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Grounded Theory and Ethnography Combined: a Methodology to Study Children's Interactions on Children's Mobile Libraries

Introduction

The purpose of this article is to examine the validity and effectiveness of the dual methodology which was used for a PhD study that was undertaken at Loughborough University. The reasons for the choice of combining Grounded Theory with Ethnography and whether that methodological strategy successfully provided a clear answer to the research question will be explored and explained, therefore generating the question for this article: was grounded theory with ethnography the correct choice of methodology to discover the influence of children's mobile libraries (CMLs) on children's reading skills? Using a combination of two methodologies that both have non-traditional and more informal paths of study and recorded outcomes meant that the resulting PhD thesis as well as this article do not follow the conventional structure.

It is well known that data collection and analysis methods directly affect the successful outcome of any research. This means that choosing the right methodology is the most important decision for researchers. Parlett and Hamilton (1976) stated that "The problem defines the methods used, not vice versa" meaning that the nature of an enquiry dictates the methods of finding a clear answer because an inappropriate method would give a biased or inconclusive answer. For some studies a single methodology does not satisfactorily provide a balanced conclusion and aspects of more than one methodology have to be applied to the data gathering and analysis in order to produce a satisfactory, precise answer to a research question. The CML study needed a methodology which could answer whether children's mobile libraries in the UK had any influence the development of a reading culture and children's reading skills (Bamkin, 2011).

For the study, a range of methodologies were explored and two appeared to be the right choice – these were grounded theory and ethnography. The range of the eliminated methodologies and the reasoning for their unsuitability for the CML project will be discussed below. The researcher learnt that ethnography and grounded theory have been

successfully combined in other studies. For example, Beautyman and Shenton (2009) used ethnographic data collection with grounded theory data analysis in order to answer the question “When does an information need stimulate a school inspired want?” Ethnography alone would have produced an insider’s account of children’s information wants. However, through the use of grounded theory data analysis Beautyman and Shenton (2009) were able to pin-point factors within the school system that could be used by teachers to stimulate and support children’s information wants. Similarly, Pettigrew (2000) used ethnographic data collection with grounded theory analysis to study beer consumption in Australia. Pettigrew (2000) states that “the study provided both a description of the ways in which beer is consumed in the lives of everyday Australians and a contribution to consumer behaviour theory.” Using the two methodologies provided a greater level of detail than either grounded theory or ethnography alone. It was hoped that combining grounded theory and ethnography for the CML study would similarly provide a detailed answer to its research question. A summary of literature about the methodologies, their philosophical positions and of their use with the study of children follows in the next section to demonstrate the logical reasoning for combining grounded theory and ethnography.

Literature review

A detailed comparison of ethnography and grounded theory drawn from literature about the two methodologies shows their differences, their similarities and demonstrates their compatibility when used as a dual methodology. Qualitative research methodologies usually stem from a particular philosophical outlook. For example, Williamson (2006) considers that ethnography follows constructivist philosophical principals because ethnographic researchers gather their data by “studying people in their everyday contexts” or by “participating in social interactions with them” in order to understand their world. Constructivist philosophy takes the stance that reality, truth, is a construction of an individual’s view of their world and that constructivist research accepts the truth which is generated between the researcher and the participant (Williamson, 2006). Charmaz (2006) believes that grounded theory naturally fits with a constructivist philosophy because that can also be used to understand people’s thoughts and behaviour. It was initially devised as a set of “explicit procedures for qualitative data analysis” in order to “construct useful middle range theories from the data” (Charmaz and Mitchell, 2001).

Robson (2002) describes grounded theory as a general method that exploits procedures and is systematic and co-ordinated. Charmaz and Mitchell (2001) explain that grounded theory was based on the pragmatic philosophy of using practical observation to explore the meaning of concepts. Ethnography and grounded theory share the constructivist principle that truth and reality relate to the perceptions of an individual which means that, although some of the practical mechanics of each methodology differ, they form a potent methodology when used in combination. In the case of the CML study the researcher blended grounded theory with ethnography because in order to examine, interpret and find meaning in the actions, interactions and realities of children and adults on a CML their individual perceptions needed to be recorded, examined and compared.

Grounded theory was developed as a research tool by Strauss and Glaser and was initially devised as a set of “explicit procedures for qualitative data analysis” in order to “construct useful middle range theories from the data” (Charmaz and Mitchell, 2001). Strauss and Glaser eventually disagreed about the theory’s progress and ceased collaboration, each developing their own individual strands of the theory. Strauss introduced layers of analytical codes to lead to one theory as an understanding and explanation of the phenomenon, whereas Glaser disagreed that such a rigorous coding structure was necessary and that a number of smaller theories about aspects of the research phenomena gave sufficient academic insight into a concept (Charmaz, 2006). There are therefore two schools of thought on the dogma of grounded theory, with rigid procedures in one camp, but more flexible guidelines for researchers in the other. The original aspect of grounded theory was selected to combine with ethnography for the CML study because a more flexible approach could be adjusted to work with another methodology and useful middle range theories were sufficient to answer the research question.

Fetterman (2010) describes ethnography as a qualitative method that is applied to understand the nature of a research problem, theory or model. As with grounded theory, ethnography has evolved and diversified since its original development from techniques that were used by anthropologists to study the daily lives and customs of indigenous people. Ethnography has since been modified to suit the purposes and situation of a variety of types of research. For example, Hunter (2014) writes of variations of the use of ethnography to understand urban groups in America. It is accepted that the researcher

would collect data by spending all their time in the research setting, “the field”, until they considered that they had sufficient data for their purpose. Data recording takes the form of intensely detailed notes termed as “thick description” which are written as observed events in the field (James, 2001). The data are then analysed when the researcher has left the field and a narrative is written (Charmaz and Mitchell, 2001).

Goulding (2005) reports that mixing grounded theory with other methodologies was disapproved of by grounded theory purists, but has now become accepted as valid.

