

Benefits, Challenges, and Dynamism of Positionalities Associated With Mixed Methods Research in Developing Countries: Evidence From Ghana

Journal of Mixed Methods Research

6(4) 379–391

© The Author(s) 2012

Reprints and permission:

sagepub.com/journalsPermissions.nav

DOI: 10.1177/1558689812453332

<http://jmmr.sagepub.com>



Joseph Kofi Teye¹

Abstract

Although mixed methods designs have gained visibility in recent years, most of the publications on this methodological strategy have been written by scholars in the developed world. Consequently, the practical challenges associated with mixed methods research in developing countries have not been adequately discussed in the literature. Relying on a case study in Ghana, this article examines the benefits and challenges of combining quantitative and qualitative approaches in a single research. The article also demonstrates how the positionality of a mixed methods researcher varies from one context to another. Based on the findings of this study, some recommendations have been made for managing the challenges associated with mixed methods researches.

Keywords

mixed methods, qualitative, quantitative, positionality, Ghana

The use of both quantitative and qualitative approaches in a single research has been a subject of considerable debate in the research methodology literature (Bazeley, 2004; Sale, Lohfeld, & Brazil, 2002). For decades, many social scientists used dichotomous qualitative or quantitative approach to examine their research problems. Attempts to combine the two approaches in a single research were very few (Onwuegbuzie & Leech, 2005; Tashakkori & Teddlie, 2003). This methodological separation of the two approaches emanated from the notion that each strategy is based on different ontological and epistemological paradigms (Clarke, 2009; Meetoo & Temple, 2003). Quantitative research is said to fall within the positivist paradigm, which assumes that the purpose of a research is to discover the general patterns of behavior. On the other hand, qualitative research resonates with the interpretive paradigm, which assumes that social reality is multifaceted, and as such the aim of social research is to explain people's subjective behaviors (Bryman, 2001).

¹University of Ghana, Legon, Accra, Ghana

Corresponding Author:

Joseph Kofi Teye, Department of Geography and Resource Development, University of Ghana, P. O. Box LG 59, Legon, Accra, Ghana

Email: jteye@ug.edu.gh

There have been various arguments in favor of each of these two approaches. The quantitative approach, which entails the use of statistical techniques for analyzing quantifiable data, is useful for generalizations and predictions. It also has the capacity for model specification and the establishment of the nature of correlations between different variables (Castro, Kellison, Boyd, & Kopak, 2010). Despite these strengths, the quantitative research approach is not very good for explaining behaviors and perceptions (Brannen, 1992). Additionally, measurements in quantitative research tend to detach findings from real-world contexts (Moghaddam, Walker, & Harre, 2003).

On the other hand, qualitative research methods, which include in-depth interviews, focus group discussions, and participant observations, are very good for generating detailed data on the experiences, perceptions, emotions, beliefs, and behaviors of respondents. Qualitative methods are also more flexible and reflective than quantitative methods (Minichiello, Aroni, Timewell, & Alexander, 1995). According to Quinn (1980), the strategy in a qualitative research is to allow important dimensions to emerge from analysis of the cases under study without supposing in advance what those dimensions will be. Despite these strengths, qualitative research methods have been criticized for being too subjective. They are also inappropriate for generalizations and predictions (Plano Clark, Huddleston, Churchill, Green, & Garrett, 2008). It is instructive to mention that some researchers have criticized the dualistic view, which tends to portray the qualitative approach as being subjective, and the quantitative approach as objective (Philips, 1998; Winchester, 2005). Despite their different epistemological backgrounds, both the qualitative and quantitative approaches are scientific and good for different purposes (Bryman, 2001).

As a result of the strengths and weaknesses of both quantitative and qualitative research approaches, mixed methods research (also known as method triangulation) has gained visibility in recent years (Tashakkori & Teddlie, 2010). In supporting the combination of quantitative and qualitative methods, Sharan (2002) argues that, since there are multiple constructions and interpretations of reality, mixed methods offer a tool for understanding complex problems.

Although the main purposes and potential advantages of integrating quantitative and qualitative strategies, especially in the field of health research, have been extensively discussed in the literature (Clarke, 2009; Creswell, Plano Clark, Gutmann, & Hanson, 2003; Meetoo & Temple, 2003), there are very few publications on the actual benefits and challenges of using mixed methods in natural resource management studies. Again, as most of the publications on mixed methods research have been written by scholars in the developed world, little is known about the unique challenges of doing mixed methods research in poor African countries, where resource constraints already pose challenges to effective research work.

