Using interviews effectively in Community Informatics

Researching with Communities: Grounded perspectives on engaging communities in research

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One of the most important techniques for finding out people's views and knowledge in a research project is though good interviewing. Even if you are caught up with the necessity of rushing to meet community or funding deadlines, you should put great effort into ensuring that your preparation for the interview, the actual interview, and the interview write-up are of a high quality. What you should aim for is an interview record that has integrity and cannot be challenged as erroneous or misleading. Information that is of low quality will always be problematic, whether you use it for community work or for high-level research purposes. High-quality interviews will be valuable for their immediate and future use.

This chapter reviews practical techniques concerning the preparation for and conduct of the interview, management of the electronic files, as well as the use of Grounded Theory for data management and analysis, linked to collaborative approaches to research with a community.

Why interview?

Community Informatics is a type of social practice that adapts Information and Communication Technologies to people's and community's needs (Stoecker & Stillman 2007) and as such, it uses many research techniques familiar from other forms of social research.

How to study a 'community' —primarily through the window of the knowledge held by its people and institutions—has long been a controversial and intractable issue in sociology, 'because there is no way to disentangle the research method from the investigator himself (sic)' (Vidich, Bensman et al., 1970, p.345). Thus, the difficulty of agreeing just what constitutes a community and how people interpret that community impacts upon any study of human action, including the study of the relationship between people and technology. Stoecker has observed that in Community Informatics, as with many other sorts of community work, 'community' is most often a community-of-interest of people with a problem to solve. And within such communities, we work with a huge variety of formal and informal community-based organisations that serve the interests of different

communities (such as people with addiction problems, nursing mothers, a bowling club, or a community house) (Stoecker, 2005). Frequently too, we work with other stakeholders, such as funders and governments who have a direct interest in a Community Informatics project.

Peter Day and Doug Schuler, representing a mix of theory and practice from either side of the Atlantic, thus suggest that:

Community and voluntary sector groups and organizations form the bedrock of community life through the planning, organization, provision, and support of community activities and services. Although usually underresourced and over-stretched the community and voluntary sector play a significant role in building and sustaining community (Schuler & Day 2004, p.13).

Steps have been taken, again by Day and others such as Stoecker, with an explicit social justice ⁴³ bent (Stoecker 2005), to develop participative, and overwhelmingly qualitative techniques for investigating and working with communities in a structured way, such as co-opting members of communities to help form research questions and manage research data (Stoecker &Stillman 2006).

In such forms of community-based research, the interview, alongside the focus group or workshop is one of the most important and efficient ways to gather detailed individual opinions from people who collectively, help constitute different communities, or who have relationships with different communities. The findings from interviews can also be used in many different ways, such as reporting to public meetings, in policy development and advocacy, or in the preparation of reports and scholarly materials such as journal articles.

Who should be interviewed?

Whether interviews are conducted by the researcher alone or in conjunction with members of the community and its stakeholders, there are some core considerations to be taken into account. One obvious question is: who to interview? At times, there is little choice because the researcher make be directed as part of a consultancy, to interview particular people. At other times, the skill of the researcher will be required to select—or at least locate and seek the cooperation of—some type of sample of organisations or people in

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What is social justice? 'From the perspective of working to remove disadvantage, it is social justice is what faces you in the morning. It is awakening in a house with adequate water supply, cooking facilities and sanitation. It is the ability to nourish your children and send them to school where their education not only equips them for employment but reinforces their knowledge and understanding of their cultural inheritance. It is the prospect of genuine employment and good health: a life of choices and opportunity, free from discrimination' (Dodson 1993).

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Additionally, the relationship of the interviewee to the community also needs to be considered. For example, when a sensitive issue is being researched, is it appropriate that community members close to the project in the research are also privy to personal interview data from those they know, even if personal attributions can be stripped from the interview transcript? How dispassionately can they, if they are responsible for the direction of a project, consider interview data about sensitive issues which directly affect them? Such issues need to be carefully considered in developing your research plan and negotiated with a community reference group.