Pettigrew (2000) considers that grounded theory and ethnography are “highly compatible” partly due to their similarity and partly due to their difference: grounded theory formalises and extends “the limited theoretical component of ethnography” (Pettigrew, 2000).

Grounded theory and ethnography have been used in varying degrees of combination by researchers who have written about, and commented on, the experience. Charmaz and Mitchell (2001) have written about the benefits of integrating the structured approach of grounded theory into essentially ethnographic studies. They espouse the concept that, used together, grounded theory and ethnography can form a cohesive and effective methodology. Charmaz and Mitchell (2001) consider that, when the constraints and focus of grounded theory techniques are used with ethnography, it forms a flexible strategy for collecting and analysing data and ensures that field work is focused and that astute analysis is produced.

Similarly, when the role is reversed the use of ethnographic methods in a grounded theory methodology can be beneficial by using ethnographic sensibilities: appreciation and knowledge of the context, sensitivity to unstated and unrecognised meanings, awareness of layers in language. Ethnographic methods can prompt grounded theory to go deeper into the studied phenomena and to understand the experience as their subjects live it, not simply as they talk about it. It is the difference of being an objective observer and of gaining insight into other lives (Charmaz and Mitchell, 2001).

Ethnography and grounded theory studies begin with the same a posteriori principle that truth is found through experience (Pickard, 2007). Neither method attempts to prove a pre-conceived theory and are therefore considered effective in the analysis of new areas to “seek insight” and provide an understanding of a phenomenon, which can then “guide later research” (Robson, 2002). This compatibility extends to the attitude of the researcher as

they begin to gather data. An ethnographer is advised to enter the field with an “Open mind, not an empty head” (Fetterman, 2010) which means that the researcher should hold the objective view that the outcome of the research can be open ended (Hammersley and Atkinson, 2007). Charmaz and Mitchell (2001) use the term a “suspension of disbelief” to describe such openness of mind to the consequences of the research process. This precept is also present in grounded theory (Pickard, 2007) which means that theories are allowed to develop and change as research progresses (Charmaz and Mitchell, 2001). The proponents of both grounded theory and of ethnography realise that each researcher has some background knowledge before the research starts, and instead of denying any effect of prior experience, the skills and knowledge of the researcher are acknowledged and put to use as a research instrument “Par Excellence” (Hammersley and Atkinson, 2007, Charmaz, 2006).

Both grounded theory and ethnography seek to understand different people’s perceptions and other realities, seeing events and actions through the eyes of the participants (Fetterman 2010, Charmaz 2006). Both methodologies incorporate the understanding that the presence of a researcher can affect the world being researched (Hammersley and Atkinson, 2007) and that participants may give information which they assume would please the researcher (Charmaz and Mitchell, 2001) but each methodology differs in their mechanism to prevent bias. Ethnographic research requires the lengthy entrenchment of researchers in a research setting so that they become such a common feature of the participants’ world that the participants revert to their usual behaviour (Fetterman, 2010). Grounded theory encourages reflexivity when analysing data to check for events and reactions that may have happened due to the presence of the researcher (Charmaz, 2006). Therefore a grounded theory study is more appropriate for a study with time constraints.

Grounded theory analyses and compares processes across a range of research settings (Charmaz, 2006): it acutely studies one thing in many places. Charmaz and Mitchell (2001) consider that observing in great depth one aspect of a phenomenon gives control over the research process. Ethnography, on the other hand, is the intensive study and description of one place and its culture, social structure, people and their behaviours: the study of many things in one place (Robson, 2002). Charmaz and Mitchell (2001) interpret that intensity as a refusal to take a short cut to the findings. They consider that grounded theory develops an

objective knowledge and understanding of a phenomenon whereas ethnography can produce subjective understanding, knowledge of a phenomenon from the inside.

Selecting a sample frame for grounded theory and for ethnographic studies does not involve random sampling for research participants. Neither method is concerned with statistical representation; instead groups or individuals are targeted “who represent the important characteristics that researchers consider of interest to the study” (Williamson, 2006). It is considered that there is no need to sample multiple cases that will not contribute anything meaningful. Therefore both methods use “purposive sampling” for observations and participants (Pickard, 2007). Grounded theory approaches the possible bias caused by targeted sampling by taking new samples at appropriate intervals throughout data collection and analysis. Corbin and Strauss (2008) use the term “Theoretical Sampling” to describe this process of selecting another individual, group or location to gather further data based on the analysis of the data already gathered. Glaser and Strauss (1999) believe that the weaknesses of a theoretical sample are easy to identify and rectify by collecting extra data to test an emerging theory or to fill a data gap. Theoretical data may be gathered either by returning to the field, or by searching existing literature (Glaser and Strauss, 1999), for example, comparison with an extant theory (Charmaz and Mitchell, 2001). Ethnographic research uses “reflexivity” to counter researcher bias, the researcher needing to acknowledge, understand and respond to their in-built prejudices (Pickard, 2007).

Charmaz and Mitchell (2001) consider that ethnographic studies would benefit from the adoption of theoretical sampling. For example, whilst researching a transient group, recurrent field observations may be necessary in order to confirm ideas. “An ethnographer needs to grasp the whole phenomena” and to do so may need many iterations of sampling and data gathering, although the process may interrupt their narrative (Charmaz and Mitchell, 2001). Both grounded theory and ethnography simultaneously gather and analyse data which allows such iterations to occur. For the purpose of clarity, the processes of data collection and data analysis will be separated into different headings as follows:

Data collection

Research begins in grounded theory and in ethnography by gathering a broad spectrum of data (Hammersley and Atkinson, 1983). The original strategy of grounded theory did not stipulate any specific type of data gathering and did not limit data forms to be either

qualitative or quantitative. In fact in their book *The Discovery of Grounded Theory* (1999) Glaser and Strauss include a chapter on grounded theory analysis of quantitative data. Interviews, focus groups and observations are all possible means of data collection. However, Charmaz and Mitchell (2001) believe that an ethnographic, deep observation can enhance a grounded theory field interview for two reasons: firstly because a participant's behaviour is different from that which they report to the researcher, and secondly because there is great importance in what is not said. A characteristic feature of both methods is the "Thick description": extensive and detailed observation field notes or participant narrative accounts. These engender and record "rich data" which "reveals participants' views, feelings, intentions and actions" (Hammersley and Atkinson, 2007, Charmaz, 2006). Pettigrew (2000) considers that the intensity of ethnological field notes, which describe actions and events beyond those needed for focused grounded theory, can provide a substantial body of text that when rigorously analysed through grounded theory coding can produce "a level of detail and interpretation that is unavailable from other methodologies."