The aim of this article is to discuss the benefits and challenges associated with conducting mixed methods research in poor African countries. The discussion is largely based on a recent mixed methods research conducted in Ghana by this author. Some examples are also drawn from other studies and experience gained from 3 years of supervising graduate dissertations in Ghana. Apart from contributing to the ongoing debates on the appropriateness of mixed methods research, the empirical analysis makes contribution to the literature on the concept of *positionality*, which refers to the notion that a researcher's characteristics (i.e. age, gender, education, class, cultural, and ideological background, and other statuses) vis-à-vis the researched can influence access to informants and the data that are produced (Mohammad, 2001). Although it has been acknowledged that a mixed methods researcher has different relationships with the researched (Barbour, 1998), very few researchers have examined how the positionality of mixed methods researchers vary from one context to another (Cormode & Hughes, 1999). Relying on this Ghanaian case study, this article demonstrates the challenges of adapting to the dynamism of positionalities associated with mixed methods researches.

Contested Views on the Purpose of Combining Quantitative and Qualitative Methods in a Single Research

Although mixed methods simply means the combination of different techniques for the collection and analysis of data (Bryman, 2001), the strategy has often been used in situations where both quantitative and qualitative methods are combined in a single research (Bazeley, 2004; Creswell et al., 2003). A fundamental assumption about mixed methods research is that it provides a broader and more credible understanding of the research problem than a dichotomous qualitative/quantitative approach (Tashakkori & Teddlie, 2010). It has been suggested that the use of quantitative and qualitative data can cross-validate each other around a common reference. Where applicable, therefore, researchers are expected to look for quantitative evidence to “check” qualitative statements (Sharan, 2002).

Meetoo and Temple (2003) have contested this view on the grounds that, even if the results from different data sources tally, there is no guarantee that the inferences involved are accurate. Meetoo and Temple (2003) further pointed out that it is wrong to assume that the use of different methods will *automatically* enhance validity. They argued forcefully that since social reality is multifaceted, the use of different methods may be motivated more by the desire to explain all dimensions of the problem rather than *merely* cross-validating one method against another. Devine and Heath (1999, p. 49) also captured this assertion perfectly when they wrote that “triangulation can be used effectively to explore the dynamics of complex social phenomena, highlighting the multi-layered and often contradictory nature of social life”. Similarly, Clarke (2009) argued that the combination of qualitative and quantitative approaches is particularly useful when the methods examine different facets of the same problem. The term *complementary mixed methods* design is usually used to refer to this situation whereby the results from one method are used to enhance the performance of another method (Sale et al., 2002).

After an extensive review of the literature on mixed methods, Johnson and Onwuegbuzie (2004) summarized the following five major purposes for combining qualitative and quantitative techniques in a single research. First, mixed methods designs are used for the purpose of *seeking convergence and corroboration* of results from different methods. Secondary, mixed methods designs are used for the purpose of *complementarity* (i.e., seeking elaboration and clarification of the results from one method with results from another method). Mixed methods designs are also used for the purpose of *initiation* (i.e., discovering contradictions that can lead to a reformulation of the research problem) and for the *development of methods* (i.e., using the findings from one method to help improve the other method). Last, mixed methods designs are used for the purpose of *expansion* (i.e., seeking to expand the breadth of the research by using different methods to investigate different components of the research problem).

The Case Study

To illustrate the discussions in this article, this author draws on a Ghanaian case study in which qualitative and quantitative approaches were combined. The study was conducted between September 2004 and June 2008 as part of a doctoral research (see Teye, 2008). The main aim of this study was to analyze forest policy formulation and implementation in Ghana. Among other things, the research examined the level of local community participation in forest policy formulation and implementation. It also analyzed how complex power relations and networks between and among state officials and societal actors influence forest management in Ghana. Based on the literature, a theoretical framework was devised. It assumes that the outcomes of forest policy are shaped by interactions among various policy actors—officials of the Forest Services Division, state politicians, traditional rulers, local farmers, illegal chainsaw operators,

and timber contractors. It was decided at the initial stages of the research that both qualitative and quantitative methods would be used concurrently for explaining the various dimensions of the research problem.

A semistructured questionnaire survey was used to collect quantifiable data from a sample of 102 forestry officials. Specifically, information was sought from forest officers on such issues as resource availability, autonomy of their organization, operational procedures, and informal networks. To get more detailed qualitative data, in-depth interviews were also held with a few selected top forestry officials and forest guards. Some officials of the Ministry of Lands and Forestry were also interviewed.

In addition, semistructured questionnaire was used to interview 105 household heads selected from two forest fringe communities. In-depth interviews were also used to collect data from some municipal officials, chiefs, assembly men, and community elders. Some timber contractors and “illegal” chainsaw operators were also interviewed about their activities and interactions with forest officers. Since interviewee had different backgrounds, different interview guides were used for each group. As Quinn (1980) has pointed out, the purpose of such interviews was not to put things in someone’s mind, but to access the perspective of the person being interviewed. Though I was aware of the disadvantages of using such unstructured interview guides, especially the tendency to produce responses that vary from respondents to respondents (Valentine, 2005), I chose this procedure based on the conviction that it would allow for detailed discussion of issues.

