may require their immediate reaction (Hutton, 2008). WHO (2006) reported that older persons with chronic illnesses who live alone, especially in tower-built apartments with no person nearby to offer assistance, and they often have difficulties in going out to get themselves food, beverages and escaping danger as fast as they possibly can. In such situations, neighbours often neglect them (WHO, 2006). Such problems have increased the level of pressure among old-age centres in many African countries as they have to institutionalise this challenged group in order to address their levels of dependency (WHO, 1998). The Department of Social Development in its strategic plan of 2010-2015 for South African citizens also includes among other programmes, programmes for older persons such as Comprehensive social security (social assistance, social insurance, social assistance grants, etc.), as well as welfare services like care services (Department of Social Development, 2010-2015). In the light of the above-mentioned challenges and services provided, there is an increasing demand for mobile technology to be available to older people (Kwan, 2007; Pfaff, 2010).
3 Older people and mobile technology

As discussed above, human communication is very vital, especially for older persons as they tend to go through some dramatic losses in life that eventually result in social isolation although there is a large group of older persons actively involved (Claudia & Anamaria de, 2012; Independent Age, n.d). Such losses include losing family members due to death that is related to aging, and keeping the relationship cycle with other family members or relatives and friends therefore becomes very significant in order for older persons to feel emotionally and physically safe (Claudia & Anamaria de, 2012). Moreover, technology has become an imperative part of our lives and will continue to be like that even in the future, particularly regarding the use of mobile phones (Feist & McDougall, 2013). According to the 2014 Accenture Consumer Survey, the mobile phone has been rated the most important digital technology. It has shifted from being a limited tool, i.e., from being used for sending and receiving calls to a tool for multiple purposes, for example, SMSs, photos, video, internet, audio, etc. (Kwan, 2007; Accenture Consumer Survey, 2014). Research shows that in 2006, about 800 million mobile phones were owned and used in the whole world (Datamonitor, 2008). The number increased to 3.3 billion mobile phones that were being used two years later (Hower, 2008; Office for National Statistics, 2013). With Africa being recognised as the fastest developing continent among other continents in the world (The World Bank, 2012) some countries on the African continent now form part of the middle class which is able to have access to technological services at an estimated rate of 90% (Anthony, 2012; Berkley, 2013). This rapid growth is reportedly brought about by the technological development and the opportunities that these technological services have brought (Deguerre & Parker, 2013). Research also shows that Africa’s technological growth had been 2.5% since 2000 to 2011 in comparison with 48% of the world’s technological growth (Smith &
Lamble, 2011). This technological growth is mainly caused by the mobile phones consumed (Deguerre & Parker, 2013), subsequently showing the value and important role that the mobile phone is playing on the African continent (The World Bank, 2012).

This change is also significantly seen through the increasing rates of mobile phone owners. As far back as the year 2000, about 3% of African citizens had only subscribed to ownership of landlines, thus mobile phone manufacturing companies shifted the focus from them (Bailard, 2009). However, in 2007 the number of mobile phone subscribers in Sub-Saharan Africa increased from 2% to 30% (Aker & Mbiti, 2010; Deloitte & GSMA, 2012; International Telecommunication Union (ITU), 2008) and this was after the mobile companies had started considering the African mobile phone markets. Research shows that the mobile phone in the African continent is changing people’s lives (Bailard, 2009). Many rely on it mainly for business purposes, accessing health-care services and for accessing money, especially for those who do not have bank accounts (Jabangwe, 2013). Similarly, older persons in South Africa rely on mobile phones as provision of their needs such as health care services and grants are mainly processed through mobile phone use with the aim of adding value to their lives (Van Biljon, Van Dyk, & Gelderblom, 2010). However, due to economic conditions in South Africa, older persons do not have the privilege to buy themselves mobile phones (Van Biljon et al., 2010). They rather rely on second-hand mobile phones passed to them by their children and grandchildren.

Although the mobile phone has been adopted as a technological device in the world that assists us in almost every aspect of our lives, a simultaneous occurrence of change in population’s age and mobile technology capabilities has been experienced lately world-wide (Neves & Amaro, 2012; Gelderblom, Van Dyk, & Van Biljon, 2010). Older persons specifically
beyond the age of 60 years find it challenging to use these mobile phones because the use of this mobile technology is dependent on multiple things, with age being found at the top of the list (Kurniawan, 2008; Lenhart, 2009). This is due to older persons’ cognitive and physical changes that affect their mobile phone usage (Neves & Amaro, 2012; Gelderblom et al., 2010), thus possessing a mobile phone mainly for emergency purposes (Kurniawan, 2008). Moreover, since the inception of technology, older persons had always been less considered because of the general consensus that older persons are technophobic despite their growing interest in the usage of mobile technology (Czaja & Lee, 2001; Neves & Amaro, 2012; Tacken, Marcellini, Mollenkopf, Ruoppila, & Széman, 2005; Thinyane, Terzoli, & Clayton, 2009). This technophobe characterization could be associated with the lower rates of mobile phone usage among older persons (Neves & Amaro, 2012) although other studies have indicated older persons’ proficiency in the use of mobile phones (Malta, 2008; Czaja & Lee, 2001). World Wide Web consortium (2012) classified the difficulties and changes related to aging and mobile phone usage as follows:

- **Change in vision:** contrast, colours in the phone features and the focusing distance makes it difficult for older persons to operate the phone.

- **Physical change:** reduced motor control, especially the joints of the hand, makes it difficult for older persons to use the small buttons on the phone.

- **Cognitive change:** reduced levels of problem-solving ability, lower concentration spans and reduced working memory defeat older persons’ ability to complete many tasks on their phones.

- **Auditory change:** this often makes it difficult for older persons to distinguish the different sounds from the phone (ringing tone) and other sounds that could be confusing especially if there are sounds from the background.
Given the challenges that defeat older persons’ capabilities to use a mobile phone, the study subsequently provides a literature overview of older persons’ competencies in using mobile phones while experiencing challenges related to the above-mentioned physiological changes.

### 3.1 User patterns

The impact of mobile phone use on development can be determined by patterns in which mobile phones are used and benefits derived by those using them (ITU, 2011; James & Versteeg, 2007). Mobile phones in Africa have already benefited many people as they have enhanced friendships and family interaction that have now resulted in tightening these social connections of close friends and family members (Ling & Horst, 2011). Kurniawan (2008) described older persons in the United Kingdom as passive users of mobile phones who would only rely on a mobile phone as an alternative when there was no other means of communication. This statement is supported by the findings from a study conducted in the European context by Fernandez-Ardevol (2012) which showed that older persons use both a landline and a mobile phone, but a mobile phone serves as a secondary means of communication. This means that if older persons are not reachable on the landline, then they can be found on their mobile phones since a mobile phone allows them to leave their homes and still be reachable. However, many have been more reliant on a landline since it does not contain multiple functions that are beyond calling, such as sending text messages and video calling (Kurniawan, 2008).

Older persons reportedly use alarm services in order to remind themselves about their medical appointments or any other kind of appointment (Chen, Chan, & Tsang, 2013). However, it should be noted that it gets complicated sometimes when the older users have to set up these appointments on their mobile phones prior to the appointment (Chen et al., 2013). In a recent study conducted by Neves and Amaro (2012) the findings showed that older persons with
financial capabilities used a mobile phone for various reasons, amongst them being paying bills through the use of mobile phone internet. Such use makes life much easier for them, to such an extent that they couldn’t imagine life without a mobile phone (Neves & Amaro, 2012). Other user patterns include a mobile phone used as a family memory box. Older persons regard a mobile phone as a family memory box where they are able to share and keep memorable pictures and videos of their family members (Fernandez-Ardevol, 2013; Neves & Amaro, 2012). Plaza et al. (2011) add that older persons are able to benefit from using mobile phones as a way of also supporting their daily lives. The most obvious advantage for them using a mobile phone is that older persons can keep contact with their family members, friends and relatives (Mallenius, Rossi, & Tuunainen, 2007). Because they experience deterioration in their health, older persons want to be able to make assistance-seeking calls during emergency; it can be with their family members or the hospital (Fernandez-Ardevol, 2013; Weilenmann, 2010). Another example of advantages in using a mobile phone is that in emergency assistance-seeking situations, if older persons should encounter a problem while driving a car, then they’ll be able to quickly make a call or when someone is sick then they will be able to call emergency response personnel. To some, safety and security are not the only motive behind having a mobile phone. In keeping constant communication with their family members, different methods of communication are used that include chatting, calling, SMSs, MMS, Emailing or Skyping, etc. Skype is among other user patterns employed by older persons (Fernandez-Ardevol, 2013). However, not all older users with mobile phone internet can Skype, but only those who are familiar with Skype. Skype serves as a long-distance means of communication especially for older persons who have children or family members living abroad. Family support is suggested to be pivotal in maintaining psychological well-being and life-satisfaction of older persons (Chen, Wen, & Xie,
In addition, older persons have indicated that mobile phones are mainly useful for their faster information seeking, for example, time checking and phone number searches. Because older persons have a much weaker memory than youth, the phone address book is helpful in keeping record of phone numbers (Chen et al., 2013). Older persons perceive an address book as the most significant feature since it makes contacting a little easier and helps them easily identify incoming and missed calls. Given different user patterns that older persons use, it could be agreed that mobile phones have greatly improved some older persons’ abilities of sending and receiving cash, either by means of internet banking or a well-known money system in the whole of Africa called M-PESA which does not require internet when sending cash (Hughes & Lonie, 2007; Morawczynski, 2009; Mos & Morawczynski, 2009; Sife, Kiondo, & Lyimo-Macha, 2010).

Not only do older persons gain knowledge from different cash transfer systems, but also gain emotional and social support from other user patterns. Older persons use mobile phones to keep their ties strong in order to keep a constant communication for support-seeking purposes since the support received at old-age centres may not necessarily be the same as the support received from family members at home (Department of Economic and Social Affairs, 2011).

According to the findings by Sife et al. (2010) mobile phones have a great potential of strengthening, expanding and improving the social relations with families, friends, etc. and they also reduce the level of physical visits and travelling. These findings are in line with the early findings from other studies (De Silva & Zainudeen, 2007; Frost & Sullivan, 2006; Goodman, 2005). These studies similarly found that mobile phone usage helps one not to feel socially isolated and it improves relationship strengths. This means that the stronger the support network gets, the lower level of loneliness it becomes (Independent Age, n.d). Older persons in the findings of an on-going project taking place in the United Kingdom, which focuses on groups
and individual interviews, reported that for them being able to use social networks and chat with families and friends increased their sense of having social support (Independent Age, n.d). This implies that through mobile phone use, older persons are able to develop social contacts and be actively engaged within their communities (Independent Age, n.d).

### 3.2 Competence

While older persons are encouraged to actively execute multiple tasks related to technology, it is of utmost importance that their competence in executing such tasks also be considered (Dara-Abrams, 2008). The vitality of understanding the competence of current South Africa’s older persons is that it enables us to reach a consensus between older persons and mobile phone usage.

Mobile technology is gradually altering the economic and social life of many citizens world widely (Hardill & Olphert, 2012), particularly the use of mobile phones (Damodaran & Olphert, 2006). On the other hand the field of gerontechnology is also growing. According to Dara-Abrams (2008) gerontechnology is currently focused on creating technological products that address physiological functioning and the physical performance challenges related to activities. It is a discipline that integrates older persons’ aging developmental needs and the use of new innovative technological products in the current society (Bouma, Fozard, Bouwhuis, & Taipale, 2007).

In many countries, mobile phones have become the most reliant instrument especially for provision of services. However, the success of this service provision through mobile phones is entirely dependent on the competencies of people using these mobile phones (Hardill & Olphert, 2012). Through the use of mobile phones, people are able to access technological services ranging from information, social networking, playing games, education, etc. (Hardill & Olphert,
2012). The omnipresence of this mobile phone has made society assume that it is automatically easy to use and that no training of some sort may be required, irrespective of age difference (Koutsourelakis & Chorianopoulos, 2010).

Koutsourelakis and Chorianopoulos (2010) add that there aren’t sufficient studies that have been conducted, focusing on older persons’ competencies of using a mobile phone. Hardill and Olphert (2012) further argue that for older persons, this does not only imply the assistive mobile technology benefits, but also provides them with the opportunity to improve their technological skills for better quality of life. It is very important to also note the development that mobile phones bring in older persons’ lives and that its features enhance older persons’ cognitive levels. For example, the visibility of time and date on their mobile phones enhances their time management.

A mobile phone also provides much freedom and older persons may feel that it gives them determination and empowers them to utilize it as much as possible for development purposes (Melander, 2008). For the purposes of this study, this chapter reviews the literature on the knowledge, skills and attitude that older persons possess when using a mobile phone.

3.2.1 Knowledge

Knowledge plays a vital role in the aging population since it helps older persons to address their challenges and provide them with an opportunity to improve their skills with regard to what they both already know about and what they don’t know (Ala-Mutka, Malanowski, Punie, & Cabrera, 2008). In this era of a constantly more complex digitized society, older persons ought to gain as much possible knowledge as they can throughout their lives with regards to technological products (Ala-Mutka et al., 2008).

Fernandez-Ardevol and Ivan (2013) further state that some older persons lack knowledge
of mobile phones and that their lack of knowledge on how to operate a mobile phone brings about dependency on other people. Their level of dependency is extreme to an extent that they don’t know how to send pictures, videos, messages, browsing through the internet, or loading airtime. Particularly the intergeneration is their main reliance when encountering problems with their mobile phones because most of older people can’t take control over mobile phone use on their own since they only operate their phones the way they have been instructed by those helping them. This consequently decreases the purpose of promoting independence and competence among older users of mobile phones (Kurniawan, 2008). This lack of control limits them from exploring the complex features because of their fear that they might complicate their mobile phones and receive an unpleasant response from those assisting them (Fernandez-Ardevol & Ivan, 2013).

Ala-Mutka et al. (2008) argue that, although learning could be helpful for older persons, the inter-generational knowledge and experiences shared shouldn’t be ignored. The interactive assistance could be beneficial as knowledge is directly imparted (Bailey & Ngwenyama, 2010). Older people receiving assistance from those living with them in the house have ample time to gain more knowledge as compared to older persons staying alone and always having to wait a long time for someone to come and assist them when lacking the knowledge of operating a mobile phone (Bailey & Ngwenyama, 2010). Older persons’ knowledge to use a mobile phone therefore requires a good working memory (Charness & Boot, 2009; Pattison & Stedmon, 2006) which in this study is described as human cognition with underpinning components to it (Sjolinder, 2006). Sjolinder (2006) describes human cognition as the ability of human beings to process information, taking into account all the necessary processes that are involved with acquisition and information processing. These processes include “perception, memory, problem
solving, acquisition…” (p. 15) and are discussed below.

Perception refers to the selection and interpretation of processed information through visual and auditory forms. The outcomes of the individual’s perception depend on the amount of mental efforts applied on the task at hand (Sjolinder, 2006). An example could be that of older persons who prefer walking around carrying a piece of paper with their contact numbers written on it since they sometimes find it challenging to record contacts in their mind (Kurniawan, 2008). They perceive a piece of paper as an easier method of keeping record than a mobile phone as it is not easy for them to remember and such a problem is related to a working memory.

A Working memory involves keeping information in our minds for a short-term period and still being able to manipulate that information (De Abreu, Conway, & Gathercole, 2010). Phiriypokanon (2011) refers to human memory as one of the important parts of the human brain that is significantly connected to physical and cognitive functionalism that serve as a support system to the usage of mobile technology, particularly mobile phones in this context.

Generally, a decline in working memory is not a result of storage capacity, but rather the amount of processing that declines with time (Norris, Smith, & Peebles, 2002). Phiriypokanon (2011) posits that the more complex the task of using a mobile phone becomes for older persons, the more their performance drops due to their lesser concentration span. Older persons’ learning, processing, reaction time and problem-solving capacities gradually slow down, requiring the simplest user mobile phone (Charness & Boot, 2009; Pattison & Stedmon, 2006).

Problem-solving involves application of mental processing and the ability to think of strategies that can be used to solve a task at hand (Sjolinder, 2006). Problem-solving requires Fluid Intelligence, another part of human ability that is associated with cognition, one that is lacking among most of chronologically aged persons (Czaja & Lee, 2007). Jaeggi, Buschkuehl,
Jonides and Perrig (2008) define Fluid Intelligence as the ability of humans to autonomously apply their knowledge distinctive from the knowledge acquired in the past, in emerging problems when using a mobile phone. The ability to solve such problems requires a working memory and more concentration time from the users (Jaeggi et al., 2008). Fluid Intelligence is thus imperative in the use of mobile phones (Czaja & Lee, 2007).

Another area within cognitive psychology is acquisition. It is the process of gaining knowledge through different experiences. Research shows that older persons, unlike younger adults, take longer to learn by themselves regardless of the prior experience they may have acquired (Charness, Kelley, Bosman, & Mottram, 2001). Many acquire the knowledge about the mobile phone use through the teachings imparted by the younger generation or someone they prefer to be assisted by (Sjolinder, 2006). Regardless of the experience or knowledge that older persons may possess, they constantly need to be reminded of what they know because of their weakening memory (Sjolinder, 2006).

3.2.2 Skills

Boyatzis and Kolb (1995) define a skill as “a combination of ability, knowledge and experience that enables a person to do something well” (p. 4). Sterns (2005) posits that it is of utmost importance that older persons learn all the necessary skills of using a mobile phone; have the ability to keep all that is learned in the mind and be able to apply what was learned in various situations. When older persons are being given the knowledge of using a mobile phone, as it often happens that many receive knowledge from certain people they prefer receiving assistance from, they should be able to retrieve what was learned when they are alone (Sterns, 2005). This, in return, increases their level of individual functionalism.

