

## Focus Groups as a Tool to Collect Data in a Community Informatics Project Involving Elderly Rural Women

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### INTRODUCTION

Elderly women living in the rural areas of South Africa are the most disadvantaged population group in the country (Manual, 2007; Statistics South Africa, 2013). It is widely accepted that increasing these women's access to information and communication technologies (ICTs) has the potential to improve their quality of life (Joseph, 2012; Terry & Gomez, 2010). The women's active participation in the design and implementation of any ICT deployed in their community is crucial to ensure its usefulness by meeting their needs, and to ensure that they derive maximum benefit from its use (Gurstein, 2003; Light et al., 2010).

This article discusses how focus groups were used as a data collection tool in a research project that is aimed at providing elderly women in a remote rural community in South Africa's Mpumalanga province with access to ICTs which meet their specific needs. The latter will be achieved by involving the women in the redesign of an existing ICT platform known as the "Digital Doorway". Focus groups were also used to pilot and adapt the informed consent process. The traditional focus group approach was adapted to support the socio-cultural context of traditional South African communities. In these communities group interaction and decision-making are very important, as are a need for openness and transparency, and the assurance that everybody receives the same information and is given the opportunity to voice their opinions (Molamu, 2015). The project fulfils the dual focus of Community Informatics (CI) as described by Stillman and Linger (2009). It does so by firstly conducting research on the relationship between the design of the ICT platform and the local community, and secondly by implementing an ICT project in the community.

Elderly rural women are a unique demographic group in the South African context. This has a direct impact on the way in which researchers have to engage with them as research participants, in order to ensure a successful interaction and outcome of the research project. A number of factors have contributed to the status quo and they may impact negatively on the women's ability to participate in and benefit from interventions that are aimed at their empowerment, if not properly managed (Diale, 2013). Socio-cultural norms, values and practices which relegate women to the lowest position in society are still firmly entrenched in rural communities and are adhered to by the elderly and traditional authority structures (Diale, 2013). Apartheid has left elderly black South Africans in general, and women in particular, to face a complex set of challenges (Lam, Leibbrandt, & Ranchhod, 2004). They have lived most of their lives under restrictions related to employment, residency and education. The inequality in education between and amongst races was far greater for the current elderly than what they are for younger South Africans. The literacy levels amongst elderly women are therefore significantly lower than their younger counterparts, who received their education after the end of apartheid (Lam et al., 2004; Statistics South Africa, 2013).

In order to ensure that the women's voices are heard and their needs addressed by the ICT platform deployed for their use, feminist critical theory forms the theoretical foundation of the research project. The paper demonstrates the fit between this theoretical framework and Community Informatics. It also demonstrates the appropriateness of focus groups as data gathering tool within the framework of feminist and critical theories.

The structure of the paper is as follows: a description of the ICT platform is followed by the articulation of the aim of the project. The rationale behind the selection of elderly rural women as participants in the project is then articulated. This is followed by a discussion of focus groups as a data collection tool in the CI domain. The paper then highlights the requirements of feminist and critical theories and how focus groups can address these requirements, followed by a discussion of how focus groups were used to finalise the informed consent process. Finally, the paper discusses the case study and how the researchers used focus groups to gather data while working with the elderly women in Mafarafara, a village in the Mpumalanga province.

### BACKGROUND

#### ICT Platform: Digital Doorway

The Digital Doorway (DD) project is a national initiative which was conceived within the context of South Africa's National Research and Development Strategy. Then President Thabo Mbeki stated in the introduction to the strategy document:

*"...We have to ensure that as many of our people as possible master modern technologies and integrate them in their social activities, including education, delivery of services and economic activity. This relates in particular to communication and information technology ...". (South Africa, 2002:3)*

The rural areas of South Africa are characterised by extremely low penetration of ICTs, high cost of access, and a severe shortage of ICT skills. The DD project started in 2002 with the vision to make a fundamental difference to computer literacy and associated skills in the under-served rural areas of South Africa (Herselman et al., 2010). Since the beginning of the project the main user base has been children, youth and young adults. The DD is a robust locally designed and manufactured self-service ICT platform which is deployed in deep rural communities, typically in unsecured public areas. It is designed to be extremely robust and vandal proof to ensure that it is suitable for the environment in which it is used. The design is further aimed at providing access to multiple users at the same time, combating misuse and to minimising support and maintenance costs. The operating system is XuBuntu. The applications, content and games (amongst others) are fully open source (Gush, 2011).

The inaugural DD installation was completed in August 2002 in a small rural village in the Eastern Cape Province of South Africa. Since then the project has proven to be hugely successful in fulfilling its prime objective of increasing functional computer literacy amongst rural communities. The project is still in progress and to date more than 260 units have been deployed throughout South Africa. 37 DDs have been deployed internationally. During the past 13 years the DD has progressed through seven major design iterations that were influenced by user feedback and the project team's desire for continuous improvement of technical aspects of the DD. The configurations range from the initial Windows-based single-seater unit to the current 220V and solar powered 3-seater units and the solar powered self-contained Container DDs. The 'Digital Drum', a DD in a 20 gallon drum developed with UNICEF for use in Uganda, was nominated by the Time Magazine as one of the top 50 inventions in the world for 2011. The photographs below show the first single seater DD, the solar powered three-seater DD deployed in Mafarafara and the solar powered container.