In addition to the key informant and household interviews, informal conversational interviews were also held with some local people (not necessarily household heads). Interview guides were not used at all in such informal interviews. Discussions were just like normal conversation with special groups such as women and charcoal producers. Such informal conversations emerged naturally and allowed respondents to talk about topics within their own frame of reference. Some of these conversations were recorded whenever the interviewee agreed. Others were written down just after the conversation. I was aware of the general weakness of such techniques, especially the fact that they may be subject to the common problem of bias, poor recall or inaccurate articulation (Yin, 1994, p. 85). However, it was my belief that the technique would be useful for unraveling other issues that might not even be revealed through standard interviews. This appeared to have paid off. Through this method, farmers who were seen working illegally on forest lands were interviewed on their activities and relationships with forest guards. The informal interviews also helped to overcome some of the sampling problems. It was thought, for instance, that most of the household heads would be men, and as such conversations with more women would help to get some insights from more women. This turned out to be useful, as it was possible to interact with some women, who were fetching firewood and producing sponges.

Apart from interviews, focus group discussions were held with some men and women in the two forest fringe communities. Two discussions were held in each of the two communities, one for men and another for women. Women were separated from men because, in such traditional societies, some women may not feel comfortable debating issues with men. This is because of patriarchal traditions, which tend to portray men as superior over women. Discussions were recorded, but notes were also occasionally taken on group dynamics, mood, and gesture. One of the focus groups was made up of 10 participants whereas the other three were made up of 9 participants each.

The quantitative and qualitative data generated were integrated at the data interpretation stage. The quantitative analysis largely involved the use of descriptive and inferential statistics to describe trends and patterns of behavior whereas the qualitative data were used to explain some of the patterns and observations. This strategy resonates with the principles of

complementary designs, in which the findings of one method are used to elaborate on or modify the findings of other methods (Sale et al., 2002).

Benefits of Combining Quantitative and Qualitative Methods in the Case Study

The findings of this case study support the argument that quantitative and qualitative methods can greatly *complement* each other. The use of both quantitative and qualitative methods was useful for showing intensity of cases while at the same time unraveling different dimensions of forest management in Ghana. Quantifiable data from the questionnaire survey were useful in areas where rates, percentages, and charts were necessary for showing frequencies of responses. For instance, rates were computed to explain the incidence of corruption within the Forest Services Division. Again, by performing chi-square test of independence, it was possible to examine the relationship between forestry officials' respective positions and their satisfaction with conditions of service. Chi-square tests were also performed to examine the association between land ownership status of farmers and their willingness to plant trees on their farms. On the other hand, the qualitative interviews and focus group discussions were useful for understanding the underlying *reasons* for the observed patterns. During the questionnaire survey, for instance, a significant proportion of forest guards indicated that they sometimes accepted bribes from chainsaw operators. The factors that accounted for such a high incidence of bribe taking were not fully understood from the questionnaire data. However, detailed accounts by some guards, during in-depth interviews, show that guards were forced to connive with local resource users because of poor conditions of services and their perception that their managers are also corrupt:

They [managers] use all our vehicles for their private activities . . . like sending their children to school and attending funerals, but we do not even have bicycles to work with. They also take bribes from timber contractors, but expect us to report chainsaw operators to them so that they can get more bribes. (Fuseni, Forest Guard, June 28, 2006).

Narratives of some forest guards also demonstrate how their dependency on people in the forest communities for survival made them powerless when it comes to enforcing forest laws:

It is easy to talk about complete restriction if you don't live here, but this is difficult for those of us here. You know I have friends among them, I eat with some of them on the same table, and they are the people I go to when I need to borrow money. How can I arrest them for harvesting wood from the forest? (Lagmatey, Forest Guard, May 11, 2006).

It is obvious that the questionnaire survey alone could not have unraveled these interesting motivations for the development of informal associations between forest guards and local resource users. The above statements buttress the argument that qualitative techniques are effective for understanding the lived experiences, complexities, negotiations, perceptions, conflicts, and shared meanings of actors' everyday social worlds and realities (Limb & Dwyer, 2001). This scenario is also in consonance with the assertion of Johnston, Gregory, and Smith (2000) that qualitative methods provide access to the motives, aspirations, and power relationships that account for how places, people, and events are represented. In a similar mixed methods study conducted on modern contraceptive use in Ghana, the quantitative analysis led to the establishment of relationships between some socio-demographic variables and modern contraceptive

use. Yet it was the in-depth interviews that actually helped to explain the reasons behind these patterns.