There is also the danger of an interview being seen as means of exploiting community knowledge. Smith, a MIXI researcher, argues that argues that on a practical level, even with the best of intentions, 'research within late-modern and late-colonial conditions continues relentlessly and brings with it a new wave of exploration, discovery, exploitation and appropriation. Researchers enter communities armed with goodwill in their front pockets and patents in their back pockets...no matter how appalling their behaviours, how insensitive and offensive their personal actions may be, their acts and intentions are always justified as being "for the good of mankind" (Smith, 1999, p.24).

Community Informatics often works with disadvantaged communities, indigenous or otherwise, and we consequently need to guard against our own forms of colonisation. We need to be prepared to allow communities to develop research at their own pace and through their own processes of governance, in conjunction with outsiders so that far more equitable power relations are established. This includes the development of relationships of reciprocity and trust that allow for productive interviews. This means that in some circumstances, the notion of the 'individual' is subsumed to a collective viewpoint or expression, and that expectations about the utility of interviews will have to be somewhat modified in some circumstances (Stillman & Craig 2006).

Furthermore, ethical and practical issues must be considered for situations which require the interpretive skills of a third person to engage in a conversation with an interviewee, for example, through an interpreter. You should be prepared to spend some time investigating and preparing for ethical, cross-cultural issues that affect both you and the interviewee. Ethics Guides or Statements exist for many disciplines and many of us are additionally guided by our own university or institutional ethics requirements for informed consent and the safe storage of data which provide another barrier against the exploitation of research subjects.

Interview Preparation

In Community Informatics, the intention of research is find out information that will ultimately solve a community's information or technology issues. However, discussing social-technical issues is not easy, given how complex the issues can be, and how many people struggle with what they see as 'technical' terminology or concepts. Because of this, an interview should not be gone into 'cold', but rather, careful thought be given to how you will draw out the interviewee's insights and knowledge for the problems that you are investigating. There is no reason why your interaction with interviewees cannot be made as personalised, if professional, as possible, so that a mutually empathetic relationship is established. This can also lead to more fruitful long-term relationships in a community. It consequently makes sense to try to find out something about the person you are interviewing beforehand, particularly their exposure to different ICTs, before the interview and the organisation with which he or she is involved. There is no reason in fact, as part of your overall methods, that you should not meet that person at another event (such as a committee meeting), and introduce yourself. In any case, it is likely that if you are working with a university, you will be required to send interviewees Ethics Forms, and this can be another the opportunity to introduce yourself and 'break the ice'.

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Questions used in a community-based research project can also be developed in consultation with a community reference group itself, and this can also has also help secure their active engagement with the project and co-ownership of the research process. In particular, as has already been suggested, care needs to be taken in developing interviews which discuss ICTs: not everyone has the same degree of knowledge of technical issues, and jargon should be avoided. For example, in negotiating a series of small evaluations of ICT community needs of small organisations, I have suggested to management that I interview each staff member, board member, and a number of service network stakeholders, in order to get a rounded picture of the community organisations' needs and ICT culture. Additionally, it may be that there is an annual report of other information available, and this can be matched to some of the questions you wish to ask.

Furthermore, in posing interview questions, the interviewer needs to develop manageable questions which can be answered by an interviewee. Given the nature of human conversation, they need to be short, clear and simple, and devoid of jargon. Developing such questions takes care, and your questions tested before going into the field (Minichiello, 1995). In fact, it is likely that you can only discuss about 10 topics or questions at the most in a semi-structured interview, particularly if you are exploring issues on which depth opinions or attitudes as sought. Furthermore, as data accumulates and you find very similar answers to questions as you conduct interviews, questions can be dropped and modified, as new questions arise from the substance of the interview data. Since you are not conducting rigorous quantitative research, there is no reason to continue asking about questions or topics that are saturated with the same answer, unless you wish to quantify that answer (but remember that unless you have a scientific sample, your quantification is only provisional and indicative of a trend).

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Interview Environment

Interviews, if possible, should be conducted in a quiet and private space known to the interviewee. In some situations this may be very difficult to achieve, for example, in openplan offices, or where private space is at a premium. Whatever the circumstances, you should try to find somewhere where there is minimal interference from external noise or distractions (turn off mobile phones), and a café, attractive as it may be, is not a private place! Because so much of interviewing is also about being aware of non-verbal cues such as body gestures (also called the 'silent language' (Hall, 1959)), interviewing by phone, except for the most factual of information, can be problematic. Personal presence can also reduce any fears of being interviewed. It could well be that people's confidence and attention spans cannot survive a phone interview with a stranger. However, on occasion, I have conducted phone interviews with people whom I have met beforehand, including international interviews.