Moreover, aging is related to a loss of skill with regards to vision, hearing and motor
control. These chronologically identified changes are said to have a great potential of interfering with their mobile phone usage skills (Chen & Chan, 2011). Less consideration of older persons’ age-related sensory-perceptual changes makes it even more challenging for them to use their mobile phones (Chen et al., 2013). Older persons from the age of 60 years onwards were reported to be experiencing a decrease in grip strength, having only 70% of maximal strength on average (Sato & Fukuba, 2000). According to Pattison and Stedmon (2006), when older persons’ vision is affected, their ability to focus long tends to deteriorate; their ability to glare diminishes and they will thus require more light and improved illumination when operating a mobile phone. In their loss of strength and grip, their skills level is often impaired and they can’t move as often as they would like. Given the problem, older persons suggested that a mobile phone with an oversized face or keys that are much easier to press can be suitable for their physiological needs (Pattison & Stedmon, 2006).

The psychomotor ability challenges faced by older persons also cause them to make errors often when they use their mobile phones. The following are some of the identified problems caused by older persons’ psychomotor challenges: (i) the common occurrence of accident dialling since older persons often forget to lock the keypads of their mobile phones (Chen et al., 2013); (ii) the pushing and pressing of operating keys (Weilenmann, 2010). As much less important as it may seem, a number of studies have indicated how problematic such input techniques (entering contact numbers and dialling) can be, especially to older users who are not used to technology and those with psychomotor problems. Particularly mobile phones are more challenging due to their small sizes (Weilenmann, 2010). In addition, O’Connell (2007) also reported that older persons experience difficulties especially when texting using certain mobile phones due to various constraints, for example the size of the screen of the phone that
could make it difficult to use by older persons with impaired vision.

These difficulties are brought about by changing and developing technology as compared to previous years. In the past, mobile phones used to be big enough for texts to be more visible for older persons to read, but the sizes of mobile phones have drastically been reducing each year since 2006 (Steyn & Van der Vyver, 2013). However, some mobile phones that have been manufactured since 2013 and which are popularly known as smart phones come out with screens which are much larger to accommodate older persons in accessing their features without encountering too many problems (Steyn & Van der Vyver, 2013). Wilkowska and Ziefle (2009) add that, because older persons have a weakened memory and dexterity, they tend to get lost in the process of learning about their mobile phones. However, because in Germany a vast group of the older population now rely on it for services from the state, the pressure to use it is thus mounting and its effective use has become a prerequisite. Older persons therefore ought to know, learn or find a way of knowing how to use their mobile phones in order to be included in the current information society. They need to learn how to make calls, send SMSs, make video calls, use phonebooks, save pictures on their phones, etc. (Wilkowska & Ziefle, 2009).

It is important to note that older persons’ skills in mobile phone use vary across countries. In trying to learn and know how to use a mobile phone, older persons in Australia have been reportedly acquiring their skills to use mobile phones informally, meaning that they either taught themselves how to use a mobile phone through reading mobile phone manuals or they learn with the assistance from family members and friends rather than going for formal lessons (Feist & McDaugall, 2013).
3.2.3 **Attitude**

Although older people are being accommodated by bigger phones that have been manufactured since 2013 (Steyn & Van der Vyver, 2013), the current industries of mobile phone technology are mainly targeting young people by creating small devices that attract them more than they are appealing to older persons, paying less attention to the requirements and needs of older persons (Ehmen et al., 2012). In addition, the complexity that comes with these mobile phones places demand on older persons’ cognitive supports (Benyon, 2010). Moreover, this increases the level of common misconception that older persons are less interested in learning how to use the newly-developed technologies (Weilenmann, 2010). Interestingly, older persons have realized that they need to keep up with these technological changes (Feist & McDaugall, 2013; Turner, Love, & Howell, 2008). O’Brien, Olson, Charness, Czaja, Fisk, Rogers and Sharit (2008) also found that once older persons have well adapted to the usage of mobile phones, they become frequent users of the device.

Although the advanced features of the mobile phones come with multiple challenges, older persons may therefore tend to possess different attitudes when using the mobile phone. Multiple studies have indicated that older persons tend to have a fear of mobile technology (Van Biljon, Renaud, & Van Dyk, 2013; Independent Age, n.d; Chen & Chan 2011; O’Brien et al., 2008). The fear ranges from costs to breaking the mobile phone. Older persons are afraid of the costs that come with using and maintaining mobile phones, for example, buying a mobile phone and airtime in order to make calls, send text messages and using the internet (Pather & Usabuwera, 2010). The reason is that most of the older persons have retired and do not have the extra cash that is required to maintain their mobile phones (Pather & Usabuwera, 2010).
Kurniawan (2008) in his study found, among others, challenges that cause the negative attitude of older persons in the usage of mobile phone: 1) the newly-developed predictive texting was found to be more of a distraction. Each time the predictive texting is not correct, older persons have to delete the wrong text and type the correct one. This becomes distracting for older persons with physical joint problems since they have to work around multiple keys; 2) with buttons that are connected to each other, for example, three letters sharing a button with a number “4”, it becomes quite challenging for older persons to text. Often, older persons have to open an SMS and respond to the person who sent them an SMS, where in some cases it’s an urgent SMS, but due to their cognitive deterioration it is often difficult to respond as quickly as expected; 3) current mobile phones constantly run out of battery power due to various functions that require more power to use them. Some older persons therefore prefer non-smart phones as they tend to forget to charge their mobile phones regularly.

Fernandez-Ardevol (2013; 2012) adds that some older persons prefer a landline as they rarely receive calls on their mobile phones and do not like texting. Many do not like long SMSs but rather short SMSs as they save them much time since most of them have joints that easily get tired due to small buttons of the phones, while others do not even bother to reply to SMSs. Findings from a study conducted by Lindley et al. (2009) revealed that some older persons valued voice communication more than texting. They regarded voice calling as “more direct of being in touch” (p. 1697).

Older persons’ benefits from mobile phones are also dependent on their attitude towards its usage. Research shows that the mobile phone needs of older persons are more centred around emergency and health-support services, as well as communication aspects that assist in enhancing safety and other services that make their daily tasks much easier (Lee, 2007;
Mallenius et al., 2007; Van Biljon & Renaud, 2008). Because mobile phones are currently used to bridge the gap between provision of health services between older persons and their health-care providers, this allows them to take control in managing their own health (Joe & Demiris, 2013; Lu, Kotelchuck, Hogan, Johnson, & Reyes, 2010). At times when older persons experience difficulties travelling or don’t find it necessary to travel to clinics or hospitals in order to meet their health-care providers, they prefer to rather use a mobile phone and communicate with their health-care providers to discuss their conditions (Back & Makela, 2012). By doing this, they save costs of traveling and the subsequent physical tiredness they would have to suffer from travelling a long distance. On the other hand, a study conducted by Joe and Demiris (2013) shows that older persons living at old-age centres also have their own preferences - instead of writing their daily activities down on a board or piece of paper, they prefer to use a mobile phone that can easily save their daily activities and remind them when it’s time for that activity to be performed. However, it is not older persons themselves who store these activities in their mobile phones, but their care-givers at the day-care centres who help them store these activities (Joe & Demiris, 2013).

4 Theoretical frameworks

4.1 Theory of multiple intelligences

Cognitive theory was established by Howard Gardner in 1983 and suggested that human beings do not only have a single intelligence, but rather multiple intelligences (Gardner, 1993). Gardner defined intelligence as an individual’s biological and psychological ability to actively absorb or hold the information and solve problems (Gardner, 1999). Gardner further identified the eight human intelligences that individuals possess:
• *Linguistic intelligence*: this is the ability to integrate both written and spoken language in order to achieve a specific goal.

• *Logical mathematical intelligence*: an individual’s ability to systematically solve and analyse investigations.

• *Musical intelligence*: the dexterity in performing, forming and recognizing sounds and sequences of music.

• *Bodily-kinaesthetic intelligence*: the ability to use all the body parts to influence or solve a problem.

• *Spatial intelligence*: the ability to identify valid patterns and influence them in both wide and limited spaces.

• *Interpersonal intelligence*: the capability of interacting with others, knowing what they want and what their motivations are.

• *Intrapersonal intelligence*: the ability to understand yourself, your inner being, knowing your desires, fears and most of all, having the capabilities of utilizing that knowledge you have about yourself to manage your life.

• *Naturalistic intelligence*: when one is able to categorize environmental species (Gardner, 1999).

This theory suggests that human beings do not only get these intelligences from birth, but also gain knowledge and develop their potential as they grow older (Dara-Abrams, 2008). With all eight intelligences human beings are born with, each individual’s stronger intelligence develops differently (Gardner, 1999). As people grow old and experience change in their physiological capabilities, older persons use both their stronger and weaker intelligences to balance their difficulties of absorbing information (Dara-Abrams, 2008).
In order to bring about balance between difficulties of their memories, older persons use spatial intelligence and linguistic intelligence (e.g. images and names) that make it easy for them to remember a person and their name (Dara-Abrams, 2008). Dara-Abrams further states that biographical sketches such as multimedia types, coupled with shared stories through the internet, helps to engage older persons’ linguistic intelligence, intrapersonal intelligence, interpersonal intelligence and spatial intelligence. It can therefore be concluded that the use of both multimedia and internet helps to set older persons’ multiple intelligences in such a way that, not only will they be balancing their physiological decline but also improving their knowledge.

4.2 Technology Acceptance Model (TAM)

Van Biljon et al. (2010) argue that numerous approaches are available that demonstrate or describe how a certain group of people accept technology. The same notion applies to older persons. Older persons’ affective reaction (attitude) towards technology usage could be modelled by their adoption using the TAM. The model was suggested by Davis (1989) where he identified the six core factors that influence the reason behind accepting a certain technological device. The following are the six influential factors that determine the attitude of an individual towards new technological device:

- **External variables (EV):** this includes perceived usefulness (PU) and perceived ease of usefulness (PEU).
- **Perceived usefulness (PU):** it is the degree to which an individual believes that by using technology device, it will enhance their level of executing a task (Venkatesh, Morris, Davis, & Davis, 2003).
• **Perceived ease of use** (PEU): it is the degree to which one believes that by using a technological device, they will not have to use much effort. Technology thus makes it easy for them to perform a task effortlessly (Venkatesh et al., 2003).

• **Attitude towards use** (A): it is defined as the desirable outcome of using technology (Malhotra & Galletta, 1999). It is through perceived usefulness (PU) and perceived ease of use (PEU) that the attitude towards the technological device used can be determined (Van Biljon et al., 2010).

• **Behavioural intention** (BI): it is determined by the attitude towards the use of technology devices and their perceived usefulness (Van Biljon et al., 2010).

• **Actual use** (AU): it is determined by behavioural intention (BI).

Renaud and Van Biljon (2008) argue that personal and social influences determine the attitude towards the use of technological device. However, the TAM does not account for social influence and consists of only one determining factor that leads to the actual use system determined by behavioural intention (BI) to use (Malhotra & Galletta, 1999) as it is depicted in the model shown in Figure 1 below.

![Figure 1: The original Technology Acceptance Model (Davis, 1989).](Image)
Figure 1 shows that the possible relation between PU and PEU indicates that PU brings about the effects of PEU on the attitude and intended use of technology (Mohamed, Tawfik, Al-Jumeily, & Norton, 2011). The Mobile Phone Technology Acceptance Model (MPTAM) which is an extension of the TAM proposed by Kwon and Chidambaram (2000) includes components such as “demographic factors, socio-economic factors, ease of use, apprehensiveness, extrinsic motivation (perceived usefulness), intrinsic motivation (enjoyment, fun), social pressure and extent of use” (Renaud & Van Biljon, 2008, p.3) (see Figure 2). Kown and Chidambaran (2000) found that perceived ease of use (PEU) positively influenced the internal and external motivation, whereas apprehensiveness about the mobile phone technology negatively affected the external motivation (Mallenius, Rossi, & Tuunainen, 2007).

Figure 2: Mobile Phone Technology Acceptance Model
The model in figure 2 above shows the determining and mediating factors that model personal mobile phone use (Van Biljon & Kotzé, 2007). The Mobile Phone Technology Acceptance Model shows the prediction of the influence of facilitating conditions (FC) on perceived ease of use (PEU), perceived use (PU) and behavioural intentions (BI). Interestingly, TAM and MPTAM both show that perceived ease of use and actual use are common in both models.

Conclusion

This literature shows that since the introduction of mobile phones, older persons, despite their chronological-age related challenges, are increasingly showing an interest in mobile phone usage. They perceive a mobile phone as an important tool that be used to meet their developmental needs since most of the services are provisioned through the use of mobile technology, such as health care, social and financial support. However, older persons are struggling to independently use mobile phone functions due to their physiological and cognitive decline.

Literature also highlighted that, in the light of the challenges faced by older persons, there is a demand for mobile phones. When older persons find themselves in a situation that requires an urgent response, they are able to use a mobile phone as the quickest form of communication. Studies have also shown that only a few older persons in other parts of the world have adequate skills in using a mobile phone, while a large number of them lack adequate skills and knowledge about the current smart phones that are being used. However, little is known about the adequacy level of skills and knowledge that South African older persons possess. The knowledge and skills required for the usage of these mobile phones is are often achieved through learning (either through self-taught or assistance). It can therefore be concluded that the usability and
competence of mobile phone use by older persons is still problematic and that the mobile phone is preventing many old users to benefit from its usage as expected.

Section A provided the orientation of the study and the literature as part of the background. Section B gives an overview of the study in article format while Section C provides a conclusion and evaluation of the literature.
References


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Abstract

PURPOSE: The level of mobile phone penetration in Africa and Sub-Saharan countries has shown a tremendous growth in terms of uptake. This study aimed to explore older persons’ competences in using mobile phones in the Tlokwe municipal area, Potchefstroom, South Africa.

DESIGN AND METHODS: The current study forms part of the iGNiTe sub-study which falls under the larger project (An exploration of enabling contexts). The sub-study (iGNiTe) had a sample of 128 older person’s aged 60+ in three old-age day care centres in the Tlokwe municipal area of the North West Province, South Africa. The current study which formed part of the sub-study had a total sample of 48 participants who only took part in semi-structured interviews and the Mmogo-method®. A descriptive research design was used to understand opinions and experiences of older persons’ in terms of competence in using mobile phones through using semi-structured interviews and the Mmogo® method.

RESULTS: The analysis revealed six thematic categories (lack of knowledge and skills, deteriorated physical and mental health, limited user patterns, attitudes of older persons, dependency and challenges of using a mobile phone).

IMPLICATIONS: The complexities of current mobile phones showed both a positive and negative impact on older persons’ usability. Although older persons’ levels of mobile phone competences vary, these complexities have prevented a number of older persons from using their
mobile phones due to inadequate skills and knowledge. Older persons in this regard have to seek assistance and knowledge regarding mobile phone use. It is thus suggested that the mobile phone be made more learnable and adapted to the needs of different age groups.

**Keywords:** user patterns; knowledge; skills; attitude; Technology Acceptance Model

**INTRODUCTION**

This study forms part of a sub-study (iGNiTe: Inter-Generational Networks through Information Technology), which was approved by the ethics committee of the Faculty of Health Sciences of the North-West University, Potchefstroom Campus on 13 November 2013 as part of a larger project (*An exploration of enabling contexts*: NWU-00053-10-S1). The aims of the larger project were (i) to understand and identify the impact of the broader environments (technology) which inform the intrapersonal, interpersonal and group level experiences of people; and (ii) to explore and describe the interpersonal context by means of identifying the definition of the relationship; relational qualities; needs and motivation for the interaction; and the circular processes according to which people mutually influence each other in a circular cause and effect manner and which makes up an individual’s preferred relational/interactional style. The larger project had different themes that emerged, such as assistance-seeking behaviour of older persons (eyesight problems, memory loss and lack of information); as well as relation regulation. The aim of the approved iGNiTe sub-study was to map older people’s user patterns of mobile technology and to explore the role of such technology in intergenerational relationships in the Tlokwe municipal area. The user patterns in the sub-study were conceptualised in terms of the ways in which older persons generally used mobile phone technology in different socio-economic contexts. The current study aimed to further explore competencies of older persons regarding mobile phone use by using a
secondary data within the iGNiTe sub-study which was accessible and saved in the internet database. The number of older persons in the population group aged 60+ is increasing (McMurtrey, Downey, Zeltmann, & McGaughey, 2011) with Africa’s percentage expected to increase by 20% in 2050 (United Nations Developmental Programme, 2012). For the purpose of this study persons older than 60 years of age were included in the sample. According to Cheng and Siankam (2009), Kimokoti and Hamer (2008), Lombard and Kruger (2009), the UN defines older persons in the context of Sub-Saharan Africa as individuals from the age of 60+ years which was one of the reasons for the inclusion criteria in this study. With both the growing population and chronological challenges witnessed world-wide, a number of policy-makers such as the Department of Social Development in South Africa have begun to intervene in older persons’ developmental programmes that are designed to also include older persons’ developmental needs (Department of Social Development, 2010-2015). Such programmes include a comprehensive social security safety net (social assistance, social insurance, social assistance grants, etc.), as well as welfare services like care services (Department of Social Development, 2010-2015). The above-mentioned programmes are aimed at addressing older persons’ chronic conditions that include a decline in physiological and psychological functioning that might disable older persons from using technology products (Chen & Chan, 2011). Given the challenges faced by older persons and the programmes strategically aimed at addressing older persons’ challenges, mobile phones thus become a necessity in demand in order for older persons to be able to access the services provisioned by the state.