**Figure 1: Examples of Digital Doorway configurations**



Various monitoring and evaluation studies conducted by independent entities have demonstrated that the DD is succeeding in its mission to contribute to computer and information literacy by providing ICT access to its many users (van der Vyver & Marais, 2013). DDs are used extensively for recreational, educational and skills building activities. Users view the DD as a tool that creates opportunities and figuratively 'opens doors of opportunity' in the lives of the users. It is often described as an active participant in the community because it keeps children out of mischief and trouble with the police. As a source of information, the DDs have significance in people's lives, and in some respects are seen as a 'personality' in the community, playing an active role in providing information. As the DD provides a system which can be accessed and which involves both hardware and software, it can be regarded as an ICT Platform. In this article when the word 'ICT platform' is used it refers to the DD.

### ICT Platform and Elderly Rural Women

As described above, the DD as an ICT platform has proven to be effective in supporting and promoting computer literacy amongst the children, young people and young adults in rural communities. There is general consensus amongst stakeholders that the impact of the ICT platform should be extended beyond its original brief with respects to both aim and audiences. For the extended project the decision was made to focus on elderly rural women.

The main purpose of the extended project is to identify and investigate the aspects that will encourage elderly women in rural areas to use the ICT platform, and to determine what the physical design, content and applications should look like to achieve this; i.e. what are the characteristics of an ICT platform that will encourage elderly rural women to make effective use of it for information access? Constraints and factors preventing these women from using the ICT platform will also be investigated. The learning will be captured in a model or framework that could be applied in other domains and to other ICT platforms in order to encourage ICT use. A modified ICT platform, based on the feedback received from the women, will permanently be deployed in the community.

#### **Elderly Women in Rural Areas of South Africa**

Elderly rural women - older than 60 (Older Persons' Act, No. 13 of 2006 in Statistics South Africa, 2013) - were selected as the focus group of this expansion project because they are the most disadvantaged population group in South Africa (Manual, 2007; Statistics South Africa, 2013). They are mostly illiterate and poorly educated; isolated and confined to their communities; subject to discriminatory customary laws, persisting patriarchal attitudes and prejudice; have access to severely limited resources and are marginalised due to the lack of initiatives aimed at their upliftment and empowerment (International Labour Organisation, 2012; Ozoemena, 2010; Statistics South Africa, 2013). As a result they face significant challenges in their access to information, education, various services, earning opportunities and making themselves heard.

In a 2013 Stats SA survey 58.3% of rural women reported that they have received no education compared to 41.66% of men and older women are less likely than men to have progressed past primary school (Statistics South Africa, 2013). Despite these obstacles and limited resources they are usually responsible for looking after large extended families and sometimes whole communities, due to the absence of the men and young adults who migrate to urban areas in search of work. Elderly women therefore become the heads of their households, while having to cope with minimum resources (Statistics South Africa, 2013). Uplifting and empowering these women can therefore have a positive influence on a whole community (Mehra & Rojas, 2008; World Bank, 2009b). It is a widely held opinion that increasing women's participation in ICTs can play a significant role in achieving this aim (Joseph, 2012; Terry & Gomez, 2010; UNESCAP, no date).

The majority of research conducted on women's acceptance and use of ICTs has been conducted in developed countries and cannot necessarily be applied to rural women in developing countries such as South Africa. This project will contribute to the understanding of how the elderly women's relationship with ICT influences the design as well as the deployment of ICTs in a rural community. It is important to remember that the women must play an active part in the design of an ICT system intended for their use; they should not be mere beneficiaries and users of the system, but co-creators (Light et al., 2010; World Bank, 2009a).

## A MODIFIED FOCUS GROUP APPROACH IN A COMMUNITY INFORMATICS PROJECT

### Introduction to Focus Groups

The use of focus groups is not new and was first mentioned in 1920 as a marketing research technique (Kamberelis & Dimitriadis, 2013; Kitzinger, 1994). In the 1940's Richard Merton and his colleagues discussed the focused interview as a research method that would facilitate the gathering of specific information from a group of participants around tightly delineated topics (Kamberelis & Dimitriadis, 2013). Over the past century focus groups have been used for several purposes. They have become a popular data gathering method in the social sciences during the 1980s because they can be adapted to suite a wide range of purposes and approaches (Kamberelis & Dimitriadis, 2013; Rodriguez, Schwartz, Lahman, & Geist, 2011).

The way in which focus groups are generally used has specific characteristics. A selection of these is listed below (Alexander & Korpela, 2012; Babbie, 2005; Ferdinand, Fudrow, Calhoun, & Wisniewski, 2013; Kamberelis & Dimitriadis, 2013; Walden, 2012).