The Interview

What is an interview?

Interviews are not an ordinary way of talking with someone, though we seek to make the discussion as comfortable as possible. The interview is a special type of conservation (which may be structured or unstructured) to obtain freely-offered information (Minichiello, 1995). Because of this, and the fact that the interviewer and interviewee have only a short amount of time to establish rapport, it can be a challenge to interview a relative stranger. It can also be quite confronting for an interviewee if he or she is not used to such forms of conversation, or with whom there are substantial cultural (and linguistic) differences that can set up barriers and misunderstandings to any form of open conversation. You also need to consider the difference between a one-on-one interview (such as that between you, as the researcher, and the person being interviewed), or an interview with several people acting as 'questioners': how appropriate is it to set in place a three-way conversation, particularly when the dynamics of three people (who may be strangers to each other), can come into play? In community-based research, such as that which seeks to directly co-opt community members as research partners, how appropriate is it to pass on the responsibility of interviews to other members of the community? The circumstances may not always be appropriate, such as when more sensitive opinions are being sought. Such questions need to be carefully considered before you begin the interview.

How long should an interview be? If you wish to develop long-term project relationships, it is particularly important that you accommodate to interview's needs, and not the other way round. There is a real danger of letting an interview drag on when there is nothing more to be gained by it. 45 minutes is probably the limit for many people. I have been in interview situations where if I had been in charge, I would have terminated the interview quite early, when it became clear that there was nothing to be gained by further questions.

In other situations, when it is clear that the interviewee has changed his or her mind about being interviewed, the session should be politely finished. Some people are much more confident in explaining themselves and can be highly articulate, while others have great problems in explaining things. But as an interviewer, you must accept people as they are, and accept that some interviews will be much richer than others. Your expectations will not always be met. People's time is also valuable, and it is also important to keep their interest so that formulaic or non-committal responses are avoided. It is also is very important to be aware of any cues such as shuffling of feet or staring out the window to indicate that boredom or frustration are setting in.

Conducting and Recording an interview

Traditionally, interviewers have written down a verbatim account of what they have heard, either during or directly after the interview. However, it is obvious that the accuracy of the account that is put on paper depends on a high degree of skill by the interviewer to listen, talk, and write (much of Sigmund Freud's work, for example, was based on relatively few, but deeply explored and interpreted interviews). And of course, with all three processes going on, there is also a high degree of filtering and interpretation.

This is where newer technology can be of great assistance. Different types of tape recorder have been around since the 1930s, but it is only recently, with very small and portable digital recorders, that the recording technology has become relatively unobtrusive. I have also been involved in interviews where instead of a data recorder, a small video recorder has been used. This was held in the interviewer's hand or placed in a corner (on a shelf for example), but not refocused or otherwise controlled during the interview so as to have minimal interference on the conduct of the interview. The rationale for using the video was to capture non-verbal language and additionally, to video additional materials that were used in this project (drawings and so on), as well as capture the local environment. The use of video also requires a further ethical consideration: is the person going to be identified in any further use of the video, or is the video just for recording their views and environment? This has to be clarified with the interviewee. Other options are also becoming available. Social software such as Skype now gives the researcher the opportunity to conduct (and record) interviews at a distance through a computer, but all the provisos already discussed apply, and as well, if the connection is poor, or disconnection occurs, the flow of an interview will be affected. Whether or not you wish to use a video link is also dependent on bandwidth and whether or not this will be more of a hindrance than a help.

Whatever brand of digital recorder you purchase (and more and more mp3 players and mobile phones have this capacity), it should be one that can make high-quality recordings of at least an hour long and be downloaded to your computer. You should also practice with a colleague or friend, and know how to use the recorder without fumbling. And always have fresh batteries in the recorder before the interview starts, pencils and notebooks. Nothing interferes with an interview like fumbling to change batteries. And also make sure that the recorder has sufficient memory left (with forgotten interviews left on the recorder).