While mixed methods strategy is mostly used to refer to research designs in which quantitative and qualitative methods are integrated, the findings of this study demonstrate the fact that the mixing of two methods from the same research tradition is also beneficial. Indeed, the two qualitative methods—interviews and focus group discussions—complemented each other. The interviews with household heads provided detailed responses from individual farmers. However, this technique did not provide any opportunity for farmers to directly corroborate or contest statements given by their colleagues. The focus group discussions compensated for this weakness. For instance, while some local farmers stated that they would want the forest to be managed by the community, other farmers challenged this view. The latter group explained that those who wanted forest management powers to be transferred from the state to the community were the local elite who will benefit from such an arrangement. This means that the focus group discussions allowed for an exploration of how experiences and meanings are negotiated and contested between participants. The scenario resonates with the assertion that the combination of different qualitative methods is very important for explaining the complexities, contradictions, ambiguities, and messiness of human behavior and everyday life (Valentine, 2001).

There were also situations where “unacceptable suggestions” by some participants were challenged by other participants. For instance, in one community, a focus group participant stated that some of them were destroying young trees on their farms because if those trees were allowed to grow, timber contractors would eventually come to harvest them. This point was challenged by another participant who felt that destroying young trees this way is a bad practice. The extract below captures these arguments between Anum and Mura:

Anum: If we leave young trees on our farms, the timber contractors will follow the same trees one day to destroy our cocoa farms. So now some of us have been destroying all valuable young trees [Mura interrupted].

Mura: Hee hee . . . I don't agree with you. It is not right to destroy valuable trees in this community just because timber contractors are destroying our farms without giving us any compensation. We need to protect the trees for our children.

The above conversation supports the assertion that focus group discussions place the individual in a group context, where conversations can flourish in what can be considered more common place social situations (Bedford & Burgess, 2001, p. 123). In one-to-one interviews, the researcher may ask for clarifications but rarely contest what respondent says (Cameron, 2005). However, in the group context, the views of participants can be amplified or contested without informants feeling that their knowledge is being challenged by the researcher (Bedford & Burgess, 2001, p. 124). The focus group discussion, therefore, also provided a platform for participants to question unacceptable behaviors of their colleagues.

The combination of quantitative and qualitative methods also helped the researcher to *broaden the dimension* of the study. By using various techniques, it was possible to gather information from farmers, traditional authorities, forest guards, and chainsaw operators. Additionally, by involving various groups of participants in this study, the *validity* of findings was greatly enhanced. In some cases, the results from different sources converged. For instance, statements by chainsaw operators and timber contractors on unofficial payments (bribes) that they have been making to forestry officials were supported by statements given by some forest guards.

On other occasions, the results from different sources did not converge and this led to further investigations. For instance, top forestry officials stated that local farmers were being rewarded

for providing labor to the Forest Services Division. However, interviews with local farmers at the communities revealed that farmers were not given any meaningful rewards for their participation in forest management. Even at the community level, some of the statements given by the chiefs were contradicted by statements by the farmers. For instance, key informants (mainly chiefs) suggested that the community wanted the government to allow them to negotiate logging terms directly with logging firms, but this was contested by many farmers, who stated that what they needed was greater access to livelihood resources. The implication is that the use of *only* key informants in researches may produce unrepresentative data, since no one individual can ever represent all perceptions and views of his or her community.

Challenges of Combining Quantitative and Qualitative Methods in the Case Study

Despite the fact that various benefits were derived from the combination of both quantitative and qualitative methods in this study, there were a number of challenges associated with the mixed methods strategy used. These challenges are discussed in the presentation that follows.

Widening the Scope of the Research Than Initially Planned

As Onwuegbuzie and Leech (2005) have argued, one common challenge faced by mixed methods researchers is how to formulate appropriate research questions that leverage the synergy of integrating quantitative and qualitative data, without expanding the scope of the study beyond the optimal. Although efforts were made to ensure that the scope of this research was manageable, the combination of both qualitative and quantitative methods broadened the scope of the research than initially planned. It became necessary to conduct more in-depth interviews than originally planned. Initially, the commercial wood harvesting groups targeted were chainsaw operators and timber contractors. On the field, however, it was realized that charcoal producers and palm wine tappers were other important exploitative groups. The researcher was “forced” to make new arrangements to interview these actors. Since the scope of the research was quite broad, the data generated were very large, and as such more time was needed for the analysis.

Resource Constraints and Challenges of Coordination

In most researches, time and resources are usually not adequate for all research activities. However, these problems are more difficult to manage in mixed method researches. In this study, the data collection was particularly *time consuming*, *labor intensive*, and *expensive*. Given that the researcher and his field assistants were required to travel to many communities for interviews and focus group discussions, the transportation cost was very high. Coordination was another big problem faced by this researcher. As a way of using the limited time wisely, multiple tasks were performed within each week. Although trained research assistants were used, it was very difficult coordinating the various data collection activities. For instance, it was very difficult to schedule meetings with top state officials. Some officials failed to keep their appointments, and the research team had to be “chasing them.”