One of the major differences of grounded theory as a methodology is that literature about the phenomena under investigation is explored alongside data collection and analysis as part of the process of gaining relevant information. Glaser and Strauss (1999) use the analogy of dipping into a library for information when it is needed. This means that literature is not collated, assessed and analysed to develop concepts to guide data collection and analysis because preconceptions may interfere with spontaneous discovery of knowledge and the birth of theories (Glaser and Strauss 1999). Grounded theory uses literature as a form of data, to be gathered and analysed during the process of research (Goulding 1999) and is used to provide a theoretical framework for a study and as a support to theories as they emerge from the phenomena being researched.

According to Charmaz and Mitchell (2001) the optimum length of time spent gathering data appears to be a source of dispute between grounded theorists and ethnographers. They suggest that ethnographers consider that grounded theory researchers halt data collection too early. However, such an assumption is at odds with the grounded theory strategy of repeated sampling, returns to the field and data collection until no new data is found in each of the population subgroups (Morse 2007). This is termed "Theoretical saturation" which is the point when every theory has been verified (Charmaz, 2006) and the researcher

can finally leave the field (Flick, 2007). Ethnographic research is more concerned about the naturalism of data gathering and “telling it like it is” therefore encouraging researchers to stay in the field to follow “Hunches” (Hammersley and Atkinson, 1983). The danger of insufficient data is that there may not be enough rich data to subsequently categorise into concepts; “early saturation leads to narrow superficial categories and premature closure” (Charmaz and Mitchell, 2001). However, Miles and Huberman (1994) pragmatically state that “...data collection is inescapably a selective process that you cannot and do not “get it all ...”

On the other hand ethnographic research collects large quantities of data which is not formed into conclusions. Much of it lies “undigested” providing no fresh insight (Charmaz and Mitchell, 2001). Ethnography would benefit from the grounded theory systematic comparison of new and old data to discover a fuller picture and indicate relationship, concepts and categories (Charmaz and Mitchell, 2001). Withdrawal from the field and re-entering to collect further sets of data gives the field work a focus and prevents an ethnographer “Going Native”, allowing researchers the intellectual distance needed for objective analysis (Charmaz and Mitchell, 2001).

Analysis

Data analysis differs between grounded theory and ethnography. Fetterman (2010) claims that, in ethnography, “...analysis precedes and is concurrent with data collection”.

Grounded theorists do not begin analysis until the first batch of data is collected (Charmaz, 2006). Hammersley and Atkinson (2007) reveal that ethnographers look for the meaning in what they find, the analysis generally taking the form of notes or memos. Grounded theory analysis starts by systematically making marginal notes in field-notes or transcriptions about specific “remarks or observations”. This is the basis of the coding system (Bryman, 2001) which also involves the use of memos to reflect on findings and check for gaps in data. Strauss and Corbin (1998) explain that the purpose of grounded theory coding is to interrogate the data, answering questions such as “What is going on here?” “How do events and actions change over time?” and “How does this compare to the data collected last month?” Ethnographic analysis use memos as a technique to hold a conversation with yourself about the meaning of the text being analysed. Memos also serve a useful function

in both methods, providing a basic first draft for the eventual written outcome (Charmaz and Mitchell, 2001).

Charmaz and Mitchell (2001) report that grounded theory researchers are told to code every line and they consider that such frequent coding would not be a suitable strategy for the repetitive and highly detailed ethnographic field notes and suggest that selectively coding passages would be more appropriate. This assumes that each line has one code, but coding for grounded theory is a much freer exercise which evolves over many phases. “Initial” or “open” codes are applied to a word, sentence or paragraph to reflect actions and processes in the text being analysed. These codes are spontaneous annotations, that is, responses from the researcher to the data, which form the backbone of the research (Charmaz, 2006). Data are then abstracted and generalised through a system of gathering the codes into categories (Goulding, 1999). The categories are not derived from theoretical concepts which were devised before the data collection, but develop from the nature of the initial codes. Finally, those categories are linked to form a cohesive structure for the information (Charmaz, 2006). Patterns and concepts emerge because all the data from all observations, interviews or documents are consistently processed in this way. The emergent ideas then form theories (Charmaz and Mitchell, 2001).

In grounded theory the comparison of data from different research settings is used to illustrate commonalities and isolated events. The single events that are highlighted by comparison with data gathered from a range of research settings are not disregarded by grounded theorists but noted and included in the theory (Morse, 2007). Charmaz and Mitchell (2001) believe that data comparison is a technique that would enhance ethnography and they write about an example from an ethnographic study of a pseudo political group which also used a grounded theory technique. Data from observations of group meetings was compared and contrasted with data gathered from posters and leaflets that the group distributed. The result of the comparison provided a fuller, richer answer than looking at either the leaflets and posters or the observations of meetings on their own, because the group did not do what the leaflets and posters suggested.

Ongoing comparison leads to data being formed into categories which build into a “theoretical Framework” (Charmaz and Mitchell, 2001). Williamson (2006) notes the complexity and range of categories derived during ethnographic research and Charmaz and

Mitchell (2001) propose that using diagrams is a useful method to understand the categories and their relationship. Similarly Strauss and Corbin (1998) suggest the use of diagrams in grounded theory analysis as a visual way to map concepts.