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Simply placing a data recorder on a table and then commencing an interview does not engender a positive atmosphere. You should make clear before hand that you wish to use a recorder as a way of writing an accurate account of the interview through being able to transcribe it post-interview and get the interviewee's permission to record beforehand, for example, in a letter of introduction. In addition, you should offer to share the transcription or account of the interview when it is written up with the interviewee, with the offer to let them comment on it before it is otherwise used. It may also be the case that the interview will be only used in an anonymous fashion, but this depends on the kind of research you are doing and the ethics requirements you are working with. In fact, people tend to be more open if they know that their views are going to be used anonymously as part of an aggregate report.

In my experience, after a moment or two, most interviewees lose their hesitation about being recorded. Setting the recorder on a table unobtrusively as possible (for example, next to a bag), helps with this. Interviewers need to remember that the focus is upon the person being spoken with, not themselves, and commenting on what is being said, or talking over the person both interrupt the flow of that the person has to offer as well as interfering with the quality of recording. It is surprising how hard it is to learn to not talk over another person, and you may wish to consider the effect this has when several people are involved in an interview. It takes some effort to resist verbal comments, promptings, and other 'noise' such as murmurs of agreement.

However, despite the usefulness of the recording, there is nothing like *listening* very carefully to what is being said, and directly after the interview, writing up an account of what seemed important to you to clarify later on. Over-reliance on the recording technology, rather than careful listening may make for a deficient account. It is surprising how quickly details can be forgotten if they are not written down.

Managing Interview Data

Data Recorders

The use of data recorders in interviewing means that the interviewer may need to acquire new skills in data management. In the past, before recorders, the interviewer's notes were used to write an interview account with reconstructed quotations and commentary, and this would be managed with other interview data to help with the research question. In writing up, for example, 20 or 20 interviews, this was already a substantial task. Today, however, being able to have a reasonably accurate transcription of an interview means that the richer has a much larger and potentially richer amount of data to work with, but converting such a large amount of information from voice data to an electronic text file can be a very large and daunting task. Twenty interviews can result in over 100 pages of text. Of course, it is possible that recorded interviews can be sent out to a transcription service,

but the accuracy of the transcription should be carefully checked, and as well, the text annotated in the way described below. If you choose to record with a video recorder, there are similar issues around conversion of the video interview into a usable computer format separate to the actual tape. It can be very consuming, requires the right sort of software and is tricky for a novice to do. It also requires a computer with the memory to work with video manipulation, including the capacity to burn DVDs.

It is also important to distinguish in any discussion of this stage between speech recognition software and transcription software. Speech recognition software, in certain circumstances, provides for a high degree of accuracy when the recording played at the same time as the software. This is particularly the case when the software has been 'trained' to record one person's voice with a particular vocabulary, for example, a doctor dictating a medical report in a predetermined format. However, such software is not appropriate for free-ranging conversations between two people, where there are two different voices, vocabularies, and speeds of talking involved.

Furthermore, because this type of interview is not involved in the analysis of the sounds or speech, manipulating the quality of the recording to enhance the accuracy of the transcription (to remove extraneous noise) is not a methodological problem. However, if recordings are also being made for historical or audio broadcast purposes, the researcher should consider preserving an original, authentic, unedited audio file with backups in case of damage or loss.

Transcription

It is useful to go over the details of the upload and transcription process in some detail, in order to show what skills are necessary. In this case, I discuss the use of Sony data recorder. Files were uploaded from my data recorder to a PC and I use the free program, Express Scribe (www.nch.com.au/scribe). While it is possible to use the proprietary software that comes with the Sony recorder (and other brands), my colleagues and I have found Express Scribe, which is widely used as a transcription software is law and medicine very easy to use particularly because its 'Global' keystrokes can be run 'under' a word processing package such as Microsoft Word. The software that comes with data recorders I have used does not have this useful feature. Global keys allow the interviewer or other staff to type and control the flow of the recording (play, start, stop, fast, slow, rewind and so on) without having to move out of the Word window. This is a great time saver. Express Scribe also allows for a certain degree of noise scrubbing in its options for play back settings for the tone frequency which enhanced the accuracy of where there is background interference such as airconditioning. I have also found it easiest so listen to a recording through good speakers rather than headphones, though this may not be your preference.