It is important to emphasize the fact that lack of reliable transportation and telecommunication networks makes the coordination of concurrent mixed methods research in developing countries very difficult. For instance, during the data collection stage, it was very difficult for this researcher to communicate with research assistants who were working in various communities. Sometimes the researcher had to travel for several hours to meet key informants in some

communities only to be told that they were not ready for scheduled meetings. Obviously, coordination would have been easier in the developed world where there are more reliable telecommunication and transportation systems.

Challenges of Prioritizing the Research Methods

In the literature review section, it was explained that some mixed methods strategies may give equal priority to both qualitative and quantitative analysis. This case study has shown that, in practice, this goal is very difficult to achieve. As mixed methods research is too laborious, the researcher may end up not doing one component of the research well. In this forestry study, I initially planned to give more priority to the qualitative aspect of the study. However, the proportion of the study devoted to the quantitative analysis was even lesser than initially planned. Consequently, although the study employed both qualitative and quantitative techniques, the latter was not extensively applied as originally planned. For instance, network structure and interactions among policy participants were only analyzed qualitatively. Looking at the literature, it appears that this is a common problem faced by mixed methods researchers. Even when a researcher plans to give equal priority to different methods, the weightings may change during the course of the research. In most mixed methods designs, one method may be dominant (Johnson & Onwuegbuzie, 2004). Morse, Wolfe, and Niehaus (2006) captured this perfectly when they wrote, "therefore, a mixed-method design *never* has two components of *equal* weighting" (p. 68).

Problems With How to Integrate Findings

Ensuring a proper integration of findings across methods is one of the biggest challenges in a mixed methods research (Bryman, 2007). Results can be integrated at both the analysis and interpretation stages. In most cases, however, results are integrated only at the level of interpretation (Caracelli & Greene, 1993). Similarly, there are challenges of reporting results from mixed methods research. According to Creswell and Tashakkori (2007, p. 108), both quantitative and qualitative components of the report must be well developed, each with its own data, analysis, and inferences. They argued further that the conclusions from the two components must, however, be well-integrated "to provide a fuller understanding of the phenomenon under study." Based on my experience in Ghana, I argue that following these stated guidelines is not very easy, especially when a concurrent strategy is adopted. As the idea of using mixed methods strategy in this study was to enhance quality of explanations, it was thought wise to integrate the two components in the entire manuscript, rather than having two separate components. Sometimes, the qualitative data was simply used to explain the quantitative findings. Such a structure was more appropriate because the results and discussions components of the dissertation were integrated. While some of my advisers liked this structure, others also suggested a separation of the two components in the presentation of findings. In a different study on the use of modern contraceptives, the two components were separated during the data presentation stage. They were only integrated in the concluding sections. However, some readers of that work felt that integrating the data during the analysis would have been a better option. The point here is that no matter how neatly a researcher integrates the findings from quantitative and qualitative methods, some readers may not like the structure because of their own backgrounds as quantitative or qualitative researchers.

Conflicts in Data Interpretation

Another major challenge of integrating qualitative and quantitative data is that the two methods used in combination can be a source of conflict in data interpretation and analysis. Ideally, such a situation calls for further investigations (Meetoo & Temple, 2003). In this research, there were situations where responses obtained from qualitative surveys were contradicted by the qualitative data. For instance, the household survey suggests that as a result of lack of a meaningful reward system, farmers were unwilling to collaborate with the forest guards. However, the in-depth interviews showed that some of the farmers were still working actively with the guards. Further interviews showed that this latter group of farmers was happy to work with the guards because providing free labor to the forest guards could help them obtain permission from the guard to harvest forest resources. Similarly, responses from traditional rulers suggested that local people would want to manage the forests themselves. Yet the interviews with household heads show that a greater majority of them would not favor any transfer of forest management powers to local people.

In both situations described above, the identification of conflicts between findings from different sources provided the opportunity for further questions. This is in line with the argument of Barger and Duncan (1982) that conflicting results across methods should be viewed as an opportunity to initiate a significant “alternation in the overall perspective with which the problem as a whole is viewed” (p. 5). Meetoo and Temple (2003) made the same point when they stated that “contradiction and tension between findings generated by different methods are to be valued and explored and not used to judge whether one set of findings produced under specific conditions are validated by findings produced under different conditions” (p. 7). Although these assertions are very useful, investigating conflicting results also come with additional costs, which the researcher may not be able to meet.

