

TBY USING FOCUS GROUPS IN CONSTRUCTION MANAGEMENT RESEARCH

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The focus group is a research instrument used extensively in humanities, social sciences and marketing research. It is a qualitative approach that is chosen for research that requires exploration and discovery, context and depth, and interpretation (factors shared by all qualitative methods). However, the focus group is less well known to construction management researchers, who tend to select other qualitative methods such as case studies, surveys, questionnaires and occasionally workshops. There is significant scope to use focus groups in construction management research where rich, qualitative data is being sought. A focus group approach has been chosen for research being undertaken on integrating project and business process models, based on the Process Protocol, because it offers several benefits compared to interviews and surveys. These benefits and possible drawbacks will be considered together with a discussion of the applicability of the method to construction management research, developing appropriate methods and subsequent analysis. A comparison will be made with similar qualitative research methods such as interviews and workshops and there will be a commentary on how the method was employed at a critical stage to enhance the quality of the aforementioned process research. Conclusions will be drawn on how to conduct successful focus groups in construction management research.

Keywords: Research methods, Focus groups, Construction management, Process Protocol.

INTRODUCTION

Sir Michael Latham (1994) and Sir John Egan (1998) were the most recent of many construction industry analysts to emphasise the need for productivity improvements, urging the industry to focus in particular on construction processes. The Process Protocol emerged from that call (Kagioglou *et al.*, 1998) as a map for the key construction phases from inception to maintenance. However, the Process Protocol is not being used to its full potential and could also be used as a basis for better understanding the processes being used to run construction companies by integrating the business processes (of a typical construction company) with those of a typical construction project.

A focus group approach has been chosen for research being undertaken on integrating project and business process models, based on the Process Protocol, because it offers several benefits compared to interviews and surveys. Focus groups are typically used in the social sciences and business research, but have not been extensively applied in construction management. This may be due to a number of factors such as a preference for quantitative and/or 'traditional' research methods.

This paper presents an overview of the key literature on focus group methodology, examines the benefits and limitations and offers practical guidance to those new to the

methods involved. Conclusions are drawn based on the application of the focus group method to construction management research.

Definition of focus group

A focus group is a special type of group in terms of purpose, size, composition, and procedures (Krueger and Casey 2000). Focus groups are small structured groups with selected participants, normally led by a moderator. They are set up in order to explore specific topics, and individuals' views and experiences, through group interaction (Litosseliti 2003). Krueger, one of the leading focus group researchers, described the focus group as “a carefully planned discussion designed to obtain perceptions on a defined area of interest in an open-minded, non-threatening environment” (Krueger, 1994). Morgan (1997) suggested “the use of focus groups is a research technique that collects data through group interaction on a topic determined by the researcher. In essence, it is the interest of the researcher’s interest that provides the focus, whereas the data themselves come from the group interaction”.

Focus groups consist of a researcher and a number of participants. The researcher serves several functions in the focus group: these could be moderator, listener, observer, and eventually analyst using an inductive process, while participants serve as data providers.

Greenbaum (1998) correctly recorded that “the term focus groups has come to mean different things to different people” and classified focus groups into three different types according to the number of participants: i.e. full groups, minigroups, telephone groups. Full groups contain from 8 to 10 people, minigroups are limited to 4 to 6 people, but telephone groups are somewhat different because the moderator and the participants are in different locations.

Morgan (1998) describes the history of focus groups clearly. This can be divided into three distinct periods: the earliest work was carried out both by academic and applied social scientists, then from World War II until about 1980, focus groups were almost exclusively used in market research. More recently, focus groups have gained broader acceptance as a research methodology and are typically conducted in a range of different fields. Focus groups have been extensively used in advertising and market research, in political campaigning (for example, to explore people's reactions to wartime propaganda in the 1920s and 1930s) and as part of public policy and communications research (Krueger 1994). More recently, focus groups have been used in education, linguistics, health research (e.g. Kitzinger 1995), feminist research (e.g. Bryman and Bell 2003) and research on social movements and phenomena, such as racism and the environmental issues.

Focus groups can be used as both quantitative and qualitative research methods (Fellows and Liu 1997, Kruger 1994), however Morgan (1997) suggests that focus groups provide mainly qualitative data. There are two broad traditions of focus group research; first, focus groups as a self-contained source of qualitative data and secondly, focus groups combined with other methods or triangulation (Love, Holt and Li 2002).

Despite being a socially oriented research methodology with a central interest in interaction, focus groups are often underused or misused in the social sciences (Gibbs 1997). One reason is that they are quite demanding to plan, conduct, moderate and analyse successfully, although on the face of it they may appear simpler to use or less structured than other research methods (e.g. surveys, workshops, personal interviews).

Langford and McDonagh (2003) provides a comparison between focus groups and other qualitative methods used in new product development such as: questionnaire, observation of activities and creative participant activities. Table 1 is based on Langford and McDonagh, but includes methods more relevant to construction management research i.e. interviews, case studies and workshops.

Table 1: Summary of a range of qualitative methods (based on Langford and McDonagh, 2003).