Depending on the type of data recorder used, Express Scribe may or may not load files automatically, but different options can be set. If you are short of storage space, converting files into an Open Source format such as ogg vorbis (www.vorbis.com/) will save space in

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In transcription, it is important to try to be as efficient as possible, given the many hours that will be spent doing it. An average of 5-8 hours will probably be spent on transcription of an hour-long interview if a high degree of accuracy is required. However, may not be necessary to transcribe the interviewer's questions and in some circumstances, the interviewee's remarks can be turned into a précis with only very pertinent remarks being transcribed verbatim. You can choose a different font to distinguish between the interviewer and interviewee, and always distinguish the two with a new paragraph for clarity.

The informants' words and colloquialisms should be transcribed verbatim—to the best of your ability—including indications and hesitations. Occasionally, however, clearly stumbles, repetitions, or prompts can be deleted (indicated by an ellipsis ...), and where clearly irrelevant material is introduced this can be summarised or an ellipsis inserted. Identifiers such as personal names and place names can be replaced by an em dash (—) in the de-identified version of the transcript.

Adding commentary to a transcription

There are some very useful features in Microsoft Word (and similar features can be adapted in other word processing packages) that can be used to develop accurate citation of text and commentary on the interview. First is the continuous line count feature in Word. In Word, go to 'File> Page Setup> Layout> Line Numbers'. This is an invaluable tool when it comes to cross-referencing interview data. (The same feature can be made operational in Open Office Writer by going to Tools> Line Numbering). Second, the Comments field in Word can also be very useful to add in your insights and (a similar function for Notes can be used in Open Office Writer). Care should be taken, as with any editing, not to forward your Notes or Comments to your interviewee unless you intend this to be the case. These can be removed from the version you send out, our make an Adobe Acrobat 'pdf file. Comments and Notes can also be turned on and off for printing when managing your data. You may also find it useful to put a double space or 1.5 spaces between each line so that it is easy to write in comments, underline and so on. Spacing also helps with the cutting up of pages (see below).

Making sense out of the interview data through Grounded Theory

Once the transcription has been performed, checked, and sent to the interviewee for comment, you need to be able to manage the many pages of interview data. How you proceed in managing and interpreting the data is dependent upon your research purpose and the time and personnel resources that are available: obviously, a high-level research project such as a PhD demands much more close attention to accuracy and detail than a small project (for example, in evaluating the outcomes of a local Community Informatics project) with a very limited time frame. Whatever the particular circumstances, some discipline is required in order to make structured and useful sense of what you have. I have found that the Grounded Theory approach is intuitive and logical for many people and in my own experience it has been easy to show people how to use it.

Grounded Theory aims to generate explanations and theories and—as the name suggests—from bottom-up and this is well described in the classic work by Glaser and Straus (1967) and further theoretical perspectives are discussed in such works as that by Lincoln and Guba (1985). Some theorists also argue that because of its bottom up approach, it is ideally suited to a social justice orientation (Charmaz, 2001) and it is well suited for group work techniques.

For anyone moving from the theoretical to the practical application of a qualitative research methodology, I would advise getting to know a methodology such as Grounded Theory—through the tried and true method of manual card sorting (see below)—before moving onto more complex software tools such as Nvivo (www.qsr.com.au). Nvivo is a software package which is used to identify patterns and themes in qualitative data, but of course, it does not replace human, interpretive thought, so important in qualitative work. Furthermore, its utility for group work in a community setting is obviously limited, since it takes a high degree of skill to use and not everyone may have this sort of computer skill and with a focus on a computer screen, group communication can be difficult. Additionally, Nvivo is not cheap software: at least \$US200 for students, and \$US500 for institutions. Unless the researcher has institutional affiliation, this is an investment of funds which could be used elsewhere.

How Grounded Theory Works: the Constant Comparative Method

The Constant Comparative method takes units or slices of data, and as the name suggests, sets in place a process of constant comparison and checking. The actual physical act of annotating interviews, developing cards, sorting piles, and seeing an outcome develop can be a rich, if exhausting kinaesthetic experience that can be quite satisfying when the results are seen. The following steps can be undertaken:

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data, and as the name suggests, the actual physical act of eng an outcome develop can ure satisfying when the results

Using interviews effectively in Community Informatics Two copies of each interview should be made before hand-annotation commences. Only print on one side of the page. One set of interviews (kept in an arch file) can be viewed as a reference copy of the original text (and annotations made as necessary), and the other set of copies are the ones used in the coding and sorting exercises.