Choice of Sample Size

The choice of an appropriate sample size is another challenge that mixed methods researchers tend to face. In a qualitative research, only few respondents (e.g., 20-40) may be investigated as the research places emphasis on process and meanings rather than on measures of quantity and frequency. On the other hand, large sample sizes are preferred in quantitative researches, since there is emphasis on representativeness of samples (Bazeley, 2004). In mixed methods studies, therefore, the researcher is faced with the difficulty of balancing qualitative considerations favoring small samples against quantitative considerations favoring larger samples that will allow for statistical analyses (Castro, Kellison, Boyd, & Kopak, 2010; Gelo, Braakman, & Benetka, 2008). As this study involved different groups of participants, the choice of sample sizes for the various groups was even more challenging. As a way of balancing qualitative considerations with quantitative requirements, questionnaires were administered to 102 forestry officials. Household interviews also covered 105 household heads. During data analysis, however, it was found that the sample sizes for some groups were not large enough for rigorous quantitative analysis. This partly explains why some of the originally planned quantitative analyses were abandoned.

Dynamism of Positionalities Associated With Mixed Methods Research

As explained in the introductory section, the concept of positionality is based on the notion that the researcher's characteristics vis-à-vis the respondents can influence the data that are produced. In the social sciences, the relevance of situating knowledge in particular contexts and

articulating the positionality of both the researcher and the researched cannot be ignored (Rose, 1997). A dimension of positionality that is particularly important in mixed methods research is power relations between the researcher and the researched (Cormode & Hughes, 1999).

As data are often collected from different groups of respondents, the mixed methods researcher needs to adapt quickly to changing power relations and this can be challenging. This was the situation in which I found myself. I tried to maintain equal power relations with all the respondents that cut across top state officials and local farmers. Yet in practice, some of the top state officials saw me as too young to be asking questions about the government's financial practices and transparency in forest resource management. Some top officials also felt a student should not have been asking some of the questions I was asking. For instance, one stated, "I don't think a student needs this information you are asking for" (Gidi, Forest Manager, February 28, 2006).

On the other hand, some respondents, mainly street-level bureaucrats and local people, perceived me as a privileged Ghanaian because of my level of education and affiliation to a U.K. university. Thus, as my research involved interviewing both elite and ordinary people, my power relations with these respondents changed from one context to the other.

My experience also mirrors some of the theoretical perspectives on the advantages and disadvantages that a researcher may have by being perceived as an "insider" or an "outsider." It has been argued that "insiders" (i.e., researchers who study a group to whom they belong) have an advantage because they are more likely to be trusted by respondents, and can therefore get access to information that would not be given to an "outsider." A counter argument is that "outsider" researchers are more objective and are able to gain access to information without distorting the meanings of these responses (Mohammad, 2001). Mullings (1999) has challenged these traditional view points, and argued that the "insider-outsider" boundary is not stable, and that it is actually subject to the dynamism of positionalities in time and space. My experience in Ghana supports this position. As I conducted interviews among various participants, there were times that I was seen as an outsider or an insider depending on the background of the respondents.

As hinted already, my interaction with top state forestry officials from the Ministry of Lands and Forestry could be portrayed as a situation involving a young postgraduate researcher trying to study the actions and networks of government elite. As Cormode and Hughes (1999) noted, access to information within those contexts is sometimes difficult. My background as a young Ghanaian postgraduate student in the United Kingdom had both negative and positive effects within this context. It appeared that some top state officials were particularly suspicious about the main reasons for conducting this research. Most of them asked if I had some connections with the Department for International Development, the World Bank, or the Transparency International. Thus, some of these respondents treated me as an outsider, who was interested in getting information for international organizations. Even some directors did not allow me to record them electronically because of this suspicion. This obviously affected the quality of information I got on issues, such as award of timber contracts and the use of donor funds to promote forest decentralization programs. Nevertheless, I got some rich information from some members of this group by virtue of my nationality. Some referred to me as "my brother" while others stated "since you are also a Ghanaian" to justify why they were giving me a particular "secret" information or the other.

My positionality was different within the local communities where I had to interview street-level bureaucrats, timber loggers, and local people. These groups did not care much about the possibility that I could leak information to international donors. However, they feared that I could rather be a spy for the government. Some forest guards, for instance, refused to take part in the survey because of these fears. Some of them also took part in the research but refused to

talk about issues on bribery. To deal with these problems, sensitive questions were sometimes skipped when I was feeling that the interviewee did not want to give specific information about those matters.

Within the local communities, the ability to speak the local languages of the people appeared to be an important determinant of how I was perceived by respondents. The research team did not encounter any serious problem at one of the study sites because I could speak the local language fluently. I was treated as an insider and this allowed me to get important information from local people and even chainsaw operators. Things were, however, not very easy at another site. Despite explaining the purpose of this study to them, some of the local people thought that my aim was to get information for the Forest Services Division. I was thus seen by many respondents here as an outsider. It is evident from the above that the insider–outsider boundary was not stable within this research. Whether I was seen as an *insider* or an *outsider* depended on the context within which I found myself. In short, mixed methods researchers often face a bigger challenge of learning to adapt to the dynamism of positionalities.