1. The groups are small with typically 6 - 12 participants.
2. The group must consist of homogenous strangers with respect to a characteristic that relates to the topic being researched. Participants that do know each other must not be placed in the same group.
3. The participants are carefully handpicked by the researchers to meet their specific needs.
4. The researcher sets the agenda or topic of discussion beforehand and leads the group accordingly.
5. The goal is to obtain information about a single predetermined topic (or a limited range of topics) which the researcher deems relevant to the research.
6. The latitude about the degree of focus of the discussion is in the hands of the researcher.
7. Focus is on determining what each individual really thinks, their actual beliefs and activities.
8. The aim of focus groups is not to make decisions.
9. The aim of focus groups is not to answer participants' questions.
10. The aim of focus groups is not to reach consensus.

Many of these characteristics are not appropriate for focus groups conducted amongst elderly women in rural South African communities, therefore necessitating adaptations to the traditional focus group approach. For example, in traditional rural communities in South Africa women occupy the lowest position in the hierarchy; even young men have more power than they do. In addition, outside parties such as researchers are seen as having power to change their negative circumstances in a positive manner. Research participants bring their experiences with power relations and well as their beliefs and perspectives to focus group discussions. If the researcher follows traditional focus group protocol by setting the agenda beforehand, picking participants without consulting the community and determining the size of the group (i.e. acting as the person with the

power), the traditional power relationships will be perpetuated. The women will only tell the researcher what they think (s)he wants to hear. They will not participate freely and the ICT intervention will fail.

### Focus Groups in Community Informatics

Many Community Informatics-related articles, such the one by Rabayah (2010) published in the Journal of Community Informatics, mention that the authors used focus groups as the data collection tool of choice - either on its own or in combination with other tools - to elicit information from the women participating in the research project. The authors present the results only. They do not discuss the reason for their choice, nor do they describe how the focus groups were conducted, whether any difficulties were experienced or what the specific value of the focus groups was to the research project. Other research projects reporting the use of focus groups were conducted in communities whose socio-cultural realities are irrelevant to elderly rural women in South Africa. These include communities in Australia (Newman, Biedrzycki, & Baum, 2010), urban areas in America (Jeffres, Jian, Neuendorf, & Bracken, 2012) and youth in America (Wolske et al., 2008).

One article that does provide a detailed discussion on the use of focus groups in a rural community in South Africa approaches community development from an Information Systems perspective. Although the article offers useful insights, the project has a number of problematic issues. The western male researchers did not understand the socio-cultural context and had to use an interpreter to interact with the community. The use of interpreters disturbed the socio-cultural and power relationships, and created distrust and resulted in non-reporting of information. The authors admitted that both these issues had the potential to compromise the effective gathering of information (Alexander & Korpela, 2012). Traditional procedures for conducting focus group sessions were used in this study, which include the researchers setting the agenda, identifying and recruiting participants, selecting the venue and planning the seating, and establishing the ground rules and protocol for the focus groups. The authors mention that (from a pragmatic perspective) it will do no harm to demonstrate some 'token gesture of respect' for community customs such as greeting the focus group participants in the vernacular.

## THEORETICAL FRAMEWORK: THE RELEVANCE OF FOCUS GROUPS

### Theory in Community Informatics

Although Gurstein (2007) views CI primarily as practice- and therefore outcomes-driven rather than methods- or theory-driven, there is a lively debate in academic literature regarding the role and nature of theory in CI. This debate focuses strongly on the absence of theory to support the technical component of CI interventions.

Williams and Durrance (2008) describe CI as "*a field of research in search of theory.*" Stillman and Linger (2009:255) highlight the ongoing debate in Community Informatics "*about the need for a stronger conceptual and theoretical base in order to give the field disciplinary cohesion and direction.*" These authors focus on the "*theoretical weakness of CI that lacks ontology for its technical endeavours*" (2009:258). This view is supported by Bourgeois and Horan (2007) who hold the opinion that the design and implementation of effective community information systems are depended on the development of a comprehensive set of theories in the CI domain which addresses these (technical) issues.

Many authors see CI as 'borrowing' or incorporating theoretical content from well-developed theoretical frameworks in related domains such as Information Systems (Stillman & Linger, 2009; Williams & Durrance, 2008). More specifically, Stillman and Linger (2009:255) contend that the rich theoretical infrastructure of Information Systems (IS) can be deployed and incorporated in the CI domain to "*understand the social and technical needs of CI*". Examples of theories originating in other domains which can successfully be applied in CI are: actor network theory, critical social theory, interpretive theories, critical theory, and design theory (Bourgeois & Horan, 2007; Rhinesmith & Wolske, 2014; Stillman & Linger, 2009). Critical social theories are particularly relevant to CI because it "*makes behaviour and social, political and historical contingencies visible in the construction process of the technical artifact. This visibility provides space to express both the CI agenda and its technological orientation*" (Stillman & Linger, 2009:260).

### Feminist Critical Theory in the Digital Doorway Project

*"Oh! I can't wait for this thing to be connected. We are going to be educated; but why? When we are already in our twilight years?"(Mma C, 2014)*

Feminist critical theory forms the theoretical framework of this project. As demonstrated by Stillman and Linger (2009), it is an appropriate theory for the CI domain. It provides a strong foundation for a project aimed at uplifting severely disadvantaged members of a rural community. This section provides a short overview of feminist critical theory as well as a discussion detailing the appropriateness of focus groups as both communication and data collection tools within this theoretical framework.