There is then also the discipline of gerontechnology, which is an interdisciplinary field that integrates both developing and existing technological products with the aim of identifying older persons’ developmental needs and supporting them to have a successful aging process.
(Bronswijk et al., 2009), is growing. Much of its work focuses on mobile technology that seeks to help older persons deal with all the challenges that come with aging in order to assist them in leading an autonomous life and be socially engaged (Dara-Abrams, 2008). Mobile technology products with their potential of reducing the burden of social and health-care service delivery as well as creating new opportunities are currently changing the world in which people are aging and how they are aging (Nehmer, Lindenberger, & Steinhagen-Thiessen, 2010; Savenstedt, Sandman, & Zingmark, 2006). However, such products require knowledge and skills to use them, which many older persons are reportedly lacking (Plaza, Martin, Martin, & Medrano, 2011). Mobile phones now form part of older persons’ worlds, serving as a safety, emergency and communication tool (Plaza et al., 2011). Research shows that older persons prefer different user patterns of the mobile phone in order to serve its purpose in their context. Although the mobile phone has a great potential of enabling users to access information and keep connection with the significant ones (Feist, Parker, Howard, & Hugo, 2010), older persons in some cases hardly use a mobile phone because they suffer from physiological problems such as eye-sight, dexterity, hearing, mobility and cognition (World Wide Web Consortium, 2012).

According to the International Telecommunication Union (2013) since the deep penetration of mobile phones in the world, the number of people using mobile phones between 2005 and 2013 has increased from 2,205 million to 6,835 million, with the majority of users counted from the developed countries. Ten years later, following the penetration, the figures of mobile phone users changed where developing countries escalated the percentage from the lowest figure to the highest in the whole world counting 77% of subscribers (ITU, 2013). That being said, studies have found that older persons are less likely to use these mobile phones due to their special needs that are hardly met when designing these technological devices, particularly
with regards to mobile phones (Chen, Chan, & Chan, 2012; Motti, Vigouroux, & Gorce, 2013).

In this era where technology is growing and coming up with advanced products, older persons require all the necessary knowledge about the mobile phone in order to equally benefit from it and improve their quality of life (Ala-Mutka, Malanowski, Punie, & Cabrea, 2008). However, studies have shown that older persons lack such knowledge (Fernandez-Ardevol & Ivan, 2013; Plaza et al., 2011) due to their weakening memory and the mobile phone not being user-friendly enough (Charness & Boot, 2009; Pattison & Stedmon, 2006). Similarly with older persons’ skills of mobile phone use, studies have shown that older persons lack skills when they have to use a mobile phone due to their decline in psychomotor activities (Chen et al., 2012).

Interestingly, there are some older persons who can use mobile phones on their own; however, certain groups are more vulnerable when it comes to getting access to mobile phones or developing knowledge and skills (Feist & McDaugall, 2013). However, Studies by Chen et al. (2012) and O’Connell (2007) showed that some older persons constantly require assistance whenever they have to use certain features of the mobile phone such as messaging, calling and using correct buttons. Feist and McDaugall (2013) posit that with all the complex features of the mobile phone and lack of skills, older persons show both positive and negative attitudes towards mobile phone use due to certain preferences of user patterns. In Sweden, it was reported that 10% of older persons have access to the internet on their mobile phones but they don’t use it because they feel that mobile phones are of no relevance to them and nothing would be gained from using them (Independent Age, n.d). This comes as a result of the unawareness of what mobile phones could offer them (Independent Age, n.d). In their study, Chen et al. (2012) also found that older persons preferred fewer features on their mobile phones and did not show much interest in mobile phones with many features that are designed for purposes beyond
communication and information seeking. Older persons also prefer mobile phones with basic functions to those with advanced features due to their socio-economic levels. Call-making came out as their most frequent pattern due to its ease of use and the few buttons it requires when making a call. However, among other older persons who participated in the study conducted by Feist and McDaugall (2013), some showed a positive attitude towards mobile phone use based on various reasons that motivated them to use mobile phones. Among the reasons was that older persons wanted to keep up with the current modernized technology so that they don’t lag behind and that they understand what their children talk about when they talk of the ‘latest’. The other reason was that they wanted to keep the brain in active mode. This has helped them become more autonomous, well-informed and maintaining a closer relationship with family and friends (Feist & McDaugall, 2013).

Studies by Kurniawan, Mahmud and Nugroho (2006) and Van Biljon, Renaud and Van Dyk (2013) have incorporated theories of cognition, the Technology Acceptance Model and The Mobile Phone Technology Acceptance Model to explain the limited reasons for using mobile phones. The aforementioned studies support the argument made in the current study and provide clear answers to the question asked in the current study, thus the current study incorporated the cognitive theory (theory of multiple intelligences) to explain older persons’ skills levels and modes of acquisition of knowledge, Technology Acceptance Model (TAM) and The Mobile Phone Technology Acceptance Model (MPTAM) to explain older persons affective reaction towards mobile phone use.

The multiple intelligences theory suggests that individuals possess eight intelligences that are biologically and physiologically related, enabling one to actively transform information gathered and be able to solve problems (Gardner, 1999). Through these multiple intelligences,
knowledge is potentially gained. However, the level of knowledge acquisition varies across individuals since each individual’s stronger intelligence develops differently (Gardner, 1999). Dara-Abrams (2008) adds that, as older persons’ ages and experiences change in physiological terms, they commonly tend to use both their stronger and weaker intelligences to balance on their difficulties of knowledge acquisition.

Both the TAM and MPTAM models describe how people accept technology (Van Biljon, Van Dyk, & Gelderblom, 2010). The TAM was suggested by Davis (1989) who identified the six core factors that model the attitude of people towards the use of technology. The six factors include external variables, perceived usefulness, perceived ease of use, attitude towards use, behavioural intention and actual use (Van Biljon et al., 2010). Kwon and Chidambaram’s (2000) MPTAM is an extension model of the original TAM which extended the factors contributing towards the use of technology and specifically looked at the attitude towards mobile phone use. Kown and Chidambaran (2000) found that perceived ease of use (PEU) positively influenced the internal and external motivation, whereas apprehensiveness about the mobile phone negatively affected the external motivation (Mallenius, Rossi, & Tuunainen, 2007).

So from the above discussion, it seems evident that older persons’ competencies regarding mobile phone use are a great concern. Older persons are experiencing different challenges regarding the use of mobile phones and more attention needs to be given to these challenges. In spite of many gerontechnology studies that have focused on improving and enhancing functional capabilities in recognizing older persons’ decline in physical abilities (Chen et al., 2012), little is known about the competences of older persons regarding mobile phone use in the Sub-Saharan Africa, particularly in South Africa. This study is also the first to explore older persons’ competencies in using a mobile phone in the context of South Africa. The
focus of previous studies was more on older persons’ attitude towards different technological products and these studies were mainly conducted in the American and European countries. The research question formulated for this article is: What are the competences of older persons regarding mobile phone use?

DESIGN AND METHODS

The study used a descriptive design within a qualitative research approach. The design was chosen on the basis that it allowed the researcher to describe the competencies of older persons regarding mobile phone use. Data had already been collected in the primary study by means of semi-structured interviews and the Mmogo-method®. However, a specific question had not been asked on competency, therefore this aspect was addressed in this study to answer the following question: What are the competencies of older persons regarding mobile phone use?

Research context

The research was conducted in three old-age day care centres in the Tlokwe municipal area (Potchefstroom) of the North West Province, South Africa. The sub-study followed criteria for selection to participate based on the discretion of the researchers as to which subjects best suited the research questions (Kelly, 2006). The following were the participants’ inclusion criteria in the sub-study: participants had to be over the age of 60; participants had to be able to access a mobile phone frequently (either borrowed or owned); both male and female participants were included; participants had to be able to understand and speak Afrikaans, English or Setswana; participants had to be able to engage in discussions about their experiences of mobile phone use; participants had to be without visible cognitive impairment. The exclusion criteria only included participants who did not want to complete consent forms and those with visual
impairment. Participants who represented different socio-economic levels based on the Living Standard Measurement (LSM) scale were included in the bigger project. This scale is a questionnaire that was developed for studying various aspects of household welfare and behaviour (Grosh & Glewwe, 1995). The scale allowed the project to focus on socio-economic levels of participants, rather than racial classification, meaning that the study did not have a specific race (White, Black, Coloured, etc.) that it focused on.

**Procedure**

Ethical approval for sub-study (IGNITe) of which the current study formed part of was obtained under the umbrella project (*An exploration of enabling contexts*) under ethics number NWU-00053-10-S1. The larger project aimed to (i) to understand and identify the impact of the broader environments (technology) which inform the intrapersonal, interpersonal and group level experiences of people; and (ii) to explore and describe the interpersonal context by means of identifying the definition of the relationship; relational qualities; needs and motivation for the interaction; and the circular processes according to which people mutually influence each other in a circular cause and effect manner and which makes up an individual’s preferred relational/interactional style.

In the sub-study, consent was obtained from the three old-age centres’ authorities before commencing with data collection. Consent from participants was obtained after the procedure had been described to them by the chief researcher of the project. The sub-study was conducted in three South African languages, i.e. English, Afrikaans and Setswana. Translators who were part of the project and understood the content and context of the research after it had been explained to them by the project leader were available to translate written consent forms for English, Afrikaans and Setswana speaking participants.
The communities had already familiar gatekeepers and mediators who were requested to invite older persons based on the inclusion criteria to participate in the sub-study. In Potchefstroom, invitations were made through verbal announcements in the community and announcements at service centre meetings during weekdays. In Promosa and Ikageng invitations were done verbally and through gatekeepers. All details regarding the date, time and place were communicated through gatekeepers with all participants who showed an interest.

Following the granting of permission to proceed with data collection, the exact time and venues were communicated to all centre authorities concerned. The participants were informed by the centre’s authorities of the specific dates that data gathering would take place. Once permission to collect data has been obtained from participants, questionnaires were administered by using both mobile phones and printed copies.

The researcher of the current study was part of the research team which was formed in the sub-study by master’s (Research Psychology) and honours (Psychology) students who were well-trained on how to obtain informed consent, administer questionnaires and conducting semi-structured interviews and the Mmogo-method® (Roos, 2012). Honours students administered questionnaires by using both mobile phones and printed copies. They also had a help-desk where older persons received assistance regarding challenges they encountered when using a mobile phone. Following the completion of questionnaires, the questionnaires were saved into the internet database by the honours students who were part of the data collection process. The system automatically saved information sent from the mobile phones by the honours students. Participants, who indicated that they had access to mobile phones and volunteered, took part in semi-structured interviews or Mmogo-method® sessions. Participants had to volunteer and choose in which part of the data-collection method they would like to take part, in order to
prevent them from being part of both data-gathering methods where repetitive questions would be asked. The semi-structured interviews and Mmogo-method® were tape-recorded. However, consent was obtained from participants before tape-recording the interviews. Questions were asked and probing was done for purposes of gaining more in-depth information. The Mmogo-method® was used at the centres where participants felt secure and where supportive personnel in the form of nurses and social workers were available.

Consent was also obtained from these participants as the method also included photo taking for the purpose of obtaining visual data. Participants were provided with malleable clay, beads, a piece of cloth and straws and they were kindly requested to make a visual representation of how they use their mobile phone: Please use the material provided in front of you and make anything that illustrates how you use your mobile phone. When participants were through with their individual representations, probing was done to gain a deeper understanding regarding what they had built. A group discussion followed where participants were asked to explain what they had made and the reasons for making that model. Probing questions included: Tell me what you have made? and Please tell me more about your representation. Participants clarified the meaning behind the representation.

Data analysis

The researcher conducted a thematic analysis using secondary data within the IGNITE sub-study. A thematic analysis according to Braun and Clarke (2006) is a 5-step analysis process which involves organising data; reading and re-reading data to get a sense of the data as a whole while performing some necessary editing to make filed notes retrievable and generally “cleaning up” the data by discarding irrelevant data as well as writing memos in the transcripts; generating themes and connecting possible symbolic values that might have been attached to representations
by participants from the visual data; evaluating data for its usefulness; and lastly reporting the results.

The data constituted visual (clay models made during the Mmogo-method® and photographs of the models) and textual data (transcripts). Data was analysed following the steps identified by Braun and Clarke (2006). Once data had been organised, the researcher firstly familiarised herself with the entire range of data by re-reading all the transcribed data. During this process, the researcher re-coded and “cleaned up” data by discarding irrelevant data. Secondly, themes were generated where in the end themes emerged as thematic categories with supportive direct quotes from the original data sets. The researcher’s supervisor and another student who took part in data collection also assisted with re-coding of data for the purpose of quality findings and avoiding biasness. The visual data was used for connecting possible symbolic values that were attached to representations by older persons. To ensure trustworthiness, crystallization was used in this study as it provided the researcher with a deeper understanding of the studied phenomena. Crystallization is used to reflect reality from different angles (Ellingson, 2008). Richardson (2000b) defines crystallization as a method that “combines symmetry and substance with an infinite variety of shapes, substances, transmutations, multidimensionalities, and angles of approach …Crystallization provides us with a deepened, complex, thoroughly partial understanding of the topic” (p. 934). In the current study, crystallization was obtained by means of two datasets obtained through semi-structured interviews and Mmogo-method®; the use of three different theories; and analysis techniques (textual and visual thematic analysis). The three theories (TAM, MPTAM and theory of multiple intelligences) served as the basis of the study where these theories were used to explain the problem identified in the study. A literature review was done to support the theories and the
problem of statement. To answer the research question, two different data-collection methods as mentioned above were used. Semi-structured interviews allowed the researcher and the participants to engage on a one-on-one level of interview, allowing participants to freely answer the questions that were asked. On the other hand, the Mmogo-method® involved the use of clay, straws and beads in order to allow participants answer the question asked according to their own understanding and their personal reflection. The findings were constructed as thematic categories to enable the researcher to interpret the participants’ different experiences and thus reveal different ways of understanding the research topic, making crystallization an appropriate strategy to ensure the trustworthiness of the findings (Nieuwenhuis, 2007). These findings were then connected to the theories used and literature searched to see if the findings supported the literature.

FINDINGS AND DISCUSSION

The findings of the study revealed only six thematic categories with regards to the competencies of older people. These thematic categories are presented in table 1.1 below.

Table 1.1. : Classification of findings

<table>
<thead>
<tr>
<th>THEMATIC CATEGORIES</th>
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<tr>
<td>Lack of knowledge and skills</td>
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<tr>
<td>Deteriorated physical and mental health</td>
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<tr>
<td>Limited user patterns</td>
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<tr>
<td>Attitude of older persons</td>
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<tr>
<td>Dependency</td>
</tr>
<tr>
<td>Challenges of using a mobile phone</td>
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</tbody>
</table>
The findings are discussed below with all elements of older persons’ competencies of using a mobile phone that emerged and skills acquired when using a mobile phone, as well as the challenges related to the use of a mobile phone. Please note: quotes from the Mmogo-method® are represented by the letter “M” in square brackets while quotes from the semi-structured interviews are represented by the letter “I”.

**Lack of knowledge and skills**

Competencies were described in terms of the knowledge acquired regarding user patterns of a mobile phone. Most participants showed a lack of knowledge in terms of using the mobile phone; and not understanding a mobile phone was their common gap in terms of knowledge. Two participants responded about their lack of knowledge by stating that, “It has too many features but I don’t know them” [P1:I5] “I can’t even use it, my goodness! . . . “I don’t know where to dial…I don’t know where to and not to press” . . . “I don’t know where to dial” [P1:I2]. Rogers (2003) in his proposed model of a five-stage process of product adoption included the knowledge phase which he explains as the first phase of the process where an individual gets to know about the product they are using. Rogers argues that it is not possible for a person to adopt the product without having acquired the knowledge about it (Rogers, 2003). It could therefore be argued that older persons’ lack of knowledge could plausibly be a result of lack of inquiring about how to use a mobile phone after purchase or after it has been passed on to them by someone. Older persons reported that they also lacked skills to use a mobile phone as they couldn’t use a mobile phone or could only use certain features of the mobile phone, especially calling. At the help-desk after data gathering had been done, one of the participants voiced her lack of skills by asking for help. The participant stated that, “They [help desk] showed me...she asked me about the names I usually make calls to, then I told her...then she showed me where to
Gardner’s cognitive theory of multiple intelligences identified, among others, the two intelligences, Musical-intelligence and Bodily-Kinaesthetic intelligence (Gardner, 1999). Bodily-kinaesthetic intelligence refers to one’s ability to influence body parts to solve a problem, however, such intelligence seems to be weaker among older persons in the current study “I can only make or receive calls but messages I can’t. My grandchild does that for me” [P5:M3] “They usually tell me, they don’t give it to me to listen” [P2:M3]...”I know how to make a call. I can’t SMS, I have children who help me” [P1:I5] although one participant showed a stronger musical intelligence where they are able to recognise the sound made by a mobile phone and respond, “When it makes a ringing sound, I just press and say ‘hallo’” [P1:I2]. To others, the bigger the numbers appeared on the phone screen, the easier it became for them to use the mobile phone, which showed a strong cognition process (perception). The perception cognitive process involves the notion that the outcomes of a task at hand are most dependent on the amount of mental effort applied to visual information processes, where in this case the participant used this component of cognitive process to the advantage of their Intrapersonal resource, “I help myself because the numbers are . . . big [enough] for me to see” [P1:M3].