Using the second set of interviews, transcriptions should be carefully re-read, and highlighting and underlining in red or other colours used to indicate particularly interesting passages (some form of coding that makes sense to you could also be implemented). It is also likely that upon reading many interviews certain overarching themes or issues will become apparent: it is worth writing up a memo about these with references to salient passages in the interviews.

When confident that all the interviews have been annotated or marked for significant passages, the time has come to actually begin to sort, categorise and code the data. The marked-up relevant units (or data slices), are cut out and pasted onto large index cards 44, together with additional handwritten annotations that come to mind. This is the sort of task that a collaborative group could do together, to cut down the time taken and to get familiar with issues.

The goal is to make each card only contain one general concept or piece of data, 'interpretable in the absence of any additional information, other than a broad understanding of the context in which the inquiry is carried out' (Lincoln and Guba, 1985, p.345). Each card should be numbered according to the interview (assuming that they have also been anonymised), but also given a general record number. For example, card no. 60 could contain text from interview 7, lines: 111-123⁴⁵. Keywords, representing what appeared to be emergent categories, and some notes about properties, as well as theoretical hunches can also be written on the cards, yellow sticky notes, or on memo pads. It is likely that several hundred cards will be generated from, for example, 20 interviews. It does not matter at this stage if many answers or comments appear to be the same (or different)—the fact that there are so many or so few is indicative of some trend in the interviews that have

Cards should be then re-read and sorted into what appeared to be emerging common categories on the basis of content and suggested key words. An overall 'label' card can be created, with some propositions or statement on it describing what has been found as characteristic of each emerging category of data. Units of data can be compared again, and if necessary moved to a different pile. Obvious duplicates can be removed, though their frequency should be noted as they indicate a particular trend. Constant comparison of data

In the literature this process is nicknamed the 3" x 5" card shuffle, though in my case, it is the 127 mm x203mm (5" x 8"), the half-page length and width of an A4 page.

Having a card with an exact reference will make it very easy, at a later stage, to copy and paste interview text or comments into another format (but the line numbering won't be copied over into the new text, so be sure

creates a memory for the researcher or researchers (at least for the length of the coding session) of the many possibilities offered by the data, but at the same time, given the depth of information (number of cards), and the process of comparison (see below), the test of trustworthiness and validity—also called 'confirmability' by Lincoln and Guba—is solved. There is a strong, triangulated, documented audit trail consisting of the 'data slices' or 'units', memos, and other written annotations that can be used, if necessary, in a form of reverse engineering to demonstrate how conclusions are reached (Lincoln & Guba, 1985, p.301ff and Appendix A).

Practice makes perfect, and I have noticed that the process of categorisation and coding takes far less time than the first time I did it. It is likely that at first there will be many separate piles, but you should aim to be parsimonious, so that a smaller number of manageable themes and their concepts or theories are the final result. Piles of annotated cards, the essence of many hours of interviews and thinking about them, and their accompanying memos, are the stuff upon which to basis a research report whether it is a report for local consumption, or more complex academic research. A key principle is at work here—ideas emerge *from the data*, rather than being forced *into the data*. This principle, in fact, is something similar to what is aimed for Community Informatics: outcomes that are in accord with the community, rather than being pushed onto a community. In a group setting, collaborative techniques such as knowledge matrix, in which issues and ideas are pasted or written onto a large sheet of paper or board, with references to specific citations in the interviews, could be used to facilitate this flow of ideas (Stillman, 2005).

Conclusions

The conduct of research for Community Informatics, including the conduct of the interview, cannot be considered in isolation from well-established methodologies which can be fruitfully adopted from the social sciences. It is very important to take the issue of developing good interviewing methodologies seriously, rather than as an add-on to projects, particularly when personal data may be the most critical data that you are looking for. Technical aids, such as the use of data recorders and software are very useful and practical tools, but they cannot substitute for the hard work involved in mining your data through careful work. Furthermore close attention to the management of data will result in rich findings, and the use of Grounded Theory is suggested as a practical technique, particularly because it can be adapted for group work if the circumstances are appropriate.

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