Grouping data into conceptual categories is a vital component of both grounded theory and ethnographic analysis in order to identify patterns in data (Pickard, 2007). Charmaz and Mitchell (2001) are of the opinion that emergent pattern is used differently in ethnography and grounded theory: ethnographers build a narration about the lives of the people they study, whereas grounded theorists form theories. However, Pickard (2007) considers that ethnography also uses pattern to form theories. Charmaz and Mitchell (2001) concede that a systematic approach to data collection and analysis as conducted in grounded theory could be adopted by ethnographic research in order to move towards theoretical development.

Finally, the outcome of each method is different. Each method chooses to emphasise different aspects of constructivist research; grounded theory analysis being strong at producing theories from data (Bryman, 2001) in comparison to the descriptiveness of ethnography. Furthermore, ethnography tries to put over human experience from one set of people to another (Charmaz and Mitchell, 2001). Therefore the outcome of an ethnographic study is an “ethnography” – a written report, article or book that conveys a social or cultural point of view from the aspect of an insider (Charmaz and Mitchell, 2001, Fetterman, 2010). Charmaz and Mitchell (2001) suggest that to engage a reader’s interest, ethnographic writing should be based on conceptual categories as a story framework to organise descriptive passages.

The outcome of a grounded theory study is a “grounded theory”, an “abstract theoretical understanding of the studied experience” (Charmaz, 2006). Charmaz and Mitchell (2001) accept that grounded theory reports favour clarity and explicitness over subtlety and nuance but suggest that grounded theory’s “Quest for an elegant method” could be adapted to “writing with style and grace”.

It can be seen so far that grounded theory and ethnography share constructivist philosophy and therefore include many of the same attributes, but as the deliverable outcomes are different each method places emphasis on certain distinguishing features. Both methods

are considered valuable methods for opening up new fields of research because the open minded approach leads to emergent theories which can be verified and developed further by other means. The research is conducted in the real world of the participants, rather than under laboratory conditions, so that the researcher can seek to understand participants' constructed realities using their own understandings. Both methods use reflexivity to guard against research bias. Sampling is purposive with data collection, analysis and theory building becoming cyclical processes. Rich data is gathered by any relevant and suitable collection tool and recorded as thick description in the form of field notes and memos. Both grounded theory and ethnography look for patterns in data which may be mapped diagrammatically to aid analysis and understanding.

The timescale of each method is different. That is, it is not possible to conduct a brief ethnographic study, because entrenchment in a specific research environment for at least a year is required to ensure that the ethnographic researcher is a familiar and trusted figure to the research participants and therefore biased data can be eliminated (Pickard, 2007). Grounded theory can be conducted over a much briefer timescale, relying on researchers to swiftly develop rapport with participants (Charmaz, 2006) and to eliminate bias by interrogative coding and reflexive memos. The focus of geographic interest is also different, ethnography having a narrow focus, concentrating on conducting research in one physical area whereas grounded theory spreads a wide focus gathering data from more than one geographical location. The situation is reversed when considering the activities and incidents that are observed and the data gathered, grounded theory limits the research focus to only paying attention to and recording data essential to answer the research question, but ethnography widens the focus of gathering all possible data in that one location whether or not it initially appears to have any bearing on the research in order to include detail and depth.

It is said to be possible to use grounded theory as a method of quantitative as well as qualitative research, but ethnography is solely a qualitative method. Grounded theory coding and categorisation procedures are more defined than those for ethnography because succinct theories about the perceived realities of the research phenomenon are the intended outcome, whereas a descriptive ethnography which communicates the thoughts and feelings of participants is the end point of ethnographic research.

The combination of grounded theory and ethnography produces a penetrating and explanatory portrayal of a situation (Charmaz, 2006). That is, the description, understanding and underlying theory that can satisfactorily answer a research question. The combination of grounded theory and ethnography takes the technique of intense scrutiny and applies it to a range of similar settings, developing an inside knowledge of a shared aspect of each setting but the concentration on analysing only the relevant data allows a research question to be answered. In conclusion, grounded theory and ethnography can be combined to produce a functional dual methodology.

Ethnography, grounded theory and children's mobile libraries

Can grounded theory and ethnography explore children's worlds effectively? The above question can be answered by examining the methodology of the CML study and that of other research which investigated children and their learning using grounded theory and ethnography. The CML research project arose from the desire to find out about the effects of the daily routine of a children's mobile library on the literacy of visiting children (Bamkin, 2011). The objectives of the CML study were to:

- Investigate and analyse the reasons for taking a children's library into the community to promote a reading culture
- Identify which actions taken by CML operators promote reading and stimulate reading skills
- Explore the influence on a child's reading of visits to a children's mobile library
- Identify and report examples of best practice observed on CMLs

It was considered that the use of a constructivist research philosophy for the CML study was crucial in order to understand both the adult and child perceptions of the world of a CML. Action research and phenomenology were methods that were considered, but not ultimately selected. Action research is generally conducted when the researcher, or body requesting the research, is in a position to change processes. This was not so in this study. Phenomenology was considered as a means of investigating the power of the child's experience, gathering data from the children in the form of a reading diary, written story or

a drawing. The drawback to this method is that it concentrates intensely on the child's experience and is suited to analysis of greater depth than this study requires (Pickard 2007). It would only have identified the effect of children's visits to CMLs but not chronicled the interactions between child and adult on board a CML. At one stage it was considered that quantitative data could be used to measure children's reading abilities, but this was impractical for the scale of observations, timescales and workforce. As this was a doctoral research study, all the research was conducted by one PhD student.