The current findings are in contradiction with the findings from studies conducted by Malta (2008) and Czaja and Lee (2001) who found older persons being proficient in the use of mobile phones. However, findings from the current study are in line with the findings from previous research which indicated unsatisfactory skills levels among older persons with regards to mobile phones even though some have capabilities to use some functions of the mobile phone (McMurtrey et al., 2011).
Deteriorated physical and mental health

Studies show that older persons often report visual challenges such as seeing from a distance, visual search, performing colour formation, etc. (Chen & Chan, 2011; Laux, 2001; Lesnoff-Caravaglia, 2001). Older persons in the current study also reported some experience of physical and mental health decline that defeated their competency to use a mobile phone effectively. It is believed that change in vision can affect the interpersonal information exchange as reading can be affected since mobile phones rely mostly on text-form of the user interface (Scialfa, Ho, & Laberge, 2004). The deteriorations in the current study include weak memory, weakened eye-sight and physical mobility. Weak memory, “I forget” [P1:I6] weakened eye-sight, “I don’t use a cell phone, I use a landline...because I can’t see properly.”[P1:M3] “Yes I do ask for help to enter airtime because I don’t see so well” [P1:I3] and a decline in physical mobility, “I was asking her whether is she still coming to check up on me... because I am still struggling with feet... ”[P1:M3].

When older persons are faced with physical mobility challenges they are more likely to have fewer movements as they often tend to experience challenges in controlling their movements (Quadagno, 2008). Lesnoff-Caravaglia (2001) adds that the inability to coordinate movement and reduced level of strength influences how one uses mobile technology.

Limited user patterns

Limited user patterns were identified in the light of older persons’ competencies. From the data it was clear that older people in this study only used mobile phones to make or receive calls and to receive electricity coupons. Participants indicated different reasons for making and receiving calls: Emergency, “I can use it when I have problems, for example, when you are sick
you can phone an ambulance and it can arrive quickly.” [P6: M3] **Convenience**, “If I want to call someone I can call at any time of the day, even when you find that the gates are locked...if you find the gates at home locked you can phone people inside the house to open the gate for you” [P4:M3] … “at times when my child is at work a can call her at any time and I can get hold of her at any time unlike using a landline” [P4:M3], **Family**, I always call my brother’s child ... I always want to know how he is doing.” [P2:M3] “It is family and friends and my brother specifically because he is the one helping me to look for a place to stay” [P3:M3]. They do call me ... my grandchild always calls and checks me” [P1:M3]. “Just December before the New Year started, my relatives in Jan Kempdorp called to wish me a happy new year. I was so excited” [P4:M3]. **Friends**, “I call my friends if I miss them or if I want to know how they are doing” [P2:I8]. **Information** “I bought a cell phone so that I can phone around and look for a place to stay because I do not have a place of my own, I rent out” [P3:M3]. “I use my phone to call my friends I’m involved with in a project to get information regarding the progress of the project, as well as informing about other people’s funerals” [P5: I8]. One participant also voiced the advantage of having a mobile phone and said that “**Inside the house, a cell phone is useful because I am able to buy electricity with my cell phone, rather than having to waste money on transport to go to town and buy electricity**” [P5:M3].

Research shows that the mobile phone needs of older persons are more centred around emergency and health support services, as well as communication aspects that assist in enhancing safety and other services that make their daily tasks much easier (Lee, 2007; Mallenius, Rossi, & Tuunainen, 2007; Van Biljon & Renaud, 2008). Therefore, the findings show that some older persons are benefiting from the usage of mobile phone, especially those who are regularly using it. The statement is also supported by the findings from a study
conducted by McMurtrey et al., (2011). Although some can’t explore different user patterns of the mobile phone due to deteriorated physical and mental health, those that are able to, have shown that they are enjoying the mobile phone. This is an indication that they are content with the usage and the skills and they benefit from using the mobile phone (McMurtrey et al., 2011).

**Attitudes of older persons**

It should also be noted that since a mobile phone has proven to be a difficult device for older persons to work with while to others it is not; older persons apply different attitudes for different reasons whenever they use a mobile phone. Research shows that older persons do not necessarily avoid using technology, but they are rather afraid to make mistakes when executing a task using a technology product (Hawthorn, 2007). This, in turn, makes older persons selective in what functions of technological product they would prefer to use (Broady et al., 2010). In their study, Mitzner et al. (2010) found that older persons reported more positive attitudes towards the use of technology as compared to negative attitudes. The positive attitude came from the benefits of using technology rather than the costs of using it as they perceived technology to be supporting their daily activities and being very convenient to use. That being said, findings from the current study showed that there were older persons for whom the complexities of mobile phones were too big and defeated their ability to apply their cognition processes, such as problem-solving and perception, thus the negative attitude towards the use of the product. The TAM suggests that the (PU) and (PEU) are the external variables (EV) that influence individuals’ attitudes towards the use of the product adopted. In the current findings, older persons showed negative outcomes of the (PEU) and (PU) where they showed lack of interest in the mobile phone, “I don’t use a cell phone because it’s complicated, it involves please-call me, messages, etc. So my kids use it a lot” [P2:M3].
Late calls not preferred, another participant praised a mobile phone but had her own preferences regarding the time when she has to receive calls and she said, “Although I love my cell phone very much, I don’t want to answer calls at night.” [P1:18].

Dependency

Although quite a large number of older persons have been reportedly using mobile phones (Plaza et al., 2011), the easiness of using this technological device is still a problem; and the findings of this study show that older persons are in need of assistance in this regard. Particularly youth appeared to be their source of assistance. The theory of cognition (multiple intelligences) suggests that as people grow older and experience physiological challenges, they tend to use both their weaker and stronger intelligences in order to execute a task (Gardner, 1999). For the purpose of this study, older persons’ ability to use both weaker and stronger intelligences could have a great potential of strengthening their competences when using a mobile phone and enhancing their knowledge. However, such evidence seems to be lacking in the findings of this study as some older persons seem to have very weakened multiple intelligences or physiological challenges that force them to rely on other people for assistance with the mobile phone, “When I have a problem with my phone, I ask for help from one of the family members, siblings. My sibling helps me when I experience difficulties with sending messages, sending a please-call me, shooting wedding and party pictures, and answering a call that brings sad news” [P1:18] “If I don’t ask my neighbour, I ask Reuben ... Reuben is my grandchild” [P3:12]. Sometimes neighbours are also instrumental in terms of assisting older persons with their mobile phone use in cases where there is no one close by in the house to assist, “Even when I receive electricity coupon, I ask Irene by Matseke’s family to come and enter the coupon numbers that I bought.” [P3:12]. Older persons expressed their various reasons for
asking a specific person for assistance during difficult times of using a mobile phone: 

**Availability**, “Because she’s the only one available at home” [P2:I2], and “The reason why my son helps me is because he is very close to me, I stay with him at home” [P3:I2]. **Trust**, “He is the only one I can trust” [P1:I5]. **Attitude**, “Because she is polite like her name and she’s also intelligent” [P1:I5], “She is not naughty...she’s not short tempered...she’s sweet.” [P1:I6]

**Challenges of using a mobile phone**

Older persons indicated different challenges they face that had proved to be related to their low proficiency level when using a mobile phone. Older persons had challenges with **recharging**, “To put in airtime (P1: I5)...I just give them money to buy airtime, then they call me” [P2:I2]...” Now, I buy it, when I’m done buying, I will put it here, I wait for them to knock-off, then I say, please enter this my child.” [P1:I7], **reading/sending English texts (language barrier)** “...texts. I can read them but if it’s English, I call him to assist.” [P1:I5], **dialling** “but if I want to call them, I must ask someone to enter the numbers for me” [P3:I2] and **societal negligence**, where older persons mentioned that at times people don’t want to assist them when they seek help from them and that forces some of them not to use the mobile phone until the person who assists them regularly comes back home “I never get help from other people if I encounter problems with my phone because they don’t want to help me. I don’t know the reason why they don’t want to help me whenever I need their help” [P1:I8] - “If she is not around, no one helps me” [P1:I6] “I wait for her to return.” [P1:I8]

**Limitations, implications for practice and future research**

This article is the first to explore older persons’ competencies of mobile phone use in Potchefstroom as many studies have been conducted regarding older persons and the use of
mobile phones without specific attention being paid to their competencies. While the findings of this study add to the literature on older persons’ competences of using mobile phones, there were also important limitations that impact on the transferability of the results of this study to older persons’ larger numbers who also now use mobile phones. The participants were purposely selected because they were in Potchefstroom. Findings show that there is a poor level of competence among older persons due to the echoed complexities of mobile phone features. Such problems indicated in the findings imply that mobile phones need to be made learnable to accommodate different age groups. This will help in accommodating the different levels of competencies acquired by older persons when using this technological device. The second reason for creating learnable mobile phones will be to accommodate the physical and cognitive decline that defeats older persons’ capabilities of using a mobile phone. It is thus suggested that, since this technology product (mobile phone) is changing and with time becoming even more advanced with new features, older persons’ competencies in using a mobile phone should be studied over a longer period of time.

**Conclusion**

Older persons did not grow up with exposure to the age of technology. The findings of this article show that in absolute terms, application of skills and knowledge about mobile phones among older persons beyond the age of 60 years are problematic issues. Older persons’ competence in using mobile phones appeared to be located at the level of lower proficiency. The first thematic category revealed the lack of knowledge and skill among mobile phone older users, where many of them couldn’t use some features of the mobile phone as they appeared to be more complex for their level of knowledge. These mobile phone complexities defeated older persons’ cognitive abilities and as a result, some didn’t even know where to dial when trying to make a
call. The second category revealed that older persons also experienced challenges with their deteriorated physical and mental health. These deteriorations also prevented them from using mobile phones as often as they would want to as they experienced weakened memory, weakened eye-sight and physical mobility. The third category was limited user patterns identified by older persons. The findings clearly showed that older persons mainly used mobile phones to make calls and receive electricity coupons. Particularly calling family members and friends as well as making calls for emergency purposes, were the reasons for using the mobiles. The mobile phone also served as a convenient tool for communication.

Fourthly there is the category on the attitude of older persons. This included a lack of interest and late calls not being welcomed. The complexities of the mobile phones created a negative attitude among some older persons towards mobile phone use as they mentioned that it is complicated. Dependency formed the fifth category. In this category, older persons explained how the difficulties encountered using a mobile phone caused them to depend on other people for assistance, particularly their children and grandchildren were the source of assistance. The reasons for depending on these people were laid out and these reasons were entirely based on their availability, trust and attitude. The last category revealed older persons’ challenges in using a mobile phone. Older persons indicated various challenges that they faced when using mobile phones and these challenges include recharging, reading/sending English texts (language barrier), dialling and societal neglect.

It could therefore be concluded that indeed older persons’ level of competencies regarding mobile phone use is unsatisfactory and that not as many are benefiting from the use of the mobile phone as might be expected. This in turn, defeats older persons’ expected level of
autonomy and quality of life as their low levels of competencies are preventing them from accessing information.
REFERENCES


Mobility Round table (GMR 2007), Retrieved from www.marshall.use.edu/assets/006/5574.pdf


SECTION C: CRITICAL REFLECTION

1. Introduction

This section provides an overview of the study, and gives a critical reflection on how the aims and objectives of the study were met in terms of the research question. Furthermore, the research process is discussed critically and a summary of how the research was conducted is given. Lastly, the experience of the researcher is described and limitations and recommendations are also discussed. The section also mentions the contribution made by the research.

2. Research problem

As discussed in section A the problem on which this research study was based, was identified around older persons’ competences of using a mobile phone. Older persons in the context of South Africa are identified from the age of 60+ years and are faced with different challenges that require their developmental needs being met. These challenges include a decline in physical mobility and cognitive abilities that prevent them from using mobile technology, particularly the mobile phone. The use of mobile phones in the population of older persons is supposed to be beneficial in terms of helping them to lead an autonomous life and improving their quality of life. However, the level of older persons’ competencies with regards to using these recently designed mobile phones still remains less extensively explored. The researcher was therefore interested in determining the competencies of older persons regarding the mobile phone use and such competencies included older persons’ knowledge, skills and attitude.

3. Research question and aim

The research question, what are the competences of older persons regarding the use of mobile phone? was formulated with the research problem in mind. The aim of the study, therefore, was to explore the competencies of older persons regarding mobile phone use.
Data was collected through individual semi-structured interviews and the Mmogo-method®, which provided participants with the opportunity to reflect on their experiences regarding the use of mobile phones. Particularly the Mmogo-method® allowed participants to express their personal views regarding the use of mobile phones and their association with the mobile phone. The study was qualitative in nature, and followed the descriptive method which made provision for drawing meaning, experience or perceptions of participants. The individual interviews were held in a pleasant space which made it easier for the participants to feel comfortable and talk honestly about their experiences. However, the Mmogo-method® had its specific challenges where some of the participants tried copying others’ model representations as they didn’t know what to build out of the malleable clay and beads they were provided with.

4. Research procedure

As mentioned above, in order to attain the aim of the research, the researcher made use of qualitative data-collection methods, which included individual semi-structured interviews and the Mmogo-method®. The visual data in the Mmogo-method® assisted in providing participants with the opportunity to get their thoughts flowing in terms of how they use their mobile phones or their association with the mobile phones. Individual interviews were conducted with 29 participants from all three day-care centres. Each interview was recorded in a voice recorder. After the individual interviews had all taken place, a few volunteering participants (19 in total) from each centre formed a small group to participate in the Mmogo-method® session. Photos were taken in the Mmogo-method® of each participant. The researcher coded and re-coded the textual transcribed secondary data with the assistance of fellow students and the supervisor. This also served as a way of ensuring trustworthiness in the study as biasness was avoided. The researcher then made use of thematic data analyses to analyse data and place participant quotes
into themes. This was one of the most challenging process, as themes kept changing until in the end thematic categories emerged as themes. The researcher feels that the data-collection methods used were effective; however, the challenge was that the questions asked in the original data were not in relation to the question asked in the current study. Therefore, working backwards on the original data made it difficult to obtain rich data that addresses the current question.

The following procedures were followed to ensure trustworthiness of the data and findings:

- Truthfulness: All interviews were recorded and the researcher was part of the research team formed by honours and master’s (Psychology) students who transcribed all data. No information was changed, adapted or manipulated.
- Researcher bias: The researcher did not contaminate data with her own opinions, preconceptions or perspectives and thus the supervisor and one of the students who took part in the research process re-coded data independently to respect participants’ personal opinions or perceptions;
- Data-collection methods: more than one method was used (individual semi-structured interviews and the Mmogo-method®), which provided opportunities for data to be collected from more than one angle;
- Validation of themes/codes: The research supervisor assisted in validating the themes by also giving an input.

5 Research summary

The data from this study shows that older persons possess different levels of competencies regarding the use of mobile phone. While a few of them could confidently use a
mobile phone, a larger sample of them experienced challenges in using it. Their skills levels are worrisome. For example, older persons explained how they always have to rely on other people for assistance regarding the mobile phone as they can’t simply make a phone call or send a text message. As a result, participants reported having both positive and negative attitudes towards the use of mobile phone. These negative attitudes were brought about by the complexities that are built into current mobile phones while the positive attitudes were as a result of experiencing the benefits of using a mobile phone.

One of the most interesting findings was that some of the older persons praised a mobile phone and couldn’t imagine their lives without it as it saves them travelling and saves them lots of expenses. This showed how older persons are benefiting from the use of mobile phones although they are not benefiting as much as could be expected due to challenges they face. It is therefore clear from the findings that despite all the challenges that prevent older persons from using the mobile phone as often as they would wish, a number of them still keep social contact with the significant ones in their lives and that reduces their levels of loneliness. The findings suggest that older persons’ lower level of competencies regarding the mobile phone use requires intervention that can promote their competences in order for them to live an autonomous and quality life.

6. Experience of the researcher

The researcher conducted an extensive literature review on older persons and their competencies in terms of using mobile phones. As a research psychology student, the researcher was first fascinated by the possibilities of psychology being connected to the use of technology, hence the research topic. The researcher was actively involved with the participants during the interview processes, particularly the individual interviews as the researcher had an opportunity to engage in
a one-on-one level conversation with participants and felt that the participants were welcoming, open and honest about their experiences regarding the use of mobile phones. From the researcher’s observation, the semi-structured interview questions were easy to understand, except for one question where the participants had to explain their interaction with the specific individual assisting them with the phone. The experiences of the two groups the researcher engaged with were different, which may have also influenced how they relate and/or use their mobile phones. For example, Promosa has a fully functional old-age day-care centre where efficiency makes it easy for the older persons not only to use the phones for calling but having other aspects of the phones to communicate with their significant ones. They are most likely to spend more time on their mobile phones since they are permanently at their day-care centre and far from significant ones, unlike older persons at Ikageng, which caters for older persons during the course of the day, which means older persons there might use their mobile phones to communicate mainly with the people taking care of them rather than their significant ones as they get to see them daily when they get home.

Although in the Mmogo-method® session participants were given equal opportunities to express their perceptions and opinions attached to their model representations by asking each participant about their model they presented, the researcher feels that the Mmogo-method® was a bit too abstract, especially when it comes to expressing how one uses their mobile phone. The researcher also expected challenges in communicating with older persons, however, that was not experienced. One participant in the Mmogo-method® became emotional but opted to continue with the interviews. The researcher also experienced that most of the participants had enjoyed taking part in the research Mmogo-method® session as it was a form of play for them. The researcher found the analyses more strenuous and challenging as this had to be done repeatedly.
in order to make sense of the data. In the final analysis, the researcher feels fully confident that findings were reported in a comprehensible and logical manner, and are a true reflection of the experiences of the participants.

7. Limitations

While the findings of this study add to the literature on older persons’ competences in using mobile phones, there are also important limitations that impact the transferability of the results of this study to older persons’ population using mobile phones.

- All participants of the sub-study were purposely selected because they were in Potchefstroom. The fact that the participants are all from Potchefstroom is not technically a limitation, however, it does impact the transferability of the results of the study to other populations.