Critical theory has the intention to promote emancipation of disadvantaged and oppressed population groups, in this case elderly rural women (Coule, 2013; Stahl, Chiarini Tremblay, & Le Rouge, 2011). Critical theory has as its central tenet the working *with* participants and not *on* them, with the aim of challenging the conventional way of viewing and conducting research as well as the traditional power relationships between researcher and researched. Adding a feminist lens ensures that research is cognisant of, and informed by, women's historical and current status in society as well as the structural inequalities that have created this status, and looks at the world from women's perspectives by honouring their social and historical realities (Bierema & Cseh, 2003).

Research that is founded in both feminist and critical theory focuses on exposing economic, power, gender and social inequalities in order to bring about fundamental change in the prevailing system, with the aim of opening possibilities for minimising or eliminating those inequalities and for the "*emancipation of people, meanings and values*" (Martin, 2002; McKinnon in Rhinesmith & Wolske, 2014:4). Expanding on the view of Stillman and Linger (2009), critical theory provides the researchers with a framework to investigate "*who benefits and who loses, particularly in the design, development, and implementation of ICTs*" (Rhinesmith & Wolske, 2014:5), while the feminist view ensures that the needs of women are taken into account. A critical feminist approach is therefore particularly suited to a project that has the aim of designing an ICT platform to meet the specific requirements of a group of elderly rural women in order to ensure that they can use the ICT platform effectively.

#### **Focus Groups and Feminist Critical Theory**

When conducting research in traditional rural communities in South Africa, particularly when elderly women are the research participants, issues such as power relationships and empowerment of the women play a significant role. Focus groups have a role to play in research underpinned by feminist critical theory due to its potential to address these issues when adapted to the specific social, cultural and political context of a community (Alexander & Korpela, 2012; Kevern & Webb, 2001; Stahl et al., 2011).

From a feminist critical theory perspective the disparity in power relationships between researcher and research participants is of concern (Kevern & Webb, 2001). Feminist critical researchers place the emphasis on research approaches which deconstruct the power dynamics between the researcher and those being researched, and which place the voices of those who have been marginalised, mostly women, at the centre of their research (Rodriguez et al., 2011). Focus groups have the potential to equalise this balance of power by democratising the research process. This can be achieved through the creation of an environment where women can engage as a collective in the focus group discussions, and where they instead of the researcher, give meaning to and interpret their social reality (Kevern & Webb, 2001; Madriz, 2000; Montell, 1999; Wilson, 1997). This should result in a research relationship which is more equitable than that which typically exists in traditional research approaches. If researchers understand and honour the socio-cultural reality of the community and conduct the focus groups and other interactions between the researchers and research participants accordingly, it is possible to foster reciprocity, rapport and respect between the two parties. In the Mafarafara project, this was accomplished because the researchers, whose first language was Sepedi (the local language spoken in the region where Mafarafara is located) stayed in the community for the duration of the various visits to the community.

## USING FOCUS GROUPS IN A REMOTE RURAL COMMUNITY

This section describes how focus groups were used to refine the ethics process and as a data gathering tool in Mafarafara.

### Informed Consent Process

The ethics documentation consisted of a short description of the Digital Doorway, the research project, the consent form to be signed by the Chief giving permission for the research project to be conducted in the community (traditional leaders still have considerable authority in rural South Africa), as well as a detailed and comprehensive informed consent document to be signed by research participants. These documents were prepared in English and Sepedi. In order to ensure the reliability of the ethics process it was tested over two days at an NGO in Mabopane, a township about 40km to the west of Pretoria. The research team wanted to check comprehensibility of the information and the consent form, whether the Sepedi translations were correct, whether the process worked and whether any other issues arose which they had not already considered.

The women participating in the trial run were of similar profile to the intended research participants. Initially, the women were individually taken through the whole process. This created a number of problems: the process was far too time-consuming, and similar questions arose in the various individual sessions. Also, taking individual women away to a separate room created an impression of 'secrecy'. The women who were waiting became bored and started to leave. The researchers decided to try a focus group approach as a way to mitigate these issues. One of the senior women, who had completed the ethics process during the one-on-one sessions, was approached to gauge her willingness to lead the focus group. She was taken through the document again. She then led the remaining women as well as some of those who had already completed the ethics process, through

the documents. The researchers acted as observers. Questions raised were addressed in the group. Opportunity was provided for the group to discuss the issues that were raised among themselves. Once the women had been taken through the consent document, the researchers went through the signature process on a one-on-one basis.

The research team benefitted from the above process in two important areas. They learnt important lessons regarding the interaction with research participants in a rural area context, which were then successfully implemented in the interaction with the women in Mafarafara. In addition, the ethics documentation which resulted from this process was used very successfully during the focus group sessions with the women in Mafarafara.