Ethnography was considered as a methodology during the early planning of the CML study. However, it was realised that ethnographic observations in one CML would only have partially answered the research question. Comparison between observations on different CMLs was necessary to make generalisations of the effect of CMLs over a broad population and to pinpoint best practises found on the CMLs. Previous studies of children and their learning that had used ethnography or other similar qualitative methods or a combination of ethnography with those methods were taken into consideration. Two methodologies, ethnography and grounded theory, appeared to be the most appropriate for studying the reactions and interactions of children in a small contained space. The merits of each methodology were examined and it was found that ethnography would provide insight into children's perceptions of children's mobile libraries, whereas grounded theory allowed comparisons to be made between children's mobile libraries across the UK. Comparison of data that is drawn from a number of settings is a feature of grounded theory and its concentrated system of data gathering, analysis and theory building was thought to be the most appropriate framework for the methodology. However, it was also realised that insider views of the interactions between the social actors on board the vehicles would be needed in order to understand whether children were gaining a learning experience. It was therefore necessary to study the children using a method that does not intrude into their world yet records children's interactions, thoughts and feelings. James (2001) writes that ethnography allows children to be full research participants; a researcher can hear children express their perceptions in their own words and then interpret those views to adults. Therefore grounded theory and ethnography were combined to form what was considered the optimum methodology for the study in hand.

A search for any literature or previous studies of children's mobile libraries was conducted prior to the research in order to establish that the doctoral study was unique and to work out the general scope and set the context of the project. It was discovered that at that time no academic work had been written specifically about CMLs. A detailed case study of a rural UK mobile library service was found (Dyson, 1990) and several descriptions of "book buses" from other countries, for example, mobile libraries in Thailand (Butdisuwan, 2000) and Kenya (Atuti, 2002). Similarly there was no existing list of CMLs operating in the UK. Therefore, it was necessary to begin by making a systematic web search of CMLs in the UK; 26 CMLs were found during the duration of the study which formed the sample population.

Grounded theory ethnography incorporates its own selection system for specifying the scope of the research and identification of samples. Decisions about sample size are not taken before going into the field (Flick, 2006) and sampling strategies may change as research develops, clarifying over time which participants will supply the richest data (Hammersley and Atkinson, 2004). Therefore the sampling strategy for the CML study developed and changed as the study progressed selecting the most appropriate sampling technique for each phase in order to gather the fullest set of data. The sampling strategy encompassed convenience sampling, snowball sampling, purposeful sampling and theoretical sampling.

Initially, convenience sampling was used selecting known individuals with key information who had organised children's mobile library services. Snowball sampling was also a factor: for example, a head teacher of a school that visited a CML, and a past children's mobile library service manager were part of the initial sample selection, and they suggested other key figures to interview. The scope of the study was defined by analysing the data from those initial interviews.

It was decided to limit the scope to the public library operated vehicles although other CMLS were operated by schools' library services. This was because public library services focused on the individual child, with regular visits to the same groups according to a scheduled timetable. On the other hand, schools' library service vehicles did not run to a regular schedule and were focused on delivering stock for the needs of the school curriculum rather than those of the individual child and were therefore less relevant to the study. Once the scope of the study was defined, purposeful sampling was used to gather

data. This means that children's mobile library vehicles belonging to certain library authorities were specifically selected from three different regions of the UK in order to gather a broad set of rich data for comparison and to allow patterns to be identified. In each of those regions all the individuals who boarded a CML at the time that it was being observed became the selected sample. That included CML operators (the staff that drove and worked in the vehicles), CML service managers, children, the carers of the children and teachers or child care staff. Over the course of a year, 13 different CMLs were visited, 29 CML staff and managers were interviewed, 40 parents and carers were spoken to and over 700 children were observed over 9 UK counties in rural, urban and metropolitan areas.

As the sampling strategy changed, so did the data gathering instruments. Semi-structured interviews and participant observation were used along with short audio recordings of story sessions to capture the interactions between CML operators and children. Managers of CML services and some staff were interviewed in their offices or on CMLs at a time when children were not present. A question framework was used as a guide to focus the data collected. The data were recorded in all cases in the form of field notes, which were written up as soon after the event as possible and the recorded story sessions were transcribed and added into the field notes for analysis.

The analysis of the data collected from the first five CML services started to produce theories which needed to be checked by returning to the field. It is at that stage in grounded theory ethnography that samples of individuals or groups are selected "according to their expected level of new insight" to serve the developing theory and this selection process is known as theoretical sampling (Flick, 2007). This phase of focused data collection was conducted with a further five authorities, gathering data from certain CML services that visited types of locations other authorities did not visit, for example the static homes of fairground families and focusing on areas such as children's reading skills, family interaction, operator's actions and minority communities in order to test theories which had insufficient evidence at that stage.

Although staffed and visited by adults, children's mobile libraries are primarily provided for the use of children and as such are a child dominated world. The vehicles are designed to cater for children's needs, carrying children's books in a child friendly environment. However, CMLs are planned, designed and operated by adults, therefore discovering

children's perceptions of a vehicle designed for them formed a crucial part of the research. Processes of interaction such as conversation, watching, talking, listening to stories, thinking and reading were the activities under scrutiny. Since research participants are influenced by their surroundings (Bryman, 2004) it meant that the method of data collection needed to be able to examine children's realities without influencing, prejudging or coercing the young participants.

Similar studies to the CML research have been carried out to discover children's views on other issues and these were examined in order to ensure that the data was collected fairly. A good example can be seen in the Beautyman and Shenton (2009) classroom based study discussed above, which combined ethnographic data collection with grounded theory data analysis. The reasons Beautyman and Shenton (2009) gave for the choice of data collection were that ethnographic participant observation in the classroom was the best method to find out what children really thought and, influenced by Charmaz and Mitchell (2001), grounded theory provided focus and helped to construct an overview and reveal patterns. The ethnographic technique of collecting data through immersed participant observation in a classroom over the period of a year allowed direct access to the children's viewpoints whereas interviewing young children or questioning their parents would not have shown the reality of the situation as adult perception could influence the data given (Beautyman and Shenton, 2009). By using participant observation children can be studied in their daily lives in the context of their complex, daily social structure, which gives a truer account than studying children in laboratory conditions (James, 2001). In such a context, children's interactions with each other can be studied and children's thoughts and feelings can be directly explored with them, valuing their opinions, rather than through a go-between. However, James (2001) relates that the understanding of what participant observation is varies according to the individual conducting the research.