- In addition, the sample composition was also one of the factors that affected transferability. The sample was predominantly female. Forty-two of the total sample of 48 participants in semi-structured interviews and Mmogo-method® were female while only six made up the number of male participants. Therefore, the transferability of the findings of this study may be limited to female older persons.

8. Recommendations

Based on the findings of this study, there are few suggestions made for future research that could further our understanding on older persons’ competences of using mobile phones. These suggestions include:

- Older persons showed unsatisfactory levels of competence (knowledge and skills) and different attitudes with regards to the use of mobile phones due to the
complications that come with features of the current mobile phones and their changes in physical and cognitive strength. It is therefore suggested that mobile phones be made more learnable and adapted to different age groups.

- It will also be more important for future researchers to conduct a comparative study on components of competences of using the mobile phone by comparing these components on gender differences of older persons as this could provide a significant insight into the different components laid out by different genders.
- Future studies may also need to add ethnicity to their inclusion criteria in order to broaden the study of competence in using mobile phones as this could also allow the study to be more relevant to different ethnic groups.

9. Conclusion and contribution

As far as the researcher is aware, this study is the first to explore older persons’ competencies in using mobile phones in the context of South Africa. The focus of previous studies was more on older persons’ attitude towards different technological products and these studies were mainly conducted in the USA and in European countries. Furthermore, by exploring older persons’ competences in using mobile phones, this study provides an important addition to the literature on older persons’ competences regarding the use of mobile phone by identifying components of competence that were revealed by older persons. The researcher hopes that this study will prompt future researchers to further explore older persons’ competences in using mobile phones by including more male participants and perhaps comparing their levels of competence drawn from a larger sample by conducting a quantitative study. Such findings may assist in informing future gerotechnologists who support the development of mobile technology in their ways of
addressing older persons’ developmental needs. The study also contributes towards informing the relevant people such as health professionals about actions that could be taken in creating intervention techniques that promote older persons’ competences in using mobile phones in order for the older population to maintain their autonomy and independence longer as a way of contributing to their quality of life.
### SEMI-STRUCTURED INTERVIEW QUESTIONS

The participants were sent for interviews based on their responses to the following questions on the questionnaire that was completed with the assistance of the research team:

<table>
<thead>
<tr>
<th>Question</th>
<th>Response Options</th>
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<tbody>
<tr>
<td>[Q_11] How do you get access to the phone?</td>
<td>&lt;1&gt; Own it</td>
</tr>
<tr>
<td></td>
<td>&lt;2&gt; Rent it</td>
</tr>
<tr>
<td></td>
<td>&lt;3&gt; Borrow it</td>
</tr>
<tr>
<td>[Q_33] What do you mainly do when you experience difficulties?</td>
<td>&lt;1&gt; Leave it</td>
</tr>
<tr>
<td></td>
<td>&lt;2&gt; Try to figure it out</td>
</tr>
<tr>
<td></td>
<td>&lt;3&gt; Read the manual</td>
</tr>
<tr>
<td></td>
<td>&lt;4&gt; Ask for help</td>
</tr>
</tbody>
</table>

During the interviews of the primary study the following questions were asked:

1. What is the role of the mobile phone?
2. Who do you ask for assistance with your mobile phone?
3. Why do you ask this person?
4. Explain the interaction between you and this person when they assist you with your mobile phone.

Follow-up questions were asked to obtain rich information.

The research question for this study is: What are the competencies of older persons' regarding mobile phone use.
CONSENT TO BE A RESEARCH PARTICIPANT

We are a team of researchers from the North-West University working on older persons’ user patterns of mobile technology and intergenerational relationships. We would like to invite you to participate in our study. Here is some more information about the study to tell you what you need to know before giving consent.

1. PURPOSE OF THE STUDY

The purpose of this study is to get a better understanding of how older people use their mobile phones and also to get a better understanding their experiences. The research will be done in Ikageng, Promosa, and Potchefstroom in the North West Province of South Africa. You are being asked to participate in this study because you are a person older than 60 years that use a mobile phone and we want to hear some of your views and experiences.

2. PROCEDURE

If you agree to be in this study you will expected to do one of the following:
• Complete a questionnaire with one of the members of the research team. The questionnaire consists of 42 questions and will take about 20 minutes to complete.

• Share your experience during a semi-structured interview that will be conducted with you by one of the members of the research team. It will take about 20 minutes and be digitally recorded.

• Participate in a focus group where you will be given a lump of clay and some beads and straws and asked to build something to show us how you use your phone. You will then be asked to share your views and experiences in a focus group discussion with other participants.

3. RISKS/DISCOMFORTS
Sharing your views and experiences could be painful and emotional. Should you have any discomfort during the data gathering, you will have access to a counselor. Some of your privacy might be lost during this study due to the fact that the research team will know your name and other people will listen to your answers in the focus group. Your name will never be made known and your data will be handled as confidential as possible. Nobody will know that it is you in any publications resulting from this study and only the team of researchers will work with the information that you shared. All sensitive information will be protected by locking it up and storing it on a password protected computer.

4. BENEFITS
By being involved in this research project you will help the researchers to better understand how older persons use their mobile phone in order to develop new ways that might help them in the future.

5. COSTS
There will be no cost to you as a result of your participation in this study.

6. PAYMENT
You will receive no payment for participation.

7. QUESTIONS
You are welcome to ask any questions to a member of the research team before you decide to give consent. You are also welcome to contact Prof Vera (0829257946) if you have any further questions concerning your consent.
ANNEXURE III

CONSENT FORM

PARTICIPATION IN THIS RESEARCH IS VOLUNTARY.

You are free to decline to be in this study, or to withdraw at any point even after you have signed the form to give consent without any consequences.

You do not give up any rights when signing this form.

Should you be willing to participate you are requested to sign below:

I _______________________________ hereby voluntarily consent to participate in the above mentioned study. I am not coerced in any way to participate and I understand that I can withdraw at any time should I feel uncomfortable during the study. I also understand that my name will not be disclosed to anybody who is not part of the study and that the information will be kept confidential and not linked to my name at any stage. I also understand what I might benefit from participation as well as what might be the possible risks and should I need counseling someone will be available.

____________________  ____________________________
Date  Signature of the participant

____________________  ____________________________
Date  Signature of the person obtaining consent
ANNEXURE IV

Private Bag X6001, Potchefstroom
South Africa 2520
Tel: (018) 299-4900
Web: http://www.nwu.ac.za

SCHOOL OF PSYCHOSOCIAL BEHAVIOURAL SCIENCES
Tel: 018-299-1722
Fax 018-299-1730
e-mail: Vera.Roos@nwu.ac.za

25/26 Tlhakole 2014

InterGenerationalNetworks through Information Technology
(IGNITE): Older persons’ perspectives

TUMELANO YA GO TSAYA KAROLO MO PATLISISONG

Re sethposabatilisi go tswakwa Universitingya Bokone Bophirima, re batlisisamokgwawatiriso ya technology kamogalawalethekamobagologong go latela lekamano yamo. Re rata go golaletsa go tsayakarolomodipatlisisongtsarona. Fa tlaseketsedimose otlisotse o tlhokang go di itsipele o kaneelanakatumelano ya go tsayakarolo. We are a team of researchers from the North-West University working on older persons’ user patterns of mobile technology and intergenerational relationships. We would like to invite you to participate in our study.

Here is some more information about the study to tell you what you need to know before giving consent.

8. MOSOLA WA DIPATLISISO

Mosolawadipatsisotseke go neelanakakitso e eatologilengka gore bagudibadirisamegalaya bona yamathekajang, le maitemogelo a bona katirisoyamegalayaletheka. Dipatlisiso di tladirwakwalkagengPromosa le Potchefstroom moprosensengya Bokone Bophirima e elngmo Afrika Borwa. O kopiwa go tsayakarolomodipatlisisongtseka gore o mogodiyo o nang le dingwaga di fetang some-a-marataro (60), yo o dirisangmogalawaletheka. Jaanong re batla go utlwadikakanyo le maitemogelo a gago.

9. DIPOELO TSA DIPATLISISO
Ga o dumela go tsayakarolomodipatlisisongtse, o solofelwa go dirasengwesatse di latelang:

- Tlatsaformoyadipotso le mongwe w aba setlhopasabatatlisisi. Form yadipotso e na le dipotsodile some-a-mane pedi (42) mme e tlatsayametsotsoele some-pedi (20) go e tlatsa.
- Neelanakaimtemogelo a gagomokapanongyasephiri le mongwewabasetlhopasabatatlisisi. Kopano e tlatsayametsotsoele some-pedi (20), mmenako e tlagatisiwa.
- Tsayakarolomokopanongyabothemo o tlaneelwakaroloyammopa, dibaga le di mothombo, a kaona o tlakopiwang go agasengwe se sebontshang gore o dirisajangmogalawagagowaletkea. O tlakopiwagape gore o neelanekidakakanyo le maitemogelo a gagokakopano le batsayakarolobabangwe.

**DIKOTSI TSA DIPATLISISO**

Go neelanakadikakanyo le maitemogelo a gago go na le go utlwisabotlhoko. Mme fa o kaamegakaselangwemoragoga go neelanakaimtemogelo a gago, o tlakgona go bona thuso go tswamo counsellor. Bontlabongwejwaseiphirisaikitsisoyagobokalathegakantlhaya gore babatlisibatlaitsileina la gagoebilebatsayakarolobabangwebatlalwidikarabotsagagomokapanongyabothle. Leina la gago le dikarabotsagago di ka se itsisiwe, mme di tlatswarwakasephiri. Ga go ope o kaitseing gore kwenamodiphasalatsongtsadibukatse di tladirawng go tsamodipatlisisongtse, kefelabatatlisisi bat la dirangkatshedimosetso e etswangmo go wena. Tshedimosetse e bolhokwagawena e tlaseleleisiwaka go e lotlelelamokhomputareng e enang le nomoreyasephiri.

**10. MAUNGO A DIPATLISISO**

Ga o tsayakarolomodipatlisisongtse, o tlathusabatatlisisi go thalagonyasentle gore bagudibadirisajangmegalaya bona yalethea go simololaditselanatsedingwetsa go ithusamobokamoso.

**11. DITSHENYEGELO**

Ga gone go nna le dituelodipemo go wenakantlhaya go tsayakarolomodipatlisisongtse.

**12. DITUELO**

Ga one o duelelwa go tsayakarolomodipatlisisongtse.

**13. DIPOTSO**
O letleletswe go kabotsadipotsomo go mongwewababatlisisipele o dumelana le go
tsayakarolomodipatlisisongtse. O amogetswe go ikgolaganya le Prof Vera monomoreng e
yamogala(0829257946) gaona le ditletlebokadipotsaka go tsayakarolomodipatlisisongtse.
ANNEXURE V

FORMO YA TUMELANO

GOPOLA GORE GO TSAYA KAROLO MO DIPATLISISONG TSE KE BOITHAOPA, GA GO PATELEDIWE.

O letleletswe go gana go tsayakarolomodipatlisisongkgotsa go emisanakoengwe le engwe le ga o setse o signileformoya go neelanakatumelanoya go tsayakarolokontlegaditlamoragodipe.

Ga o neelanekaditshwanelodipetsagagoga o signatumelano e Ga o dumela go tsayakarolo o kopiwa go signamomothalong o o fa tlase:

Nna ________________________________________ kedumela go tsayakarolomodipatlisisongtse di fa go dimo. Ga ke a patelediwakatsela epo tsayakarolo, ebilekethaloganya gore nkannakaemisanakongwe le ngwegakesatlholekebatla go tshwelela go nnakaroloyadipatlisisotse. Ketlhaloganya gore leina la ka le ka se itsisiweope o esengkaroloyadipatlisiso , le tshedimosetso e tlannasephiri, mmegaene a amangwa le leina la me kagope. Ketlhaloganyamosola le dikotsitsa go tsayakarolomodipatlisisongtse, mme kea itsi gore gankatlhoka go kgotatsiwa, go na le mongwe o tlannateng.

____________________
Letlha Tshaenoyamotsaya-karolo

____________________
Letlha Tshaenoyamoamogelabotsaya-karolo
14. DOEL VAN DIE STUDIE

Die doel van die studie is om ‘n beter begrip te kry van hoe ouer persone hulle mobiele fone gebruik en van hulle ervarings. Die navorsing word gedoen in Ikageng, Promosa, en Potchefstroom in die Noordwes Provinsie van Suid-Afrika. Jy word gevra om aan die navorsing deel te neem omdat jy ‘n persoon ouer as 60 jaar is en ‘n selfoon gebruik en ons wil graag van jou perspektiewe en ervarings verneem.

15. PROSEEDURE

Indien jy toestem om aan die navorsing deel te neem, sal die volgende van jou verlang word:

- Voltooi ‘n vraelys saam met een van die lede van die navorsingsspan. Die vraelys bestaan uit 42 vrae wat ongeveer 20 minute gaan neem om te voltooi.
- Deel jou ervaringe met ‘n lid van die navorsingsspan deur middel van ‘n semi-gestruktureerde onderhoud. Dit sal ongeveer 20 min neem en digitaal opgeneem word.
• Neem deel aan ‘n fokusgroep waar daar vir jou ‘n bol klei, krale en stokkies gegee word en dan sal daar vir jou gevra word om iets te bou van hoe jy joufoon gebruik. Jy sal dan gevra word om jou persepsies en ervarings in ‘n fokusgroepgesprek met ander deelnemers te deel.

16. RISIKO'S/ONGEMAK
Deelname aan navorsing waarin perspektiewe en ervarings gedeel word kan soms pynlik en emosioneel wees. Indien jy enige ongemak gedurende die onderhoud ervaar, het jy toegang tot ‘n sielkundige. Jou privaatheid word gedeeltelik geskend aangesien die navorsingspan weet wat jou naam is en ander mense jou antwoorde kan hoor. Jou naam sal egter nooit bekend gemaak word nie en die data sal as konfidensieël gehanteer word. Niemand sal weet wie jy is in enige publikasies wat uit die navorsing mag voortspruit nie, slegs die span navorsers sal met die inligting werk. Alle sensitiewe inligting sal beskerm word deur dit toegesluit te hou en op ‘n rekenaar te berg wat beskerm word met ‘n wagwoord.

17. VOORDELE
Deur aan die navorsingsprojek deel te neem sal jy die navorsers help om beter te verstaan hoe ouer persone hul自我one gebruik en om nuwe metodes te ontwikkel wat hulle in die toekoms kan help.

18. KOSTES
Daar is geen koste aan jou deelname aan hierdie navorsing verbonde nie.

19. BETAALING
Jy sal nie enige betaling vir deelname ontvang nie.

20. VRAE
Jy is welkom om enige vrae te vra aan die lede van die navorsingspan voor jy besluit om toestemming te gee. Jy is ook welkom om Prof Vera (0829257946) te kontak as jy enige verder vrae het oor jou toestemming.
ANNEXTURE VII

TOESTEMMINGSVORM

DEELNAME AAN HIERDIE NAVORSING IS VRYWILLIG

Jy is welkom om te weier om aan die navorsing deel te neem, of te onttrek op enige stadium, selfs al het jy die ingelige toestemmingsvorm onderteken, sonder enige gevolge.

Jy gee nie enige regte prys deur hierdie vorm te onderteken nie.

Indien jy gewillig is om deel te neem, word jy versoek om hier onder te teken:

Ek ________________________________________ gee hiermee vrywillige toestemming om aan die bogenoemde navorsing deel te neem. Ek is nie op enige wyse beinvloed om deel te neem nie en verstaan dat ek ter enige tyd onttrek indien ek ongemaklik voel tydens die navorsing. Ek verstaan ook dat my naam nie aan enige iemand wat nie deel is van die navorsing bekend gemaak sal word nie en dat die inligting konfidensieel gehanteer sal word en nie op enige stadium aan my naam gekoppel sal word nie. Ek verstaan ook die voordele verbonde aan die navorsing asook die mate van risiko en dat indien ek dit sou benodig, dat daar sielkundige ondersteuning beskikbaar sal wees.

__________________

Datum

Handtekening van deelnemer

__________________

Datum

Handtekening van navorser
ANNEXURE VIII

a. **Research Articles.** Most articles present the results of original research. These manuscripts may be no longer than 6,000 words. The text is usually divided into sections with the headings: Introduction, Design and Methods, Results, and Discussion. Subheads may also be needed to clarify content. Qualitative manuscripts may be no longer than 7,000 words. Please adhere to the following: Avoid the subheading: “A Qualitative Study,” provide new/novel findings; clearly present research design and analysis procedures.

b. **Preparing the manuscript.** Manuscripts should be double-spaced, including references and tables, on 8-1/2” x 11” paper using 1” margins. Number pages consecutively for the abstract, text, references, tables, and figures (in this order).

c. **Submitting the manuscript.** Manuscripts should be submitted online at http://mc.manuscriptcentral.com/tg. (See above for details.)

d. **Title page.** The page should include complete contact information for each author, including (at a minimum) affiliation, mailing address, e-mail address, and phone number. The corresponding author should be clearly designated as such. APA recommends that a title be no more than 12 words.

e. **Acknowledgment.** If the authors choose to include acknowledgments recognizing funders or other individuals, they should be placed on a separate page immediately following the title page. These acknowledgments should be removed for the anonymous version of the manuscript.

f. **Abstract and key words.** On a separate page, each manuscript must include a brief abstract, double-spaced. Structured abstracts for research articles, Brief Reports, and Practice Concepts submissions should be approximately 200 words (the web-based system will not accept an abstract of more than 250 words), and must include the following headings: **Purpose of the study, Design and Methods, Results, and Implications.** Forum and Policy Studies manuscripts must also include an abstract of about 200 words, but without structured headings. Below the abstract, authors should supply three to five key words that are NOT in the title. (Please avoid elders, older adults, or other words that would apply to all manuscripts submitted to *The Gerontologist.*) Please note three key words must be entered in order to move forward in the online submission process.

f. **Text references.** Refer to the *Publication Manual of the American Psychological Association* (6th ed.) for style. References in text are shown by citing in parentheses the author’s surname and the year of publication. Example: “. . . a recent study (Jones, 1987) has shown. . . .” If a reference has two authors, the citation includes the surnames of both authors each time the citation appears in the text.
When a reference has more than two authors and fewer than six authors, cite all authors the first time the reference occurs. In subsequent citations, and for all citations having six or more authors, include only the surname of the first author followed by “et al.” Multiple references cited at the same point in the text are in alphabetical order by author’s surname.

g. Reference list. Type double-spaced and arrange alphabetically by author’s surname; do not number. The reference list includes only references cited in the text. Do not include references to private communications or submitted work. Consult the Publication Manual of the American Psychological Association (6th ed.) for correct form.