## Mafarafara

### *Introducing Mafarafara*

**Figure 2: Community centre where focus groups took place**



Mafarafara is a small village consisting of 280 inhabitants situated in the Greater Tubatse Municipality in South Africa's Mpumalanga province. It is extremely remote, and because of the poor state of the roads the community can only be reached by a 4x4 vehicle. The community is surrounded by a mountain range as well as a river which practically isolates it during heavy rains. Given these transportation challenges, it is not easy for the inhabitants and particularly elderly women to travel to the surrounding towns. The village consists of a higher and lower section. The higher section has pre-paid electricity, which is not the case in the lower section of the village where the project is taking place. Cell phone coverage is patchy at best and not very reliable. Figure 2 shows photographs of the community centre in which the researchers met with the women. The ICT platform is also installed at this centre.

The lead researcher was introduced to Mma C (Mma is a term indicating respect for elderly women), the project's champion in the community, by a fellow researcher who had worked in a neighbouring community and who was aware that "*Mafarafara has nothing*" (Veldsman, 2013). The first contact with Mma C was made via cell phone - a process which took a couple of weeks firstly because of the unpredictable cell phone coverage and secondly because cell phones cannot be charged as there is no electricity in the village. Subsequent contacts to arrange site visits and to gather additional information was accomplished by leaving messages on cell phones or by sending a text message, which could only be retrieved once there was coverage and the cell phones were charged, or by contacting an employee of a multipurpose community centre in a much larger community about 25 km away. He would then pass the message on when he visited Mafarafara, or when somebody from Mafarafara came to Kgautswane.

### ***Why Focus Groups as Mechanism to Interact With The Community?***

By creating a forum through which women can share their collective stories and make visible the different dimensions of their daily lives, focus groups can become an important tool to contribute to the advancement of social justice for women (Madriz, 2000). More specifically, appropriately modified focus groups can de-centre the authority of the researcher, allowing for a more egalitarian and less exploitative dynamic than other research methods. This in turn allows the women to connect with each other and share experiences, and creates room for the women to 'take over' the focus group and re-conceptualise it to meet their specific needs (Montell, 1999). In a rural community such as Mafarafara, where most of the elderly women are illiterate and regard the researcher as

more powerful than themselves, individual interviews reinforce the skewed power relationship between the researcher and the researched.

In the Mafarafara project, focus groups were used as both a vehicle of communication with the community and elderly women as well as a data gathering tool. The researchers identified focus groups as an appropriate approach because the culture in rural South African communities is inherently oral, and decisions are reached by consensus. Group interaction, the need for openness and transparency, and the assurance that everybody gets the same information and is given the opportunity to voice their opinions, are very important in rural communities. As discussed below, the traditional focus group approach was adapted to ensure the establishment of a forum in which the interactive discussions could give the women a collective strength and therefore a stronger voice in the research project. Focus groups have the potential to create an environment in which the women and researchers can learn from each other and collaboratively redesign the ICT platform such that it meets the women's specific needs (Stahl et al., 2011).

The focus group discussions were conducted in Sepedi, the local language, by researchers who are first language Sepedi speakers. This approach ensured that the researchers were aware of (and honoured) the local socio-cultural context and that the nuances of the discussions were captured. It also prevented complications such as non-reporting of information by the interpreter and skewed power relations that can arise by inserting a third party (in the form of an interpreter) into the discussion. In order to allow for sufficient time for discussion of issues on the agenda while taking cognisance of participant and researcher fatigue, the group discussions ran for forty-five minutes to one hour.

Focus groups were used in a number of different scenarios:

1. As the vehicle through which to share information with the community and the elderly women participating in the research project.
2. To generate discussion and to get feedback.
3. To obtain the women's buy-in to the research project.
4. To explain and conduct the ethics- and informed consent processes.
5. To explore the women's needs with respect to specific information which could be made available on the ICT platform.
6. To gather information about their perception and use of the ICT platform.
7. To get their inputs into the redesign of the ICT platform.

#### ***Focus Groups Participants***

In a rural community important decisions are usually made after an 'indaba' (gathering or meeting) where wider community participation is important. An atmosphere of 'openness' is crucial to the success of the project. The researchers and Mma C, the community champion, introduced the project and ICT platform during a gathering at the community centre. The Chief and the men were supportive and gave the project their blessing. All of the elderly women were then invited to participate in the project. An existing group of elderly women, who already knew each other, became the research participants. Access to the group of women was gained via Mma C. The number of participants in the focus groups ranged between 15 and 23. Focus group discussions were conducted at the community centre in Mafarafara which 'belongs' to the women: Mma C has the keys and the women meet at the centre to do their sewing and to socialise. Despite being between 60 and 80 years of age, these women are responsible for generating their own incomes and sustaining the livelihoods of their families. The majority are heads of their households.

#### ***Research Process***

The first visit to the community took place in April 2013. During this visit the ICT platform and the research project was introduced to the community. Permission was obtained from the local Chief to conduct the research in the community, to obtain the buy-in from the community as a whole for the project, to recruit elderly women to participate in the research project and to complete the informed consent process. All these activities were conducted as focus group discussions. To date four follow-up visits have been conducted. During August and November 2013 the respective purposes of the visits were to install the standard ICT platform, to get feedback on the women's experience with the platform and to obtain their initial inputs into the design. The purpose of the April 2014 visit was to 'touch base, address issues the women experienced using the ICT platform and obtain further inputs into the design. The researchers visited Mafarafara again in August 2014 to collect the ICT platform to take it back to the researchers' technical lab to make the technical and content modifications requested by the women. The inputs into design were to determine modifications which should be made to the ICT platform in order for it to better meet their needs and to enable them to use it effectively. At the time of writing the team is making arrangements to return to the community to install the modified ICT platform.