Conclusions

Using a case study in Ghana, this article examined the benefits and challenges of combining qualitative and quantitative approaches in a single research. It was argued that since social reality is multifaceted, mixed methods designs provide an effective means of explaining the complexity of human behavior. By combining qualitative and quantitative methods to study forest policy formulation and implementation in Ghana, this author was able to account for intensity of cases, while at the same time explaining different dimensions of forest management. The article also demonstrates the usefulness of mixed methods for explaining the complexities, contradictions, and messiness of human behavior. It is concluded here that given its potential for broader understanding of research problems, mixed methods designs provide more robust opportunities for formulating policies for dealing with the social problems.

It was demonstrated that while mixed methods designs come with a lot of benefits, they are also associated with challenges, such as increased cost of research, time constraints, problems of integrating findings across methods, conflicts in data interpretation, and challenges of adapting to the dynamism of positionalities. These challenges must be carefully considered whenever mixed method frameworks are being designed.

A number of steps can be taken to enhance the use of mixed methods designs. It has been shown that although a researcher may plan to give equal priority to both quantitative and qualitative methods, but most mixed methods researches are predominantly quantitative or qualitative study, supplemented with the other. This situation has come about as a result of the difficulty of integrating the large amount of quantitative and qualitative data that are usually generated. As Onwuegbuzie and Leech (2005) have suggested elsewhere, since a large amount of data are generated from different sources, robust analytical techniques must be developed for integrating quantitative and qualitative data. Again, young researchers must be aware of the fact that mixed methods designs require more comprehensive methodological training and interdisciplinary collaboration (Bryman, 2007).

It is concluded, therefore, that although there are a number of advantages of combining qualitative and quantitative approaches in a single research, such a methodological choice requires training and careful planning to offset some of the trade-offs. Finally, given the fact that mixed methods researches are very expensive, governments and funding bodies must be educated on the benefits of such approaches so that they make financial resources available to mixed methods researchers. As funding bodies in the developed world are beginning to appreciate the importance of mixed methods strategies (Creswell & Plano Clark, 2006), it is hoped that

governments and funding bodies in the developing world will also come to accept and support mixed methods researches.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

References

- Barbour, R. S. (1998). Mixing qualitative methods: Quality assurance or qualitative quagmire? *Qualitative Health Research*, 8, 352-361.
- Barger, R. R., & Duncan, J. K. (1982). Cultivating creative endeavour in doctoral research. *Journal of Higher Education*, 53, 1-31.
- Bazeley, P. (2004). Issues in mixing qualitative and quantitative approaches to research. In R. Buber, J. Gadner, & L. Richards (Eds.), *Applying qualitative methods to marketing management research* (pp. 141-156). Basingstoke, England: Palgrave Macmillan.
- Bedford, T., & Burgess, J. (2001). The focus-group experience. In M. Limb & C. Dwyer (Eds.), *Qualitative methodologies for geographers: Issues and debates* (pp. 121-135). London, England: Arnold.
- Brannen, J. (1992). Combining qualitative and quantitative approaches: an overview. In J. Brannan (Ed.), *Mixing methods: qualitative and quantitative research* (pp. 153-189). Hants, England: Avebury.
- Bryman, A. (2001). *Social research methods*. London, England: Oxford University Press.
- Bryman, A. (2007). Barriers to integrating quantitative and qualitative research. *Journal of Mixed Methods Research*, 1(1), 8-22.
- Cameron, J. (2005). Focusing on the focus group. In I. Hay (Ed.), *Qualitative research methods in human geography* (2nd ed., pp. 116-132). Oxford, England: Oxford University Press.
- Caracelli, V. J., & Greene, J. C. (1993). Data analysis strategies for mixed-method evaluation designs. *Educational Evaluation and Policy Analysis*, 15, 195-207.
- Castro, F. G., Kellison, J. G., Boyd, S. J., & Kopak, A. (2010). A methodology for conducting integrative mixed methods research and data analysis. *Journal of Mixed Methods Research*, 4(4), 342-360.
- Clarke, P. (2009). Understanding the experience of stroke: A mixed-method research agenda. *The Gerontologist*, 49, 293-302.
- Cormode, L., & Hughes, A. (1999). The economic geographer as a situated researcher of elites. *Geoforum*, 30, 299-300.
- Creswell, J. W., & Plano Clark, V. L. (2006). *Designing and conducting mixed methods research*. Thousand Oaks, CA: Sage.
- Creswell, J. W., Plano Clark, V. L., Gutmann, M. L., & Hanson, W. E. (2003). Advances in mixed methods research designs. In A. Tashakkori & C. Teddlie (Eds.), *Handbook of mixed methods in social & behavioral research* (pp. 209-240). Thousand Oaks, CA: Sage.
- Creswell, J. W., & Tashakkori, A. (2007). Developing publishable mixed methods manuscripts [editorial]. *Journal of Mixed Methods Research*, 1(2), 107-111.
- Devine, F., & Heath, S. (1999). *Sociological research methods in context*. Basingstoke, England: Palgrave Macmillan.
- Gelo, O., Braakman, D., & Benetka, G. (2008). Quantitative and qualitative research: Beyond the debate. *Integrative Psychological & Behavioral Science*, 42, 266-290.
- Johnson, R. B., & Onwuegbuzie, A. J. (2004). Mixed methods research: A research paradigm whose time has come. *Educational Researcher*, 33(7), 14-26.