Examples:

h. Tables. Tables are to be double-spaced, numbered consecutively with Arabic numbers and have a brief title for each. Place table footnotes immediately below the table, using superscript letters (a, b, c) as reference marks. Asterisks are used only for probability levels of tests of significance (*p < .05).

i. Figures/Illustrations. Please upload your figures either embedded in the word processing file. For line drawings, the resolution should be 1200 d.p.i. and for color and half-tone artwork, the resolution should be 300 d.p.i. For useful information on preparing your figures for publication, go to http://cpc.cadmus.com/da.

Figures must be professionally lettered in a sans-serif type (e.g., Arial or Helvetica). All labels used in figures should be in upper case in both the figure and the caption. The journal reserves the right to reduce the size of illustrative material.

Color figures.
Please contact the production editor for information about color.

j. Appendices: Please upload your appendix file embedded in the word processing file. Please make
sure to follow APA style when formatting appendices. All appendices will be published online only as supplementary material.
ANNEXTURE IX

A flower pot and the couch which are part of the house setting

Grandmother

The mobile phone she uses inside the house to establish contact with her children.
ANNEXURE X

EXAMPLE OF THEMATIC ANALYSIS

Below is the thematic analysis of a transcribed semi-structured interview and Mmogo-method® of different participants

From the transcribed semi-structured interviews and Mmogo-method®, all the quotes applicable to the competencies of mobile phone use were categorised according to codes as shown below in the first column of table A and B. The quotes were then highlighted according to preliminary themes using different colours, again shown in table A and B. Each colour represented a possible theme as illustrated in C. after all data sets were coded as in A and B, these themes were then grouped according to the final thematic categories as in table D.

A. CODING OF SEMI-STRUCTURED INTERVIEW

<table>
<thead>
<tr>
<th>CODE</th>
<th>QUOTE</th>
<th>RESEARCHER’S NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of knowledge and skills</td>
<td>I don’t know how it is used</td>
<td>Don’t know how to use a mobile phone</td>
</tr>
<tr>
<td></td>
<td>Just press and say “Hallo”</td>
<td>Can only answer</td>
</tr>
<tr>
<td></td>
<td>I can’t even use it</td>
<td>Can’t use a mobile phone</td>
</tr>
<tr>
<td></td>
<td>They showed me</td>
<td>Taught by someone</td>
</tr>
<tr>
<td>Person assisting if they can’t use a mobile phone</td>
<td>Grandchildren</td>
<td>Children /Family/Neighbours</td>
</tr>
<tr>
<td></td>
<td>Children</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Young one</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Siblings</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Neighbour</td>
<td></td>
</tr>
<tr>
<td>Family member</td>
<td>Neighbour’s child</td>
<td></td>
</tr>
<tr>
<td>---------------</td>
<td>------------------</td>
<td></td>
</tr>
<tr>
<td>Reasons for asking a specific person</td>
<td>She’s very clever</td>
<td>They are clever</td>
</tr>
<tr>
<td></td>
<td>She is polite</td>
<td>Attitude</td>
</tr>
<tr>
<td></td>
<td>She is intelligent</td>
<td>Trust</td>
</tr>
<tr>
<td></td>
<td>He is the only I can trust</td>
<td>Availability</td>
</tr>
<tr>
<td></td>
<td>She is the only one at home</td>
<td></td>
</tr>
<tr>
<td>Reason</td>
<td>She is not short-tempered</td>
<td></td>
</tr>
<tr>
<td>User patterns</td>
<td>I receive the electricity coupon</td>
<td>Receive electricity coupon</td>
</tr>
<tr>
<td></td>
<td>When I’m away from home or relatives, they can call me</td>
<td>Maintain social contact</td>
</tr>
<tr>
<td></td>
<td>Cell-phone banking</td>
<td>Cell-phone banking</td>
</tr>
<tr>
<td></td>
<td>Receive calls from social workers</td>
<td></td>
</tr>
<tr>
<td></td>
<td>To call my friends</td>
<td></td>
</tr>
<tr>
<td>Attitude of older persons</td>
<td>I don’t use them (features)</td>
<td>Not using mobile phone features</td>
</tr>
<tr>
<td></td>
<td>When I feel like calling her</td>
<td>Call only when they feel like calling</td>
</tr>
<tr>
<td></td>
<td>I just give them money to buy airtime then they call me</td>
<td>Prefer being called than calling</td>
</tr>
<tr>
<td></td>
<td>I don’t answer calls at night</td>
<td>No calls allowed at night</td>
</tr>
<tr>
<td>Living conditions</td>
<td>Stay alone</td>
<td>Stay alone</td>
</tr>
<tr>
<td>Living arrangements</td>
<td>I stay with her aunt</td>
<td>Stay with relatives</td>
</tr>
</tbody>
</table>
### Memory

- Forget
- Forgetful

### Societal attitude and neglection

- If she is not around, no one helps me
- I never get help from other people
- They don’t want to help me
- No one to help

### Challenges

- Answering a call
- To put in airtime
- Shooting wedding and party pictures
- Reading text in English
- Sending a please call-me
- I don’t know where to dial
- I don’t know to and where not to press
- I must ask someone to enter numbers for me
- I wait for her to come back from work
- Answering calls
- Recharging
- Taking pictures
- Reading /sending texts
- Pressing correct buttons
- Ask/wait for someone to assist

---

B. Coding of Mmogo-method®

<table>
<thead>
<tr>
<th>CODE</th>
<th>QUOTE</th>
<th>RESEARCHER’S NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limited User patterns</td>
<td>When I want to call someone</td>
<td>Making or receiving calls</td>
</tr>
<tr>
<td></td>
<td>I always call my brother’s child</td>
<td>Emergency</td>
</tr>
<tr>
<td></td>
<td>To look for a place to stay</td>
<td></td>
</tr>
<tr>
<td></td>
<td>When my child is at work I can call her</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Receive calls</td>
<td></td>
</tr>
</tbody>
</table>
### Living conditions

#### Living arrangements
- Stay with kids
- My grandchildren, their parents passed away

#### Health
- Struggling with my feet
- I can’t see properly

<table>
<thead>
<tr>
<th>Responsibility</th>
<th>Deteriorated physical health</th>
</tr>
</thead>
<tbody>
<tr>
<td>and staying with grandchildren</td>
<td></td>
</tr>
</tbody>
</table>

### Attitude of older persons

- I help myself because the numbers are too big for me to see
- I don’t use a cell phone because it involves please call-me, messages...
- I am not concerned about cell phones

<table>
<thead>
<tr>
<th>Confidence</th>
<th>Mobile phone not important</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Skills

- I do need help
- I can use it
- I don’t know how to use it

<table>
<thead>
<tr>
<th>Lack skills</th>
<th>Can use a mobile phone</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Person assisting if they can’t use a mobile phone

- My kids
- My grandchildren does for me

### C. POSSIBLE THEMES

- **Youth**
- **Lack of knowledgeable**
Taught by someone

Attitude

Trust

Availability

Receive electricity coupons

Intrapersonal resource

Calling

Societal negligence

Pressing correct buttons

Reading/sending English text

Recharging

Deteriorated health

Lack of skills

Lack of interest

D. FINAL CATEGORIES

<table>
<thead>
<tr>
<th>FINAL THEMATIC CATEGORIES</th>
<th>APPLICABLE THEMES/SUB-THEMES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of knowledge and skills</td>
<td>Taught by someone</td>
</tr>
<tr>
<td>Limited user patterns</td>
<td>Receive electricity coupons</td>
</tr>
<tr>
<td>-----------------------</td>
<td>----------------------------</td>
</tr>
<tr>
<td>Deteriorated physical and mental health</td>
<td>Weak memory</td>
</tr>
<tr>
<td>Attitude of older persons</td>
<td>Late night calls not preferred</td>
</tr>
<tr>
<td>Dependency and Youth</td>
<td></td>
</tr>
<tr>
<td>Challenges of using a mobile phone</td>
<td>Recharging</td>
</tr>
</tbody>
</table>
ANNEXURE XI

TRANSCRIPTIONS

Interview 2

Participant 1: they are asking if I know about this cellphone I’m having
Researcher : yes

Participant 1: but I don’t know my child
Researcher : yes

Participant 1: I don’t know it
Researcher : really?

Participant 1: my children bought me a cellphone, now when it makes a ringing sound I just press and say “halo”
Researcher : yes

Participant 1: now when I feel like calling her…
Researcher : you don’t know where to dial

Participant 1: I don’t know where to dial (laughs)
Researcher : ooh granny!

Participant 1: I don’t know where to and where not to press
Researcher : ooh, they didn’t show you?

Participant 1: yes they showed me. She asked me about the names I usually make calls to, then I told her
Researcher : yes

Participant 1: she showed me where to press when a name appears
Researcher : then you just say “hello”

Participant 1: yes
Researcher : really?

Participant 1: yes

Small group
Researcher : ok grannies, my name is Lebogang
Participant : yes Lebo
Researcher : yes. Now I have some questions I would like to ask you, similar to the ones you were asked
Participant : yes
Researcher : but I am going to record you, okay?
Participant : yes
Researcher : so that we can be able to assess what we have been talking about
Participant : yes
Researcher : do you agree?
Participant : yes I agree
Researcher : the reason I put it here is because I want to record
Participant : yes
Researcher : and you too granny, so that we can talk together
Participant 2 : yes
Researcher : do you have a cellphone granny?
Participant 2 : No, I don’t have a cellphone
Researcher : really granny? So where do you make calls?
Participant 2 : there is a phone at home
Researcher : oh, you have it at home?
Participant 2 : hmm?
Researcher : cellphone… or you have the landline?
Participant 2 : yes, landline
Researcher : oh, they installed the landline for you?
Participant 2 : landline, yes
Researcher : okay. In the house there is no one using a cellphone?
Participant 2 : there’s many of them
Researcher : your grandchildren?

Participant 2: yes. No they don’t show me

Researcher : aren’t you eager to know?. Okay. So grandma doesn’t have a cellphone, you only use the landline?

Participant 2: yes mam, yes

Researcher : so, the one in the house is still working? You can operate it?

Participant 2: I can’t even use it, my goodness!

Researcher : ooh, when it rings, you just answer? Don’t you ever call them?

Participant 2: yes

Researcher : so, don’t you call them if you miss them?

Participant 2: no, I just give them money to buy airtime, then they call me

Researcher : yes…so you can’t even use airtime?

Participant 2: no, I can’t even use it, my goodness!

Researcher : oh, so there’s no one who helps you with that?

Participant 2: there is

Researcher : there is…who is that?

Participant 2: it’s my other child, Moeder

Researcher : oh, its your child, not your grandchild?

Participant 2: no, its Moeder, she’s mine

Researcher : okay. So what’s your reason for asking moeder? How come you ask Moeder and not others?

Participant 2: because she’s the only one available at home

Researcher : oh. Others don’t stay with you?

Participant 2: no, when others are available I ask them when she’s not there.

Researcher : okay

Participant 2: yes
Researcher: granny, how do you operate the phone?

Participant 3: me?

Researcher: yes

Participant 3: Like she has been saying, I also stay alone. So I can’t even operate a landline

Researcher: oh, you have it in the house?

Participant 3: yes

Researcher: oh, but they do call you on the landline?

Participant 3: yes, I just answer

Researcher: ooh…

Participant 3: even here they do call, I just answer

Researcher: ooh…

Participant 3: but if I want to call them, I must ask someone to enter the numbers for me

Researcher: ooh, who? Whom do you ask?

Participant 3: if I don’t ask the neighbor, I ask Reuben

Researcher: Reuben?

Participant 3: yes, Reuben is my grandchild, he works “on & off”

Researcher: oh, Reuben stays with you?

Participant 3: No

Researcher: he doesn’t stay in the house with you?

Participant 3: he stays somewhere there with his aunt.

Researcher: oh, so these “on & offs”, it is when he visits at home?

Participant 3: it is when he is angry. When he is angry, he gets angry to everyone

Researcher: ooh

Participant 3: he’d cook for me, next thing he is angry
Researcher : ooh…

Participant 3: yes, he never sits down

Researcher : okay. Is he working?

Participant 3: No

Researcher : is he a child?

Participant 3: he’s just a young man, he doesn’t work

Researcher : has he completed at school?

Participant 3: yes, but he can’t find a job

Researcher : oh, so who is that neighbor you also ask for help from?

Participant 3: it’s Irene

Researcher : oh, it’s the neighbor’s child?

Participant 3: yes, it’s the neighbor’s child

Researcher : okay. How come you ask Irene?

Participant 3: mmm?

Researcher : you feel it’s better to ask her?

Participant 3: if there’s no one to ask

Researcher : yes…?

Participant 3: even when I receive the electricity coupon, I ask Irene by Matsike’s family to come and enter the coupon numbers that I bought.

Researcher : oh, how is she co-operating? What kind of a person is she?

Participant 3: she sees me as her mother, I see her as my child since she grew up in my presence.

Researcher : yes

Participant 3: yes

Researcher : does she listen?

Participant 3: yes
Researcher: by Irene’s home, there are other children, right? Do they have phones?

Participant 3: yes

Researcher: why not ask them for help?

Participant 3: No, isn’t it that our children are never there? They are never there

Researcher: yes, I mean from the neighbors.

Participant 3: so now Irene is no longer employed

Researcher: yes…

Participant 3: she is the only one at home. When Irene is not home, I ask her mother. Her mother is always home and she’s very clever

Researcher: okay. Thank you

Participant 3: yes

Researcher: thanks

Participant 3: and Mr Matsike too, when I have problems I ask him

Researcher: okay, thank you mommy

Participant 3: yes

Researcher: thank you mommy

Participant 3: thank you dear
Interview 3

Interviewer
Hello mam’, my name is Lebogang and I work with those other people that side, when you come this side, there are some questions I am going to ask you, they won’t take you long, they are concerning your phone. Now I will have to record while we are talking

Respondent
Yes.

Interviewer
Do you mind if I record? Is it ok?

Respondent
Yes

Interviewer
Ok mam’. 

Respondent
I thought you meant we should speak on the phone

Interviewer
No, I wanted to know if you have a phone.

Respondent
Yes mam’

Interviewer
Ok, is it yours? You didn’t borrow it?

Respondent
No

Interviewer
Now on this phone of yours, do you ever ask help to use it?

Respondent
Yes I do ask for help to enter airtime because I don’t see so well

Interviewer
Ok, you do ask for help?

Respondent
From grandchild/daughter-in-law

Interviewer
Ok, so they are the only two people that you ask help from?

Respondent
Is just that sometimes I don’t see so well

Interviewer
Now what makes you ask for help from this two people?

Respondent
I don’t live them only

Interviewer
So you ask from them only, is there someone else you ask?

Respondent
Yes

Interviewer
Aren’t there other children that you live with?

Respondent
It’s a boy; he is forever out of the house.

Interviewer
Oh ok, there is no way that you can ask him to help since he is forever out of the house

Respondent
Yes

Interviewer
You ask these ones because they are always here? They are always here?

Respondent
They are always here
Ok, so the cooperation is between you and them, and the daughter-in-law, it is your daughter-in-law and your grandchild?

Its daughter-in-law/grandchild.

Oh, so she is the only one, I thought its two people, ok its one?

Yes

Ok, So she is the only one you ask help from?

Yes, she is the one who helps me

At home, how many people live there?

Inside? In the house?

Yes

Besides visitors, They are only visiting, I live alone

Daughter-in-law/grandchild lives alone?

No, she lives at her house with her children

Ok, so you don’t ask her children?

Who?

To help you with the phone

They are still young, no, they have not grown enough

Ok, I just wanted to know who you ask with the phone, and whether you have a phone or not, now I fully understand, you said you have a phone right?

Yes

So on this phone, you ask for help but ask for help from daughter-in-law/grandchild

Yes

Because she is older and always around

Yes

There is another one but he is always gone?

Yes, a boy

A boy, he is always not around

When things are right, this one is the one that helps

Ok, alright mam’, I just wanted to ask those questions

Thank you

Thank you mam’, I am grateful.
Researcher: How are you mommy?

Participant: I am good.

Researcher: With the questions they asked you that side, did they tell you that you are going to come this side for more questions? My name is ( ). I work together with the people that side. You don’t mind if I record what we are going to talk about?

Participant: Yes

Researcher: Yes, so we should record now?

Participant: Yes

Researcher: You are okay, isn’t it mommy?

Participant: Yes

Researcher: You said you a phone right?

Participant: Yes

Researcher: Is it yours or you borrowed it?

Participant: Its mine.

Researcher: Do you ask for help when you use it?

Participant: No

Researcher: You don’t need help, you understand it?

Participant: I understand it.

Researcher: ooh. What kind of a phone is it?

Participant: It’s a Nokia cellphone.

Researcher: Ooh, so there’s no one helping you with it in the house? You can SMS and call?