The researcher conducting the CML study had previously worked extensively with children in a variety of roles and educational and library settings and was fully trained and experienced in those roles. She therefore matched the ethnographic concept of "researcher as research instrument". Participant observation may be carried out either passively, by unobtrusively watching and being ignored by children, or actively by integrating with the children, giving the children a simple explanation of why the adult is there (James, 2001). As

observations for the CML study would be taking place in a small, cramped area, a mobile library, it was decided that active participant observations would be more appropriate.

Participant observations were conducted on each of the vehicles selected, the researcher travelling from stop to stop and participating in the usual everyday jobs on each vehicle. The researcher was able to blend in and understand the insider view because she had previously worked as a CML operator and was competent at the necessary tasks. This meant that she quickly developed a rapport with the CML operators. Similarly, she gained the trust of other adults who accompanied the children, such as teachers and early years staff, because she had the training and experience of a pre-school leader and a teacher and was able to converse about general issues with competence.

James (2001) warns that, despite adult attempts to blend in with children's environment, there is always the issue that a child can feel that the adult has power and that children may speak in order to please the adult. It has already been noted that such concerns are remedied by prolonged attendance in the field, however, there was insufficient time for the researcher to be embedded in the field for a lengthy ethnography. James (2001) says that the solution is to have semi-structured and semi-private interviews, such as a focus group, and if the children do not want to be part of the research, then they will not react, and will not be part of the research (James, 2001). It was therefore decided that the researcher would talk to the children on board the CMLs and use an informal question framework as well as acting as a storyteller to groups of children, engaging the children in the activity in order to assess their understanding and levels of literacy as an informal focus group.

In advance of any relevant visit, the operators on each CML had generally informed the staff of settings which they would be visiting that there would be a researcher accompanying them. The researcher gained permission to observe the children from teaching or nursery staff as gatekeepers to the children when parents were not present, just before the observation began. Permission was refused for one child only and consequently nothing was noted in the field notes about the actions of that child. Children were talked to informally either on a one to one basis as they browsed for books, or in a group at times when the researcher was reading a story. The researcher assessed the children's skill with books and literacy by their body language, their comprehension of stories and answers to questions. In order to evaluate the contributions that CLM staff make to children's literacy an adult

viewpoint for the justification for taking a vehicle into the community was also needed. The CML operators, parents and other adult carers and their interactions with the children such as looking at and reading books together, telling stories and talking to the children and each other were observed.

The field notes were interrogated and open coded freely using qualitative analysis software with certain codes merging or being removed as their relevance to the research became clearer after each period of time in the field. Those codes were further coded at a second level, clustered into larger conceptual categories and potential theories were noted as memos. The developing themes were compared with extant psychological, neurological and educational theories in response to questioning the data. The conceptual groups were then assembled further into five main mid-range theories: Event, Reach, Process, Resource and Wellbeing, which will be presented in detail below.

Four outcomes that were required from the study were an understanding of children's experiences in children's mobile libraries; a record of library outreach work across the UK; a compilation of effective methods of reading promotion that occur on a children's mobile library; and a definitive knowledge and understanding of the effects of a children's mobile library (CML) on children's literacy. The research was considered important because the acquisition of literacy and the enjoyment of reading by children in the UK was reported as much lower than European counterparts (UNICEF UK, 2010). In 2005 the House of Commons Select Committee report on Public Libraries recognised the contribution of libraries to literacy and emphasised the need for libraries to work with communities (Culture Media and Sport Committee, 2005). Most recently the British government has published a further report on Libraries in England which again recognises that libraries are places where people not only learn to read but also develop a love of reading (Department for Culture Media and Sport, 2014). Therefore an exploration of literacy development through visits to a CML to find out whether children are encouraged to learn to read and enjoy reading adds to the body of knowledge about libraries, literacy and learning.

The aim of the CML study was to examine the effect of CMLs in the UK on the development of a reading culture and the promotion of children's reading and it was concluded that CMLs are effective at engendering, sustaining and exploiting a love of reading and that they can

overcome geographic, social and psychological barriers to library access, reading and literacy (Bamkin, 2011).

Development of theory

A significant feature of the use of grounded theory ethnography for this study was that no a priori theory was developed from studying literature before data gathering commenced. As there was no academic literature about children's mobile libraries, grounded theory ethnography provided the freedom to explore relevant literature when the need to understand a finding arose. There are many known theories about literacy development and the learning of reading skills which have been studied, developed and tested by many psychologists, sociologists and educationalists over decades and this research did not set out to rediscover what is already known. This study was an evaluation of whether those theories apply in a specific situation and to discover whether that situation contributes in any previously unknown way to children's reading development.

This approach allowed theoretical concepts to be developed before comparison with extant theories so that the findings were firmly based in the data and could not have been superimposed on observations by bias: the observer only seeing what they believed to be true. This approach led to some surprising and novel reasons for CMLs to be helping children with their learning. Five theories emerged from the methodology:

1. Event – a visit to a CML arouses the brain into a state that facilitates learning because it is viewed by customers as an “event”

The theory of “event” showed that a vehicle full of books that comes for a short while and then disappears caused children to become excited, therefore stimulating the brain into a heightened awareness, which is a good state for learning (Bamkin, 2011). This theory would have been lost if the researcher had gone into the observations with a tick sheet of what actions and interactions to expect.

2. Reach – A CML has the potential to reach any child of any ability anywhere in the UK

The theory of “reach” was discovered through the researcher travelling on each observed vehicle as they went about their daily routine and noting the relevance of the places where each CML stopped for children to visit (Bamkin, 2012). This theory was

consolidated by deliberately going back into the field to make observations at the more unusual places, such as children's secure units. CMLs deliberately seek out children and go to where they can be found.

3. Process – CMLs provide a learning environment where interactions between social actors promote reading skills

The theory of "process" began to emerge when the obvious rapport between CML operators and their customers became apparent. This led to observing a cyclical interaction between operators, believing that their informal encouragement of children's reading actually improved literacy, and children whose reading habits developed as they were actively encouraged. The CML is also a closed, literacy saturated environment where children were able to behave like readers without sanction, and to interact with adults or other children also behaving like readers (Bamkin, 2011). These complex interactions may have been missed simply by interviewing children or their carers rather than the rich observational data that was gathered and analysed.