- Johnston, R. J., Gregory, D., & Smith, D.M. (2000). *The dictionary of human geography* (4th ed.). Oxford, England: Blackwell.
- Limb, M., & Dwyer, C. (2001). Introduction: Doing qualitative research in Geography. In M. Limb & C. Dwyer (Eds.), *Qualitative methodologies for geographers: Issues and debates* (pp.1-20). London, England: Arnold.
- Meeto, D., & Temple, B. (2003). Issues in multi-method research: Constructing self-care. *International Journal of Qualitative Methods*, 2(3), 1-21.
- Minichiello, V., Aroni, R., Timewell, E., & Alexander, L. (1995). *In-depth interviewing principles, techniques, analysis*. Melbourne, Victoria, Australia: Longman.
- Moghaddam, F. M., Walker, B. R., & Harre, R. (2003). Cultural distance, levels of abstraction, and the advantages of mixed methods. In A. Tashakkori & C. Teddlie (Eds.), *Handbook of mixed methods in social & behavioral research* (pp. 111-134). Thousand Oaks, CA: Sage.
- Mohammad, R. (2001). Insiders and/or outsiders: Positionality, theory and practice. In M. Limb & C. Dwyer (Eds.), *Qualitative methods for geographers: Issues and debates* (pp. 101-117). London, England: Arnold.
- Morse, J. M., Wolfe, R. R., & Niehaus, L. (2006). Principles and procedures of maintaining validity for mixed-method design. In L. Curry, R. Shield, & T. Wetle (Eds.), *Improving aging and public health research: Qualitative and mixed methods* (pp. 65-78). Washington, DC: American Public Health Association.
- Mullings, B. (1999). Insider or outsider, both or neither: Some dilemmas of interviewing in across-cultural setting. *Geoforum*, 30, 337-350.
- Onwuegbuzie, A., & Leech, N. (2005). On becoming a pragmatic researcher: The importance of combining quantitative and qualitative research methodologies. *International Journal of Social Research Methodology*, 8, 375-387.
- Philips, L. J. (1998). Combining quantitative and qualitative approaches to social research in human geography—an impossible mixture? *Environment and Planning A*, 30, 261-76.
- Plano Clark, V. L., Huddleston, C. A., Churchill, S. L., Green, S. O., & Garrett, A. L. (2008). Mixed methods approaches in family science research. *Journal of Family Issues*, 29, 1543-1566.
- Quinn, P. M. (1980). *Qualitative evaluation methods*. London, England: Sage.
- Rose, G. (1997). Situating knowledge: positionality, reflexivities and other tactics. *Progress in Human Geography*, 21, 305-320.
- Sale, J. E. M., Lohfeld, L. H., & Brazil, K. (2002). Revisiting the quantitative-qualitative debate: Implications for mixed-methods research. *Quality & Quantity*, 36, 43-53.
- Sharan, B. M. (2002). *Qualitative research in practice: Examples for discussion and analysis*. San Francisco, CA: Jossey-Bass.
- Tashakkori, A., & Teddlie, C. (Eds.). (2003). *Handbook of mixed methods in social & behavioral research*. Thousand Oaks, CA: Sage.
- Tashakkori, A., & Teddlie, C. (2010). Putting the human back in human research methodology: The researcher in mixed methods research. *Journal of Mixed Methods Research*, 4(4), 271-277.
- Teye, J. K. (2008). *Forest resource management in Ghana: An analysis of policy and institutions* (Unpublished doctoral dissertation). University of Leeds, UK.
- Valentine, G. (2001). At the drawing board: developing a research design. In M. Limb & C. Dwyer (Eds.), *Qualitative methodologies for geographers: Issues and debates* (pp. 41-53). London, England: Arnold.
- Valentine, G. (2005). Tell me about . . . : Using interviews as a research methodology. In R. Flowerdew & D. Martin (Eds.), *Methods in human geography: A guide for students doing a research project* (2nd ed., pp. 110-127). Harlow, England: Pearson Prentice Hall.
- Winchester, H. P. M. (2005). Qualitative research and its place in human geography. In I. Hay (Ed.), *Qualitative research methods in human geography* (2nd ed., pp 3-18). Oxford, England: Oxford University Press.
- Yin, R. K. (1994). *Case study research, design and methods* (2nd ed.). Thousand Oaks, CA: Sage.