Participant: I know how to make a call. I can’t SMS, I have children who help me.

Researcher: Who are the children?

Participant: Its two boys. They are grandchildren. They belong to my child.

Researcher: Your child?

Participant: Yes
Researcher: A daughter?
Participant: Yes
Researcher: So these children stay with you?
Participant: Yes they stay with me.
Researcher: Is it only the two of them?
Participant: Yes just two.
Researcher: Is it boys?
Participant: Yes its boys.
Researcher: So between the two, who do you ask for help?
Participant: I stay full time with the eldest. The young one is still schooling, the eldest is done.
Researcher: Oh, so why do you ask the eldest for help?
Participant: Because she is polite like her name, and she’s also intelligent. When the sunset, she would dish for me.
Researcher: Being a boy as he is?
Participant: Yes, he is a boy.
Researcher: So you ask him because he is a polite boy?
Participant: Yes, he is polite.
Researcher: So the phone you are having is yours, you don’t borrow it?
Participant: Its mine.
Researcher: So you only ask Bonolo to help you with SMSes and what else?
Participant: And to put in airtime, texts. I can read them but if it’s English I call him to assist. I would call him “come here, phone!” He would come, even when he is with his friends, at the car wash, then I say “here is the problem”, then he helps.
Researcher: So your phone doesn’t have too many features?
Participant: It has too many features but I don’t know them.
Researcher: Okay
Participant: And games
Researcher: You don’t use them?
Participant: No, I don’t use them

Researcher: Okay, may I ask if it has a camera?

Participant: So whatever it has, you ask the child to assist.

Researcher: So he is the only one who can help you?

Participant: He is the only I can trust.

Researcher: ooh, with SMSes and other things?

Participant: Yes

Researcher: All right my granny, thank you very much my granny.

Participant: Yes

Researcher: We are done now.

Participant: I am thankful too
Interview 6

Researcher: mommy, my name is Lebogang. I am a girl from Rustenburg. Am here to ask you some questions. May I please record our conversation, so that when I go back I can be able to listen again? Are you comfortable with that?

Participant: (whispering- inaudible). Am happy with that.

Researcher: ooh. But if you can’t talk you’ll let me know so that we can stop, right?

Participant: you know Manana?

Researcher: no I don’t know her. Do you have a cellphone mommy?

Participant: it’s my child’s phone, she borrowed me.

Researcher: ooh, so you use this phone?

Participant: yes I am using it.

Researcher: so who borrowed you the phone, is it a grandchild?

Participant: yes, the grandchild.

Researcher: ooh, what’s her name?

Participant: Fifi

Researcher: ooh, so you stay with this grandchild?

Participant: No, I don’t stay with her in the house, she stays with her mother.

Researcher: Whom do you stay with in the house?

Participant: I stay with her aunt.

Researcher: ooh, so you never borrow a phone from her?

Participant: (inaudible)

Researcher: So you don’t have a phone in the house?

Participant: I don’t have a phone in the house.

Researcher: So if you want to use a phone, you use fifi’s phone?

Participant: Yes

Researcher: Oh, so how is your relationship with Fifi?

Participant: She is a child.

Researcher: She stays nearby?
Participant: Yes she stays nearby.
Researcher: So what does she help you with? By making calls or how?
Participant: Just like I have borrowed her phone now.
Researcher: So you just make calls?
Participant: Yes
Researcher: So when she borrowed you a phone, she helps with dialing?
Participant: Yes
Researcher: And she also helps you with the rest of the things?
Participant: Yes
Researcher: You can’t dial by yourself?
Participant: (whispers) I forget.
Researcher: Ooh, so what is it that you can do with the phone when Fifi is not there?
Participant: If she is not around, no one helps me.
Researcher: So you wait for her?
Participant: Yes I wait.
Researcher: What kind if a child is Fifi?
Participant: She is not naughty
Researcher: Is she sweet?
Participant: Yes
Researcher: So she can be asked for help?
Participant: She is not short tempered.
Researcher: Ooh, so how is she? Is she sweet?
Participant: She’s sweet
Researcher: All right. You don’t have a phone, right mommy?
Participant: Mmmm
Researcher: So when you borrow a phone, you ask Fifi to help you?
Participant: Yes
Researcher: So she borrows you a phone if you want to do what with it?
 Participant: To talk to someone.
 Researcher: Ooh
 Participant: Yes
 Researcher: So where you are staying right now, there is no phone? You said you stay with someone right?
 Participant: Yes I stay with them, but they are working.
 Researcher: Don’t they have phones?
 Participant: The young man has a phone.
 Researcher: You stay with him?
 Participant: Yes, grandchild
 Researcher: Son why don’t you ask him to help you with the phone?
 Participant: How will he help me?
 Researcher: How come you borrow a phone from Fifi and not him?
 Participant: Sometimes he doesn’t sleep at home.
 Researcher: Okay. How old is he?
 Participant: He is 26
 Researcher: Ooh, the one who doesn’t sleep at home?
 Participant: Yes
 Researcher: So you can’t borrow from him because he is never around?
 Participant: Yes. But when he is around, I borrow.
 Researcher: Oh, okay. So when he is around he agrees to borrow you? He doesn’t refuse?
 Participant: Yes he doesn’t refuse.
 Researcher: Okay. So you don’t have your own phone?
 Participant: No
 Researcher: Ooh. You won’t buy it as time goes by?
 Participant: Yes I will buy it as time goes by.
Researcher: oh. You see it’s important?
Participant: yes
Researcher: Thank you granny. Don’t you have any questions?
Participant: (no response)
Researcher: You are just okay?
Participant: Mmm
Researcher: Thank you granny
Participant: Thanks
Researcher: Thanks.
Interview 7

Interviewer: How are you mam?
Respondent: I’m well

Interviewer: I am Lebogang
Respondent: Yes

Interviewer: My name is Lebogang
Respondent: Okay

Interviewer: I work with those people from where you come from
Respondent: Yes

Interviewer: Now that they have brought you in here, we have to now proceed, process continues
Respondent: Okay

Interviewer: Now, before I talk to you, may I record our conversation
Respondent: Yes

Interviewer: So that when we are finished, we can scrutinize it at school
Respondent: Okay

Interviewer: But now, it’s as if we cannot mention your name, right?
Respondent: Yes

Interviewer: We will just be talking that granny spoke like this
Respondent: Yes

Interviewer: (Line does not make sense)
Respondent: Okay

Interviewer: Right?
Respondent: Yes

Interviewer: Do you mind if I record?
Respondent: No

Interviewer: It is ok, right?
Respondent: Mhmmmm…

Interviewer: We can talk while recording?
Respondent: Mhmmmm…

Interviewer: Ok, Granny has a phone?
Respondent: Here it is
Interviewer: Is it yours?
Respondent: Yes
Interviewer: You didn’t ask for it?
Respondent: No, it is mine child
Interviewer: Okay, now on this phone…
Respondent: Yes
Interviewer: Do you ask for help?
Respondent: Oh yes. I want to, I don’t know how to enter this… what is it called? What do you call this thing that you buy that has money, I don’t know how to enter that you know?
Interviewer: Oh
Respondent: Yes
Interviewer: Okay, now who helps you?
Respondent: My child does
Interviewer: Which child?
Respondent: Mine, now I want to enter it myself, right?
Interviewer: Oh
Respondent: It is not my child, it is my grand-child. My child is old, married, lives right in this street
Interviewer: Okay
Respondent: Now, I buy it, when I’m done buying, I will put it here, I wait for them to knock-off, then I say, please enter this my child
Interviewer: Oh shame, poor thing
Respondent: We are afraid to enter it at the Indians
Interviewer: Oh
Respondent: They give us old ones, we do not know them
Interviewer: Oh, okay so…
Respondent: They take out the old one and then say it’s the one
Interviewer: Now this grandchild, you live with him?
Respondent: Yes
Interviewer: What is his name again?
Respondent: His name, it’s Stephen
Interviewer: Oh, He is a boy
Interviewer: Now, how did you come to choose Stephen to enter your airtime?

Respondent: Eh... He lives with me right?

Interviewer: Oh...

Respondent: Yes, He lives here in my house

Interviewer: Okay, is he the only one you live with?

Respondent: Yes

Interviewer: Is it just the two of you?

Respondent: There is the three of us and Oupa

Interviewer: Oh... Ok. So eh... How is your relationship with Stephen?

Respondent: Iyoh!...

Interviewer: How do you relate with each other?

Respondent: We relate well. You know that child?

Interviewer: Eh...!

Respondent: (Not clear)... You know we love him and he really loves us too, me and Oupa

Interviewer: Oh really!

Respondent: He is a sweet child, You understand?

Interviewer: Mhmm...

Respondent: He does not smoke, he does not drink

Interviewer: Is he in school?

Respondent: No, he works

Interviewer: Oh...

Respondent: Yes my love

Interviewer: Okay so... (Respondent interrupts)

Respondent: Response does not make sense

Interviewer: Are we married

Respondent: Oh? I want to find him the right woman, a sweet one because he is also sweet

Interviewer: Oh

Respondent: Now if find nasty girls and I don’t want those types of girls at my house, I am quick to beat, with a whip

Interviewer: Okay, so if he is not here, who do you ask?

Respondent: When he is not here, there is my daughter, she lives in this street

Interviewer: Oh...
Respondent: Eh… she is married, she lives further on in the street
Interviewer: Oh…
Respondent: I go there and say my child enter this thing
Interviewer: Okay, Is it the only two of them?
Respondent: The other one passed on
Interviewer: Okay, I mean those that help you with the phone?
Respondent: No, yes…
Interviewer: Oh…
Respondent: No
Interviewer: So what kind of things do you want to be taught?
Respondent: Eh… eh… I want you to teach me to enter that thing, what do they call it?
Interviewer: Airtime?
Respondent: Airtime and show me how to find a picture there.
Interviewer: It does not have picture granny
Respondent: It does not have it?
Interviewer: How do you mean?
Respondent: Which one is this one?
Interviewer: How do you mean if you don’t see a picture, the one that has a picture is the one with a window there?
Respondent: Oh really?
Interviewer: There is no window
Respondent: Oh, that girl bought me a stupid one?
Interviewer: No
Respondent: Because I am stupid?
Interviewer: Who bought it for you?
Respondent: The girl from front there. You know, at first, we used to stay like this right, in the same street, but she lives in that one I live in this one.
Interviewer: Yes
Respondent: Then she fell ill…
Interviewer: Mhmm…
Respondent: Now you like to lock the gates at your house… you lock
Interviewer: Mhmm…
Respondent: Then she fell ill. One day early in the morning when I was sweeping the yard,
she did this on the window, I called her. I can’t enter, you locked the gate

Interviewer  Ooh…
Respondent  Then I called the child from next door, then I said, creep under the fence so we could go see if she is there

Interviewer  Yes
Respondent  We found that she…, I found that she has fallen on the floor

Interviewer  Oh?
Respondent  Yes, she fell on the floor, it was wet, wet wet. (line does not make sense)

Interviewer  Ooh, oh my Good gracious!
Respondent  She fell because of stroke, she did not fall while she was in carltonville though

Interviewer  Oh?
Respondent  Mhmm…

Interviewer  Now what happened to her?
Respondent  Then I took her to the hospital

Interviewer  Okay
Respondent  Then when she came out of hospital, her mother said I should take her so she can go home since there will be no one to look after her

Interviewer  Mhmm…
Respondent  There in Carltonville, she is the one who bought me this thing

Interviewer  Oh… she said it will help you too?
Respondent  Huh?

Interviewer  She said… this phone will help you too?
Respondent  Yes, now after a long time, she is the one

Interviewer  Oh
Respondent  She call

Interviewer  Okay
Respondent  Yes

Interviewer  Yes
Respondent  Don’t you call?

Interviewer  Wow, I don’t call, I don’t see the numbers, she calls. She said when it goes ting-ting, I press here, here I switch off

Interviewer  Yes
Respondent: Then you say yes
Interviewer: Okay, Did it teach you though?
Respondent: Yes
Interviewer: Okay so do your children call?
Respondent: Yes
Interviewer: Do they call too?
Respondent: Yes they do call
Interviewer: And you?
Respondent: And that one too, and this grandchild I live with. Sometimes when it rains a lot while he is at work, he calls me
Interviewer: Oh
Respondent: He said granny please check my room if water is not coming in
Interviewer: Okay
Respondent: Yes
Interviewer: Yes, you see that it is helpful?
Respondent: Yes, it is helpful, and the ones in Stilfontein at my uncles house, they usually call me
Interviewer: Okay
Respondent: Yes
Interviewer: Okay so you… you have your phone right granny?
Respondent: Yes
Interviewer: So all that you need is to ask for help on it?
Respondent: Yes
Interviewer: And the person that helps you is your grandchild that you live with.
Respondent: Yes
Interviewer: Right?
Respondent: Yes
Interviewer: When he is not here, it is your daughter who stays in the your street right?
Respondent: Yes, yes
Interviewer: The help you want is to enter airtime
Respondent: Yes
Interviewer: Many times right?
Respondent: Yes
Interviewer: And to do… you know to send messages?
Respondent: No, I don’t know
Interviewer: Oh, you also want to know how to send?
Respondent: Yes
Interviewer: Okay, is that only…?
Respondent: Yes, it’s only those, problems are only on those
Interviewer: Eh… oh, so when did they buy you your phone? Is, is it in the previous year though?
Respondent: Yes, it is in the previous year
Interviewer: It is not, it is not long time ago
Respondent: Hmm, it’s not so long time ago
Interviewer: Now, before you had that phone, how did you manage?
Respondent: No, I did not mind, I did not have a phone
Interviewer: Yes
Respondent: What would I do with it?
Interviewer: Whose phone did you use?
Respondent: They, they called my daughter if they wanted to call me
Interviewer: Oh…
Respondent: Or they call my grandchild
Interviewer: Oh…
Respondent: And your grandchild would…
Interviewer: Has your grandchild always had a phone?
Respondent: Yes, (Line does not make sense)
Interviewer: Yes
Respondent: I called
Interviewer: Yes
Respondent: Grandfather called
Interviewer: Oh…
Respondent: Then I said give me, then he said there you go…
Interviewer: Oh…
Respondent: I said give me, give me, give me, then I said thank you my child
Interviewer: Okay
Respondent: Yes
Interviewer: Okay
Respondent: You see, he wanted to install a house phone for us
Interviewer: Yes
Respondent: Mhmm, then I said wow… grandfather, wait a bit…
Interviewer: Mhmm… Didn’t you want a house phone? You have always wanted a cell phone right?
Respondent: Yes, ow…
Interviewer: Okay then, yes they have helped you, they bought you one, its better
Respondent: Yes
Interviewer: Okay
Respondent: Yes
Interviewer: Thank you very much mam’
Respondent: Okay my love
Interviewer: Now, there are others that side, they help people do those things you want
Respondent: Yes
Interviewer: Now I am going to take that side
Respondent: Okay
Interviewer: They should help you with all that you want
Respondent: Yes
Interviewer: Are messages, they will help you and they will, they will not despair on you
Respondent: Okay
Interviewer: They are going to help you, you are going to leave here knowing how to enter a message… you know how to enter airtime?
Respondent: Airtime
Interviewer: Yes, we are not going to leave you not knowing
Respondent: Yes
Interviewer: When you leave here, you will know how to enter it
Respondent: Yes but, you would teach me but, when I have bought it mhmm right
Interviewer: You know when you have bought it, for the first time go to you grandchild and show him that you are going to enter it
Respondent: Yes
Interviewer: He should help you, when you have not entered it correctly, he should help you again
Respondent: Oh...

Interviewer: But here, you are going to leave knowing how to

Respondent: Yes

Interviewer: Yes

Respondent: Alright

Interviewer: Right granny?

Respondent: Yes

Interviewer: Yes

Respondent: Oh! One with a picture has a window here?

Interviewer: Yes

Respondent: I thought they also had pictures

Interviewer: Alright granny, thank you very much okay…

Respondent: Okay my love

Interviewer: Thank you

Respondent: Now who is going to take me that side?

Interviewer: I am, I am going to take you

Respondent: Oh, will you be able to take me?

Interviewer: Yes
INTERVIEW 8

Respondent 1: when I have a problem with my phone, I ask for help from one of the family members, sibling. My sibling helps me when I experience difficulties with sending messages, sending a please call me, shooting wedding and party pictures, and answering a call that brings sad news.

My sibling is the only one who helps me with the phone whenever I need help. If I encounter problems while she’s not home, I wait for her to return.

I never get help from other people if I encounter problems with my phone because they don’t want to help me. I don’t know the reason why they don’t want to help me whenever I need their help.

My phone is very important in my life because even when I’m away from home or relatives, they can call me. Although I love my phone very much, I don’t answer calls at night.

Respondent 2: when I need help with my phone, I ask Ditsela* or my son to help me. The person who helps me more is my son. The reason why my son helps me is because he is very close to me; I stay with him at home. I use my phone to receive electricity; I use it for cellphone banking, to receive calls from social workers and project chairpersons. I always receive calls.

Respondent 3: I don’t have a phone. When I borrow it from my neighbor she says she has no airtime

Respondent 4: I have a phone. I call my friends if I miss them or if I want to know how they are doing.

Respondent 5: I have a phone. Whenever I need help, I ask my children to assist me. My child who attends school is the one who always helps me. If he is at school, I ask my eldest children to assist me because they are always at home and unemployed.

I use my phone to call my friends I’m involved with in a project to get information regarding the progress of the project, as well as informing them about other people’s funerals.
Refilwe: We are from the university of North West, here at PUKKE. We are here to spend the day with you today. What’s going to happen is, we would like to find out how do you use your cell phones or do you all have them. So what’s going to happen is, we are now going to sign papers that stipulate that you are not forced to spend the today with us.