4. Resource – A CML is a source of expertise that is drawn upon by children's educators and carers to enhance their own knowledge and skills to support their teaching

The examination of the stock carried by CMLs and noting the way that it was used by children and adults across the range of CMLs observed led to the theory of "resource". It is obvious that the stock would be specialised for children, but it was frequently also used by teachers as a learning resource, not only for the classroom, but also to increase their knowledge of a forthcoming curriculum topic. Constant handling of the stock also made regular CML operators experts in children's books and reading resources (Bamkin, 2012). This pattern of behaviour might not have been considered relevant if comparisons had not been made between observed vehicles.

5. Wellbeing – the feeling of wellbeing that is stimulated by children's own actions on a CML reinforces their desire to read

The theory of wellbeing came about by the comparison of the extant theory of self-efficacy (Bandura, 1977) with observations of children browsing and selecting books themselves and their choice being re-enforced and encouraged by the CML operators,

whereas children's choice was sometimes vetoed by parents, carers or teachers. On a CML children can feel empowered because they are made to feel that they are doing something right (Bamkin, 2011).

It can therefore be seen that the CML study revealed some complex concepts by the setting aside of pre-conceived ideas and becoming sensitive to emerging patterns of data gathered in situ. A study which was conducted in 1972 by Parlett and Hamilton is possibly the most similar project to the CML study. Parlett and Hamilton (1972) considered the learning environment in a classroom and the learning value of interactions between children and adults. In order to observe, record and analyse the benefits of innovative teaching programs in the classroom environment Parlett and Hamilton (1972) developed a methodology using an ethnographic model which they termed as "illuminative evaluation".

Parlett and Hamilton (1972) were interested in the perceptions and interactions of both teachers and pupils over a range of settings. Therefore, instead of a purely ethnographic study Parlett and Hamilton (1972) used the iterative process of gathering data from the field, analysis and comparison between settings, returning to the field to solve "problem areas", narrowing the focus to "give more concentrated attention to the emerging issues": a technique closer to grounded theory than ethnography. They considered that their methodology suited the learning environment because learning is affected by a complicated interaction of factors such as the prior experience and perceptions of adult and child, curricular delivery systems and immediate physical surroundings. Likewise, the CML study corroborated that children's literacy is affected by their home environment, access to text and exposure to narrative and their school environment as well as other factors.

The validity and credibility of research depends on the transparency of the thought processes of the researcher, so that the research journey can be followed and the conclusions can be understood by other interested people. To be considered credible, research must be carried out systematically with a scientific attitude and consideration of the reasons for completing the research. The researcher should be "Sceptical, subjecting ideas to disconfirmation", and should closely examine observations and conclusions to safeguard against bias (Robson, 2002).

Ethnography with grounded theory was chosen as a methodology for the above studies because together they incorporate rigorous techniques that can be followed to verify validity. The constant comparison of data and the iterative process of data gathering, analysis and checking of theories provide a self-checking system that ensures against bias. Charmaz (2006) sums it up in the following way: "...The grounded theory method itself contains correctives that reduce the likelihood that researchers merely superimpose their preconceived notions on the data." From the above cases it is argued that a methodology which uses aspects of ethnography and grounded theory is a suitable and effective methodology for investigating children. Observation of their natural daily routine with an objective participant observer allows children the opportunity to clearly express their views and provides the researcher with the opportunity to observe and compare children's natural interactions and processes as they are enacted in the real world of the child.

Limitations

Research that studies the behaviour of people in their own environment, as in this current study, can be open to many factors that could influence the results. Time was a limiting factor for the CML study which meant that each child was only observed once and their attitudes and reactions were noted only for a short space of time. However, because over 700 children were observed over the period of a year, individual snapshots could be built up to show a pattern of influence. Since it was impractical to write notes during the participant observations some of the participants' actions, words, and phrases were inevitably forgotten. This deficiency was compensated for by the large volume of rich data that was collected and did not have a detrimental effect on the research as a whole.

Constructivist research uses the skills, knowledge and understanding that a researcher already has as a tool in understanding the research setting. This poses a danger that the researcher may judge the setting with preconceptions or prejudices. As the CML researcher was already knowledgeable about children's literacy, anticipated outcomes had to be set aside during the data gathering process. The researcher's prior knowledge became useful during analysis, in order to understand the interactions which were observed, and to appreciate what further information and knowledge was needed to interpret the results.

For example, the researcher knew that children learn better when they are relaxed, but needed to find the empirical research to explain why they learn better in a relaxed state.

Ethnographers are also aware that a researcher placed into an environment can affect the outcome of the research because of the effect they have on the participants. Participant observations held on CMLs during their daily or regular operations were chosen for this study to minimise any effect and allow the researcher to blend in. However, there were instances where the presence of the researcher may have unwittingly affected the data gathered. During the participant observations, children were asked if they thought that a CML helped their reading. Those who replied to that question were emphatic that it did. It is possible that those children were answering in a positive way to please the researcher, but as the conversations were informal and the children who expressed that opinion were the most articulate, there is little doubt that they perceived that their visits to CMLs help them with their reading skills. Overall, all efforts were made to limit the factors that could have influenced the results of the CML study.

Conclusions

In conclusion, the use of grounded theory together with ethnography was a deliberate, well considered choice in order to explore the interactions inside CMLs because the combination of grounded theory as a strategy and style of data analysis with ethnographic data collection methods was the most suitable methodology to answer whether visits to CMLs aided children's literacy. Not only was it demonstrated that it did, the study also identified how and why visiting CMLs could improve literacy.

The subject of children's mobile libraries was a novel field with no previous research having been conducted in the area therefore the ability of grounded theory ethnography to lead exploration into new ground was appropriate to the study. Ethnographic methods allowed the researcher to enter the naturalist setting of CMLs to understand the perceptions of the social actors in that world. The researcher used prior teaching and educationalist experience to gather data while telling stories to children on CMLs, representing the ethnographic concept of researcher as an instrument.