The researchers used an interview guideline listing the key points to be covered, to ensure that the research questions were being addressed. Data was captured in audio, video and written formats, which were complemented by photographs. Group size changed at times as women needed to attend to other commitments. An example is the majority of women excusing themselves at lunch time during one of the sessions, in order to collect their pensions at the pay-out point. The same group of women participated in all the focus groups which took place. In this way the research team could build on the information and

data gathered during previous visits and gain new insights into the women's lives. An additional advantage of this approach was that, when the researchers arrived for subsequent visits, they were known to the research participants who received them warmly and opened up more easily than would otherwise have been the case. No segmentation of the focus group was done. The research team tried to create an environment that is natural, empowering and validating for the women. By honouring the traditions, socio-cultural context and cultural identity of the women the researchers were able to demonstrate their concern and respect for participants (Rodriguez et al., 2011:413). The researchers lived in the village during the visits and blended in with the community's way of life. This enabled the women to relate more easily to the researchers than would have been the case had the researchers stayed outside the village.

#### **Characteristics of focus groups**

The research team included all the women in one large focus group rather than several smaller groups. Focus groups were facilitated in an informal non-directive style. During the discussions the researchers and Mma C made a concerted effort to ensure that everyone's position was articulated and noted. This approach demonstrated clearly that the women have very different perspectives of, and attitudes to, the topic of the ICT platform. Although the focus groups were not conducted in a very structured and formalised manner, the team was concerned with ensuring that the all women had an opportunity to express themselves. The women were less inhibited in a group setting than in one-on-one interviews. Group discussions enabled the team to get information about community attitudes towards the use of the ICT platform. Members of the discussion groups built on each other's ideas and reminded each other of experiences which assisted them in getting important information. A disadvantage of this method was that some participants would be more vocal than others and would tend to dominate the discussion. A particular 'culprit' was Mma C; when she was present in a focus group, effort was made to ensure that other participants' voices were also heard. She was equally sensitive and aware of her influence compared to other women and would encourage them to state their views as well. The passivity or inactivity of some members was at times due to the high social standing of the more active members.

The interview guide was used to steer the content and dynamics of the conversations. The questions were designed to promote group discussion, with the research team using open-ended questions rather than a detailed list of questions. The women were allowed to 'get off topic' and to put their ideas across, thereby acknowledging their contribution. They would afterwards be steered in the right direction to respond to what was being asked. This approach empowered the women by giving them room to talk about issues they were interested in as well. This would include issues pertaining to Internet connectivity, and Mma C wanting discussions to look at UN funders who could be asked to get involved in the development of Mafarafara. The women provided an audience for one another, encouraging a wider range of discussion than would have been possible with more structured approaches. The research team made an effort to be aware of the rhythms of the women's conversations and to 'go with the flow' of the discussion. The conversation flowed easily and there were no disagreements.

Topics that generated the most interest were the ICT platform as a source of information relevant to the women's daily lives, and its potential as a tool to leverage assistance from funding agencies and government departments. Specific examples include a) health information focusing on remedies for old age ailments and those affecting children; b) agricultural information dealing with crop cycles, disease management in both crops and livestock, and beneficiation of indigenous plants and applications that focus on the improvement of numerical literacy; c) Information relating to their craft and sewing activities such as how to design their own clothing patterns, knitting and crocheting patterns, as well as craft ideas that are not expensive with particular emphasis on crafts using recycled goods; d) information on lightning and thunderstorms, and particularly how fatalities and destruction of crops, livestock and property can be provided; and e) Information about different funders (government and non-governmental) which can contribute to upliftment of the community, their contacts and areas of interest as well as application forms for funding. Because of the isolation of Mafarafara the women felt that their community has been forgotten by various government and funding agencies. They were of the opinion that the ICT platform could serve as a tool to motivate these agencies to become involved with the community. Discussions also centred on transforming the community centre into a multipurpose facility over time, including the provision of Internet connectivity, providing the ICT platform with a printing and photocopying facility as well as providing the women with chairs to use whilst working on the ICT platform.

During the conversations the women expressed their excitement about the ICT platform. Far from the technology being threatening it was instead embraced, as is evidenced by the quote below;

*"You don't know how excited we are with this project. Now that the DD is here, there's no turning back. We are going to be successful. We can't be defeated by something that cannot talk."*

The socio-cultural and power relationships which became evident during the site visits are very interesting. For example; the second visit to Mafarafara was undertaken by a white English speaking male who was responsible for installation of the ICT platform. From the women's point of view, he was not the stereotypical 'white male' because of the manual



work which he did. The women were very impressed by his humility and hard work. They were also aware of the differences between the two black female researchers with respect to age and ethnicity, but respected the fact that the researchers could communicate in Sepedi, the local language. For the two black female members of the research team, coming from different socio-cultural backgrounds was value adding. This diversity amongst the team enabled its members to bring to the fore their skills and capabilities for the development of a community.