Crowd: mmmmh hhh!

Refilwe: Firstly you are all going to fill forms…yes! … We are going to fill forms. You are not going to fill them yourself, they are doing to ask you questions and fill them for you. We understand that is not all of us who can write, right.

Crowd: mmmmmnh!

Refilwe: When we are done, we are all doing to talk… we are just going to talk, but we will talk about cell phones.

Crowd: ok!

Refilwe: (Inaudible)… Then we are going to build with clay…what it is…Mmogo…what is it..

Crowd: Clay

Refilwe: Clay… yes we are going to build… what you are going to do, is build anything that will show us how you use your cell phone. So we are going to build anything that shows how we use our cell phones. So before we continue, if there is something you are not satisfied with or if you do not want to participate, you will tell us, because there is no one who is going to force you… right! My parents. ( bagolo). So in letter that they are giving you now, please sign, showing that you agreeing to work with us, if you can’t sign, my parent, you will put an X. I will show you where to put it. Do my parents have questions? You don’t have questions…you understand

Crowd: mumbling …..And talking (Signing of informed consent)
Refilwe: Please write here…

Crowd: continues to talk…

Refilwe: are you seeing it well…

Crowd: Mumbling

Refilwe: Write where I marked

Participant: Where should I write…Refilwe…Where should I write …here...

Refilwe: My parents as you are writing on those papers we gave you…please tell us how old you are, so we can write them. So when were you born. Do we all remember?

Crowd: Yes we remember.

Crowd: Mumbling again…

Refilwe: Or I will write them for you…

Crowd: Talking…

Participant: speaking in Afrikaans

Refilwe (background): What is mama’s name…Mama what is your name… and your surname

( Prof calling Refilwe aside)….They talked….mumbling

Refilwe: My parent…at school…

Participant: eight, eight, eighty- nine…

Student: eighty nine…oooh!

Refilwe: My parents, at school, did we all go to school.

Participant: Yes just a bit

Refilwe: Mama which level at school did you finish.

Participant: (inaudible)
Refilwe: Is that form 9…

( on the background- fourty nine, not four nine)

Participant: Yes

Refilwe: Mama how about you…at school…

Participant b: What about it…oooh I didn’t go to school, I did 4

Refilwe: was that standard 4

Participant c: mumbles something (laughs)

Refilwe: (laughs) Mommy…you

Participant d: 2

Refilwe: Standard 2…

Participant e: I also did standard 2

Refilwe: Mommy…Standard 2……standard 2.

Mme Mercy…Mme Mercy where did you attend school

Participant f: excuse me

Refilwe: Did you go to school

Participant f: Me…

Refilwe: Yes

Participant: I was born (inaudible)

Refilwe & Crowd: No… School!

Participant f: What dear

Refilwe & crowd: School!

Participant: (laughs) I didn’t go to school at all

Prof: So we are going to start now
Crowd: Mumbling…in Afrikaans and Setswana

Student: Grandma (inaudible), which year was grandma born?

Participant a: In 19 what?

Participant b: forty

Student: 1940

Participant a: yes

Student: ok…Grandma Letti

Participant b: 1950

Student: 1950…Ellen

Participant c: 1942

Student: 1942

Participant d: 1943

Student: 1943

Participant e: 1948

Student: 1948

Student b: Grandma Bertha is 89

Student: 89…ooh! Ok. And grandma…uuh!

Student b: Margret

Student: Margret…

Refilwe: I think she said nineteen twenty…

Student: nineteen twenty eight

Refilwe: mumbling

Student: Just confirm with her
Refilwe: We are this side mama…mama… we are this side, right!

Participant g: huh!

Refilwe: We are still this side

Participant g: Ok

Refilwe: Where are you going mama, now?

Participant g: mmmhmmnh( in a sign of disagreement)

Refilwe: Oooh! I thought you’re going

Participant g: No

Refilwe: Ooh!

Crowd: laughing and giggle

Prof. Roos: Give instructions (not audible)

Recording 3

Refilwe: I am going to ask you to open the containers that you see infront of you… inside there’s a cloth that you must lay all on top of the table, then we going to lay all the contents on top of the cloth, inside there’s clay, beads, and sticks. We must take them out and place them on the table.

Participant f: Mmopa (Clay)

Refilwe: clay…sorry (giggles) There is clay, there are beads and there are sticks…neh! We are going to take them all out and put them on the table.

Participant: What is in here?

Refilwe: beads… I will give you more, I can see that you have few of them…Beads, (Dibaga- saying it in setswana)

Participant: I hear you saying…( giggles)

Refilwe: They have beads… We are going to take these things...parents are we listening…You are going to build anything that comes to your mind when you think of a cell phone.
Cell phone is a “waist phone”. (inaudible). We all understand. Please build anything that comes through your mind when you think of a cell phone. Anything… We are going to give you 20 minutes or 30 Minutes.

**Participant:** Oh my God! you mean anything that has to do with a cellphone?

**Refilwe:** Ther.. There is no right or wrong answer. Anything that comes into your mind, you can build it for us.

**Crowd:** mumbling! … Do we take them out.

**Refilwe:** Yes! We take them out of the plastic.

**Participant:** Ooh! Anything that is related to a cell phone?

**Refilwe:** Yes! Anything that is related to a cell phone… you will build it for us.( they don’t know what to do), or how do you use a cell phone, my parents. Or how do you use a cell phone.

**Crowd:** We will have to see! (Mumbling and giggling)

**Refilwe:** Did we all understand my parents.

**Crowd:** Yes!

**Refilwe:** Do we have questions?

**Crowd:** Talking….mumbling

**Participant a:** Hey my friend

**Participant b:** Yes!

**Participant a:** I will copy your work

**Participant b:** Where? I thought I will copy from you

**Refilwe:** No! We don’t copy from each other, my parents. We don’t copy from each other. No copying…

**Participant c:** ha ha ha (laughing) we are not copying

**Refilwe:** yes…Each person … (Participant talking in the back ground)
Participant g: Should we make anything that is like a cell phone or what…

Participant f: You will fail…you will fail

Refilwe: Anything that will show how you use your cell phone.

Participant a: How do we use a cell phone …?

Participant b: I don’t know.

Participant c: I do not even have a cell phone…

Participant d: I also do not have a cell phone… I don’t know how it is used…

Crowd: (mumbling)…this is a problem…mumbling continues…………so what are we going to do since we don’t have cell phones…mumbling continues….

Participant c: Hey Kele (inaudible) You are irritating! …. Mumbling continues…

Participant d: So where will I press…

Participant e: laughs! (Ha ha ha )…I told you…Mumbling…

Participant a: I was going to build a dog… (Laughs)…

Participant b: a dog…. (Laughs)…

Participant a: Yes… a dog…and a cow (laughs)…

Participant b: (laughs)…I was going to build (inaudible) and a cat… (Laughs)…

Participant a: I was really going to do a dog and a cow…

Participant b: (Still laughing)…and a pot

Talks on the background…..

Participant c: What is that?

Participant d: It’s a person

Participant c: (inaudible)

Participant d: Yes
Participant c: (inaudible)

Participant d: Yes

Crowd: Mumbling. (Not audible)...

Participant f: Where do we put this …?

Participant e: I don’t know.

Participant f: You don’t know, my friend

Crowd: Talking… (Not audible)…

Participant f: We join it like this?

Participant g: Yes ma’am…(mumbling….)

Participant f: Where does this go?

Participant: We don’t know

Participant e: Girl! …

Crowd: Laughs…

Participant e: you will just figure out what is going on here…

Crowd: (Laughs from the crowd)…

Participant e: can you see what I am doing aunty…i…i am making a belt…

Participant f: A belt…ha ha!

Participant e: (inaudible)

Participant f: ooh! Ok

Participant e: Do you see it…

Participant f: yes! Ha ha (Laughs)

Participant e: ooh no… I was just making my own…

Participant f: But now… I want to ask…where are these things inserted…
Participant **g**: I don’t know…

Participant **f**: you don’t know…

Participant: Let me see that first…

Participant: now, what about these things…Where are they put…?

Participant: mumbling… (Not audible)

Participant: In front…

Participant: mmmmhh!

Participants: mumbling…

**Participant h**: Their clay is too soft

**Participant i**: It is too soft

**Participant h**: mmmh! (In agreement)

**Participant j**: this thing is confusing, this is for young kids. I am doing a belt for myself; this thing of cell phones is not for me. This clay of theirs is too soft.

**Participant h**: It is too soft

**Researcher**: are we done yet? Or we should give you more time?

**Participant**: this thing is difficult; the blackberry is refusing to come along.

**Researcher**: when you are done its fine, are we done all of us? I am going to ask that we clean the areas we were working on, shall we help you?

**Participant**: yes

**Researcher**: has everyone completed the task?

**Participant**: Not yet

**Researcher**: are we done? Before we proceed I forgot to tell you that we are going to take pictures of you, we are going to use the information that you are going to provide us, and we are not going to use any of your names.
We are going to ask you all to explain to us what is it that you have designed, who would like to be the first one to start?

PARTICIPANT 1

Participant: (29:22-inaudible) I created a cell phone

Researcher: (29:40-inaudible) I would really like us all to listen when one is explaining, because I am going to be translating to my colleagues, reason being they are not familiar with Setswana, is that fine?

Participant: (29:49-inaudible) I made a cell phone then put beads...

Researcher: (29:55-inaudible) you were saying you made a cell phone and?

Participant: (30:03-inaudible) when you phone

Researcher: (30:10-inaudible) why are there three beads?

Participant: i put three beads so that you can answer, answer and answer.

Researcher: and what about the rest?

Participant: it is when you want to phone someone, when you search

When i want to call someone

Researcher: Search for who’s number?

Participant: Dipuo’s number

Dipou in Vryburg.

My younger sister.

Researcher: why do you call her?

Participant: i was asking her whether is she still coming to check up on me.

Researcher: why do you want to ask her that?

Participant: because i am still struggling with my feet, she promised to come visit me in hospital but she did not.
Researcher: who else do you phone with your cellphone?

Participant: I don’t use a cellphone, I use a landline.

Researcher: why not?

Participant: because I can’t see properly

Researcher: and the landline who is assisting you?

Participant: I help myself because the numbers are too big for me to see.

Researcher: do you receive calls?

Participant: yes they do call me... my grandchild always calls and check me.

Researcher: who is your grandchild?

Participant: Mosibudi

Researcher: how old is she?

Participant: she is a woman with two kids, she is married, you know her.

Researcher: when you the phone is there someone who helps you?

Participant: yes there is someone

Researcher: who is that person?

Participant: Manini

She calls me when I have a call to answer

Researcher: does she stay with you?

Participant: yes, she is my first born

Researcher: is it fine when she helps you?

Participant: yes I do need her help

Researcher: do you have a cellphone and a landline?

Participant: I had one but my grandchildren took it
Researcher: how did you feel when they took it?
Participant: i told them to take it because i did not understand it

Researcher: who gave it to you?
Participant: i bought it in town

Researcher: thank you Mom

Researcher: (37:30 - inaudible) can we get someone else to explain what they created?

PARTICIPANT 2

Participant: (38:18) i created a cellphone, but i don’t know what kind

Researcher: can you tell us more?

Participant: i don’t use a cellphone, because its complicated, it involves please call me’s, messages, etc. So my kids use it alot

Researcher: the cellphone you are using is it yours or your child’s?

Participant: it is the kids cellphone

Researcher: (39:10) do you ever receive a call on the cellphone?

Participant: no i do not, they usually tell me, they don’t give it to me to listen.

Researcher: how do you feel about that?

Participant: i feel excited at times, i accept everything they tell me

Researcher: do you ask them at times to use the cell phone when you want to call someone?

Participant: yes, I always call my brothers child.

Researcher: why?

Participant: i always want to know how he is doing
Researcher: who usually helps you when you want to call?

Participant: i always ask Disebo, she works at Pick n Pay

Researcher: why specifically her?

Participant: because she is permanently employed

Researcher: does she helps you with an open heart?

Participant: yes, she does.

Researcher: the reason you ask her what is it?

Participant: because she always answers her cell phone

Researcher: thank you Mom (42:30)

Researcher: (42:54) just a last question; the kids you always ask are they your kids?

Participant: they are my daughters

PARTICIPANT 3

Researcher: (43:30) can you please tell us about what you created?

Responded: (43:41) crying... i bought a cell phone so that i can phone around and look for a place to stay, because i do not have a place of my own, i rent out.

Researcher: (43:46) are you alright Mom?

Participant: yes I am, just that it hurts me most because always when i go with people they have their own places to call home and i don’t.

When i pass away am i going to leave my kids.

Researcher: (44:30) do you want to continue or do you want to give you more time?

Participant: it is because in my old age, i had a place to stay when someone said to me he or she is selling an RDP house, then i sold my stand to buy the house but after 6 months the very same person kicked me out of the house with lawyers. So when i went back to my old stand they took it already.
Researcher:  (45:24) we can see that you are emotional, but is there a correlation between
the house and the cellphone?

Participant:  yes, because i bought a cellphone to phone around and look for a place of my
own.

Researcher:  (46:09) where is the cellphone now?

Participant:  here it is

Researcher:  (46:34) who do you call specifically?

Participant:  it is family and friends and my brother specifically, because he is the one helping me
look for a place to stay.

Researcher:  (47:09) what do you ask from them?

Participant:  i ask them to find me a place to stay because where i am staying, i am renting
the place because you never know the exact time that god will call you.

Researcher:  (47:30) do you still stay with your kids?

Participant:  yes i stay with them, and one of them is working at pick n pay

Researcher:  (48:10) do you use your cellphone or do they help you?

Participant:  i can use a cellphone

Researcher:  (48:34) thank you Mom

**PARTICIPANT 4**

Participant:  (48:36) here i made a cellphone, so that if i want to call someone i can call at any time
of the day, even when you find that the gates are locked.

My children bought it for me because they are employed, a cellphone is important than a landline.
Because at first my son had a landline. I had a cellphone but the kids took it because theirs broke.

Researcher:  (50:13) the gate you are referring to where is it?

Participant:  i was saying, if you find the gates at home locked you can phone people inside the
house to open the gate for you.
Researcher: (50:39) apart from the gate do you use it for something else?

Participant: at times when my child is at work a can call her at anytime and i can get hold of her at anytime unlike using a landline.

Researcher: (51:15) the kids you are referring to are they your kids or grandchildren?

Participant: they are my grandchildren, their parents passed away.

Researcher: (52:30) are you responsible for them?

Participant: yes i stay with them. I also stay with my brothers kids, just in December before the new year started my relatives in Jan Kemp dorp called to wish me a happy new year, i was excited.

Researcher: (52:55) are the kids helping you? If so why?

Participant: they help me

Researcher: who is helping you?

Participant: it is Joseph, he works at the fire department

Researcher: (54:00) is he your child?

Participant: no my grandchild, he stays at his own place but before and after work he always come to check up on me.

Researcher: (54:20) thank you Mom

PARTICIPANT 5

Participant: (54:30) i made a couch, a person and a cell phone. The person is holding the cell phone in the hand. When the phone rings the person stands up to answer the phone. But the clay you gave us is too soft.

Researcher: (55:31) who is this person calling?

Participant: i can say it’s me, i am calling my kids. Inside the house a cell phone is useful because i am able to buy electricity with my cell phone, rather than having to waste money on transport to go to town and buy electricity.

Researcher: (57:10) do yuo read the sms’s or not?
Participant: i can only make or receive calls, but messages i cant. My grandchild does that for me.

Researcher: (57:45) is it one grandchild or two?

Participant: it is two.

Researcher: (58:01) can you elaborate more on the couch and the flower pot you made?

Participant: i did it like that because it is a house setting.

Researcher: thank you Mom (58:45)

Researcher: (58:49) who bought it for you?

Participant: my daughter in Klerksdorp.

Researcher: (59:10) we are about to finish please be patient with us

Participant: no we are happy that you are here.

PARTICIPANT 6

Participant: (01:00:10) i made a cellphone, i can use it when i have problems, for example when you are sick you can phone an ambulance, and it can arrive quickly.

Researcher: (01:00:42) who else do you call on your cellphone?

Participant: i don’t have one

Researcher: (01:01:05) do you have a phone at home?

Participant: my husband has one

Researcher: (01:01:33) do you at times ask your husband to make use of his cellphone?

Participant: no i don’t

Researcher: and what be the reason behind that?

Participant: because i am not concerned about cellphones.

Researcher: (01:01:55) how do you communicate with your relatives?

Participant: they call my husband
Researcher:  (01:02:01) thank Mom

PARTICIPANT 7

Participant:  (01:02:04) i made a calabash and a belt, i use the calabash to fetch water and make tea. The belt i use to tie myself around the waist.

Researcher:  (01:04:30) do you have a cell phone?

Participant:  no i don’t but my daughter has one, she always tells me who called.

Researcher:  (01:05:52) when you want to make a call do you use the same process?

Participant:  only kids communicate but i don’t but i usually buy the airtime my daughter.

Researcher:  (01:07:40) we would like to thank you all for your cooperation and contribution. (01:07:47) How did you enjoy our company?

Participant:  we really enjoyed being with you.

Researcher:  (01:08:09) do any have you use a cellphone to call the clinic?

Participant:  no we usually just go there.

Researcher:  (01:08:20) if we would have given you a piece of paper and a pen would you have written what you think about cellphones? Or you rather prefer to do it in this manner?

Participant:  it is easier this way, because we did not go to school, it is best using our creative minds.

Researcher:  (01:10:40) did we learn something?

Participant:  we learnt the importance of having a cellphone.

Researcher:  (01:11:20) thank you very much for your assistance