Grounded theory with ethnography enabled data gathering across settings to gain knowledge of the processes that stimulated reading skills, the perceptions of children from diverse geographic and demographic backgrounds, and the impact of CMLs on a variety of communities. The constant comparison of data from each CML showed patterns emerging which allowed the establishment of five mid-range theories. The results of the study were not written as an ethnography, or as a standard report, but as a doctoral thesis which although it was rigorously and logically structured, did not follow the conventional pattern of a thesis.

The use of two methodologies merged into one compensated for any disadvantages in either methodology, for instance grounded theory may not give great depth of insight into the research setting and its participants whereas ethnography does. The thoroughness of focused data collection and conceptually rigorous analysis not only ensured that a valid conclusion was drawn, but that novel concepts emerged. The research question was satisfactorily investigated within the timeframe of a doctoral study. Therefore, it is concluded that grounded theory ethnography was the optimum methodology for studying children's interactions on children's mobile libraries in the UK.

References

- Atuti, R.M., 2002. The challenge of public library systems to meet information needs for diverse multi-cultural communities: A case of mobile library service in Kenya. 68th IFLA Council and General Conference, August 18-24, 2002, ILFA.<www.ifla.org.sg/IV/ifla71/papers/103e-Li_Pan.pdf>,[accessed 13.05.14]
- Bamkin, M., 2011. The Promotion of Reading on Children's Mobile Libraries in the UK. Doctoral thesis. Loughborough University.
- Bandura, A., 1977. Self-efficacy: Toward a unifying theory of behavioural change. *Psychological review*, 84(2), 191-215.
- Beautyman, W. and Shenton, A., 2009. When Does an Academic Information Need Stimulate a School-Inspired Information Want? *Journal of Librarianship and Information Science*, 41(2), pp. 67-80.
- Bryman, A., 2004. *Social Research Methods*. 2nd edn. Oxford: Oxford University Press.
- Bryman, A., 2001. *Social Research Methods*. Oxford: Oxford University Press.
- Butdisuwan, S., 2000, Reaching out through a mobile library. [Presentation given at the 66th IFLA council and general conference, 13-18 August 2000,] <<http://archive.ifla.org/IV/ifla/papers/099-175e.htm>>, [accessed 13.02.09]

- Charmaz, K., 2006. *Constructing Grounded Theory*. London: Sage.
- Charmaz, K. and Mitchell, R.G., 2001. Grounded Theory in Ethnography. In: P. Atkinson, A. Coffey, S. Delamont, J. Lofland and L. Lofland, eds, *Handbook of Ethnography*. pp. 160-176.
- Corbin, J. and Strauss, A., 2008. *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory*. 3rd edn. London: Sage.
- Culture, Media and Sport Committee, (2005), *Culture Media and Sport - Third Report* [Homepage of House of Commons], [Online]. Available: <http://www.publications.parliament.uk/pa/cm200405/cmselect/cmcumeds/81/8102.htm> [11.09.09, 2009].
- Department for Culture Media and Sport, (2014). *Independent Library Report for England* [Homepage of DCMS], [Online]. Available: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/388989/Independent_Library_Report-18_December.pdf [09.01.15, 2015].
- Dyson, I., 1990. Mobile Libraries in Rural Areas, With Special Reference to Clwyd. *Library Management*. **11**(2). pp15-32.
- Fetterman, D.M., 2010. *Ethnography: Step by Step*. 3rd edn. London: Sage.
- Flick, U., 2006. *An Introduction to Qualitative Research*. 3rd edn. London: Sage.
- Glaser, B.G. and Strauss, A.L., 1999. *The Discovery of Grounded Theory: Strategies for Qualitative Research*. New York: Aldine de Gruyter.
- Goulding, C., 1999. Grounded Theory: Some Reflections on Paradigm, Procedures and Misconceptions. *European Journal of Marketing*, 39(3/4). pp294-308.
- Hammersley, M. and Atkinson, P., 2007. *Ethnography: Principles in Practice*. 3rd edn. London and New York: Routledge.
- Hammersley, M. and Atkinson, P., 1983. *Ethnography Principles in Practice*. 1st edn. London and New York: Routledge.
- Hunter, M.A., 2014. Ecologies, Post Modern Urbanism, and Symbolic Economies: a comparative Assessment of American Urban Sociology. *Comparative Sociology*, 13(2014), pp. 185-214.
- James, A., 2001. Ethnography in the Study of Children and Childhood. In: P. Atkinson, A. Coffey, S. Delamont, J. Lofland and L. Lofland, eds, *Handbook of Ethnography*. London: Sage, pp. 246-257.
- Miles, M. and Huberman, M., 1994. *Qualitative Data Analysis: An Expanded Sourcebook*. 2nd edn. London: SAGE.
- Morse, J.M., 2007. Sampling in Grounded Theory. In: A. Bryant and K. Charmaz, eds, *The Sage Handbook of Grounded Theory*. pp. 229-243.

- Parlett, M. and Hamilton, D., 1972. *Evaluation as Illumination: A New Approach to the Study of Innovative Programs*. University of Edinburgh.
- Pettigrew, S.F., 2000. Ethnography and grounded theory: a happy marriage? *Advances in Consumer Research*, 27, pp. 256-260.
- Pickard, A., 2007. *Research Methods in Information*. London: Facet.
- Robson, C., 2002. *Real World Research*. 2nd edn. Oxford: Blackwell.
- Strauss, A. and Corbin, J., 1998. *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory*. 2nd edn. California: Sage.
- UNICEF UK, (2010). New child wellbeing table welcomed by UNICEF UK. Available:
<http://www.unicef.org.uk/Archive/New-child-wellbeing-table-welcomed-by-UNICEF-UK/>.
- Williamson, K., 2006. Research in Constructivist Frameworks Using Ethnographic Techniques. *Library Trends*, 55(1), pp. 83-101.