## COMPARING THE TRADITIONAL FOCUS GROUP APPROACH WITH THE COMMUNITY BASED APPROACH WHEN INFORMATICS IS THE CENTRAL ISSUE

### Specific Areas of IS Research That Might Benefit From Focus Groups

The areas in IS research and the implementation of ICT projects in rural communities that can benefit from the use of focus groups are typically related to the socio-cultural aspects of IS projects. Following a transparent, all-inclusive focus group approach when engaging with the community can contribute significantly to the factors discussed below. In order to succeed, ICT projects based in rural communities must be significantly community-driven (Pade-Khene, Mallinson, & Sewry, 2011), a reality which can be created by involving the community in discussion and planning through focus groups. ICT initiatives should incorporate socio-cultural factors such as gender awareness and political structures in the community to ensure effective participation of traditionally excluded social groups (Bridges, 2006). Focus groups can play a significant role in encouraging participation of the community in general as well as specific target groups in the ICT project, thereby creating the conditions in which appropriate ICTs (which meet the needs and expectations for that community) can be introduced (Pade-Khene et al., 2011). Engaging with the rural community through focus groups can contribute to the researcher's understanding of the day-to-day realities of the community. Focus groups can add value to IS research when used to explore and recognise the socio-technical nature of technology in rural communities (Stahl et al., 2011).

### Issues to Consider in Community-based Settings

Although researchers see a promising role for focus groups as a research tool in community-based research, there are a number of issues that could potentially lead to methodological difficulties in cross-cultural contexts if the traditional focus group approach is applied as is (Alexander & Korpela, 2012; Babbie, 2005). Researchers should be aware of roles and relationships, communication protocols and community traditions when conducting group discussions in cross-cultural settings (Strickland, 1999).

If adapted to the socio-cultural context of rural communities, focus groups is a research and data collection method that allows researchers in the Community Informatics field to engage more closely with the marginalised members of disempowered communities in a culturally sensitive and community-focused way. This approach is more likely to produce authentic and rich information *"because participants are communicating in natural ways in an environment that affirms their experience and ways of sharing information"* (Lau, Gilliland, & Anderson, 2012; Rodriguez et al., 2011:411). Using a focus group which includes all the research participants - rather than breaking up in small groups - promotes transparency. The women know that they have all received the same information. The community in which the research is being conducted as well as the research participants themselves must be able to put their own agendas on the foreground, even if it contrasts with those of the researcher.

Using focus groups in traditional rural communities can present the researcher with unique challenges, relating in particular to socio-cultural issues, the size of the focus group and language. From a socio-cultural perspective the researcher must resist the temptation to disregard different voices due to the perceived collective identity or persona of the 'rural community'. It is for this reason that, during one of the site visits, a researcher also conducted a survey amongst community members not participating in the project in order to determine what their perceptions are of the activities at the community centre. In this way other community members were given space to express their views, which allowed for a more holistic view of the project.

The focus group setting and interaction with the women were intentionally designed to affirm the women and to communicate the message that the researchers respect and value them, their experiences and their contribution. It is important that researchers are *"truly interested in and have an appreciation for participants' cultural identities and the stories being shared"* (Rodriguez et al., 2011:410).

The women expressed their appreciation for the way in which the focus groups were conducted, stating that the research team ensured that every woman's interests and needs were accommodated. The sessions were conducted in Sepedi and English.

Table 1 summarises the discussion above and reflects how the Mafarafara focus groups diverged from the generally accepted criteria for focus groups, which is often based in business and market research.

**Table 1: Comparing traditional focus groups with those conducted in Mafarafara**

The traditional focus group approach	The Mafarafara focus group approach
Focus group is small with typically 6 – 12 participants (Ferdinand et al., 2013; Kamberelis & Dimitriadis, 2013; Walden, 2012).	The number of participants in the focus groups varied according to the women's availability and ranged between 15 and 23 participants. An atmosphere of 'openness' is crucial to the success of the project. All the women must be comfortable that they have the same information, equal opportunity to express themselves, etc.
Focus group must be "homogenous strangers" with respect to a characteristic that relates to the topic being researched. Participants that do know each other must not be placed in the same group (Babbie, 2005; Ferdinand et al., 2013; Walden, 2012).	The focus groups were not homogenous as they consisted of women of different ages, levels of literacy and standing in the community. Participants did not have the same capacity to engage in the discussions. All the women in the focus group knew each other.
Carefully selected "handpicked" participants. Researcher determines the selection of the participants (Ferdinand et al., 2013; Montell, 1999; Walden, 2012).	The participants were part of a pre-existing group which met regularly at the community centre where the research was conducted. The researchers suspect that some of the participants were hand-picked by Mma C but this cannot be confirmed.
<p>The researcher sets / promotes the agenda or topic under discussion beforehand and leads the group (Alexander &amp; Korpela, 2012).</p> <p>The latitude about the degree of focus of the discussion is in the hands of the researcher (Kamberelis &amp; Dimitriadis, 2013; Montell, 1999; Walden, 2012).</p> <p>The researcher asks the questions and frames the issues of the study (Montell, 1999).</p>	<p>Although the researchers had specific items they wanted to cover, the agenda and content of the discussions were frequently influenced or set by the women. Topics that they were interested in were those they regarded as critical to their livelihood. This included information on funders, and government interventions in rural development initiatives. The researchers 'allowed' them to explore these topics before gently coaxing the discussion back to the original topic.</p> <p>The researchers remained open to the aspirations of the community, keeping in mind that the ultimate aim of the research project is the emancipation of the underprivileged women.</p>
The goal is to obtain information about a single predetermined topic (or a limited range of topics) which the researcher deems relevant to the research question (Ferdinand et al., 2013; Kritzinger, 1994; Walden, 2012).	The research team and the women co-created knowledge rather than tried to uncover the "singular truth" about a research question (Rodriguez et al., 2011:402).
Focus groups must be conducted in a formal research setting.	Focus groups were conducted in a mud and thatch building which serves as a community centre, on the community centre's veranda or in a covered shelter opposite the centre. The community centre 'belongs' to the women. One of their own holds the keys to the building. The centre is used as a place where the women meet and engage in various activities.
Research participants must share specific experiences.	The women shared the same socio-cultural environment and daily challenges. They were all also part of a group which regularly used the community centre for various activities.
Focus is on determining what each individual really thinks, their actual beliefs and activities (Montell, 1999).	In a traditional rural community the focus is on the community as a whole. The focus is typically not on the individual and her / his thoughts, beliefs and activities.

The aim of focus groups is not to make decisions (Ferdinand et al., 2013).	The researchers used focus groups to share information about the project, obtain permission from the community to conduct the research, and for the ethics / informed consent process.  The aim of the focus groups was to elicit information from the group while respecting the different responses. Participants were not expected to have the same points of view.
The aim of focus groups is not to answer participants' questions (Babbie, 2005; Ferdinand et al., 2013; Montell, 1999).	The researchers went out of their way to answer participants' questions, even if the questions did not relate directly to the topic of the focus group or the research project. Quite a number of questions were related to government and donor funded development projects.
The aim of focus groups is not to reach consensus (Babbie, 2005; Ferdinand et al., 2013; Montell, 1999).	This project is inherently about researching consensus on the design of an ICT platform for use by rural middle-aged women.  Focus groups were also used to reach consensus whether the research project could be conducted in the community.

### Synthesis

It is evident from the above table that the difference between the Mafarafara- and traditional focus groups are mainly:

1. Size and composition of the focus group;
2. The active participation of the research participants in setting the agenda, and directing the flow of the conversation;
3. The flexibility in the way in which the focus groups were conducted; and
4. The use of focus groups to make decisions and to reach consensus rather than merely as a data gathering tool.

### CONCLUSION

When implementing ICT projects in rural South African communities it is important that researchers honour the local socio-cultural context. With research participants who have been and still are discriminated against by remnants of the apartheid regime and traditional power structures, it is important that the researcher interacts with the elderly rural women such that the unequal power relationship is equalised as much as possible. When conducting focus groups in rural communities it is important that the researcher realises that (s)he is on the community's "turf". In this project this realisation necessitated adopting a non-traditional approach to focus groups, notably with respect to focus group size, the active role that the research participants played in setting the agenda and guiding the research, and the use of the focus groups to answer questions and to reach consensus. To this end, the paper compares how focus groups adapted for a rural community differ from the conventional focus group which has its origin in marketing. The case is also made that focus groups as a research method matches well with the feminist critical theory framework underlying this research project, which is aimed at working with the elderly rural women to redesign the ICT platform to meet their needs.

In the context of assisting rural women with their use of ICTs and their understanding of the potential of ICT in the information age, this paper has shown that focus group methods have a special contribution to make in a number of areas. The first area is building deep mutual trust between the researchers and the women. In addition to the adapted structure of the focus groups, researchers who were fluent in Sepedi and stayed in the community for the week of the site visits also contributed to the depth of the relationship. Secondly, the open and frank focus group discussions helped the researchers build an in-depth understanding of the needs of the women as a collective. The focus group discussions encouraged joint exploration of what the ICT intervention could offer the community as a whole, and how the women themselves could benefit by providing a safe environment for all women to contribute to the design and improvement of the ICT platform. These three factors contributed to the design of an ICT platform which will better meet the needs of the women. It also contributed to more effective use than would have been the case had the researchers designed the ICT platform in the lab using their own imagined understanding of what the women would need. The training on how to use the ICT platform was also done in groups. The interaction between the women became quite vocal as they 'dared' one another to try something new. During the focus group activities the women became more confident in what they themselves can achieve.

The following comments summarise the women's opinion of the ICT platform:

"Oh! I can't wait for this thing to be connected. We are going to be educated; but why? When we are already in our twilight years?"

"We are now going to start competing with each other on who will learn faster than the other."

"You don't know how excited we are with this project. Now that the DD is here, there's no turning back. We are going to be successful. We can't be defeated by something that cannot talk."

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