Technique	Description	Benefits	Limitations
Focus Group discussion	Discursive interaction between participants (e.g. a sample of users), guided by a facilitator (moderator/researcher) focusing upon particular issues	-Focused data, revealing experiences and reasons for behaviour, can be elicited in a short period of time; -Help researchers to become immersed in the user's 'world of thought' and terminology; -Flexible technique -Provide good data for exploratory research type	-Relatively high cost (e.g. recruitment administration, participant fees, data analysis); - Qualitative data from conversations are difficult to formalise or use as statistically secure evidence
Questionnaires (Forms)	Retrieving feedback through use of forms with pre-determined questions (e.g. using prepared feedback boxes, rating scales and opportunities for comments)	-Feedback is short and precise as comments are restricted; -Tick boxes can be analysed statistically	-Limited level of detail and flexibility of responses; - Statistical analysis may be unsuitable due to small sample sizes; -People often prefer talking to writing
Individual Interviews	Researcher and interviewee discussing a certain topic (could be structured, semi-structured or unstructured)	-Reveals experience of the interviewee in-depth	-Qualitative data from conversations are difficult to formalise or use as statistically secure evidence -Difficult to generalise
Workshops	Discursive interaction between participants in an educative manner, where participants change their experiences and views about a certain topic	-Participants are actively involved and produce a tangible output	It is not considered an appropriate research method for researchers collecting new information

BENEFITS OF A FOCUS GROUP METHODOLOGY

The literature on focus groups shows that they provide a number of benefits.

- 1- Focus group research is useful for revealing through interaction the beliefs, attitudes, experiences and feelings of participants, in ways that would not be feasible using other methods, such as individual interviews, observation or questionnaires (Gibbs 1997). In contrast to such methods, focus groups can provide insight on multiple and different views and on the dynamics of interaction within a group context, such as consensus, disagreement and power differences among participants.

- 2- Focus groups can be used as the primary source of data (i.e. they are a self-contained method), as a supplementary source of data, or in multi-method studies that combine data-gathering methods (Morgan 1997).
- 3- Focus groups can be used to obtain a number of different perspectives on the same topic, in participants' own words (Litosseliti 2003).
- 4- Focus groups can be used in brainstorming and generating ideas, with participants discussing different angles of a problem, and possibly helping to identify solutions (Litosseliti 2003).
- 5- Focus groups can be used both during the preliminary or exploratory stages of a research project, where questions are explored and hypotheses generated, and at later stages for assessing the development, effectiveness or impact of a programme of activities (Krueger 1994).
- 6- They can also be applied as a follow-up where the researcher needs information to shed light on quantitative data already collected.
- 7- Focus groups are less intimidating than individual interviews and less daunting than questionnaires.

LIMITATIONS OF FOCUS GROUP METHODOLOGY

The main limitations are summarised below, based on discussions by Krueger (1994), Morgan (1997) and Gibbs (1997).

1. Bias and manipulation: there is a danger that participants could be swayed by respond in a particular way, or by participants saying what they think the researcher wants to hear.
2. Some participants with strong personalities and/or similar views may dominate the discussion, while others remain silent.
3. It can be difficult to generalise based on the focus group information (not only because of the limited number of participants, but also due to the difficulty of obtaining a representative sample).
4. Focus groups are difficult to interpret and analyse due to their open-ended nature, that participants comments must be interpreted within context and occasionally will modify or even reverse their positions after interacting with others
5. Difficulty in distinguishing between the views of an individual and those of a group.
6. Focus groups should not be used for education/communicating a message to people.
7. Focus groups can be time-consuming and expensive.

Nonetheless careful planning and skilful moderating of focus groups can address some key limitations. Dominant participants can be dealt with through firm, yet non-intrusive, moderating, and with the help of a topic guide, in order to keep the discussion on track. The moderator can also set some rules of behaviour to be observed during the discussions (for example, asking people not to talk at the same time). Careful selection of participants, in accordance with the research questions being explored, should help to avoid a disruptive mismatch among participants and between the topics set by the researcher and the participants' ability to discuss them.

It is also essential to have a discussion with the participants beforehand about what is expected of them; for example, explaining that there are no right or wrong answers and that they are not expected to reach consensus. Careful design of the questions and topics to be developed during the discussion, together with experience, will help the moderator to minimise bias, by avoiding the use of leading and yes/no questions, and by encouraging a balance of contributions among participants. To organise practical aspects and facilitate the focus group in mind with the interpretation of results, it is also useful to have an additional person (an observer or assistant) present when conducting the focus group discussions (Litosseliti 2003).

UNDERTAKING FOCUS GROUPS

The process of undertaking a focus group is shown in Figure 1.

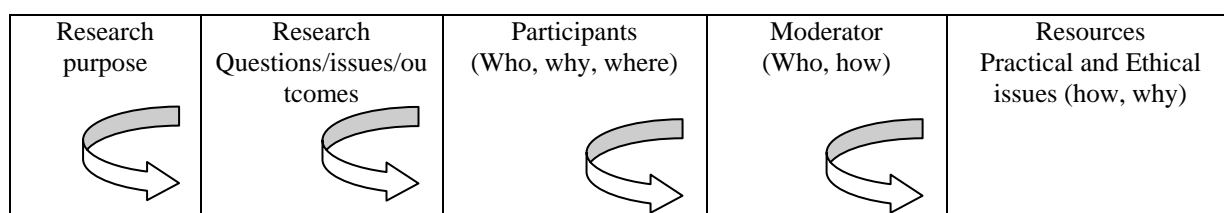


Figure 1: Steps in the focus group method (Litosseliti 2003).

According to Krueger (1994) the process of conducting focus groups includes planning the study, conducting the interviews, analysing and reporting. Planning consists of considering the purpose or what information is needed, developing the plan and developing the questions; the conducting phase consists of moderating the focus groups; and analysis and reporting is the final phase. Figure 2 outlines the major phases that are described in detail thereafter.

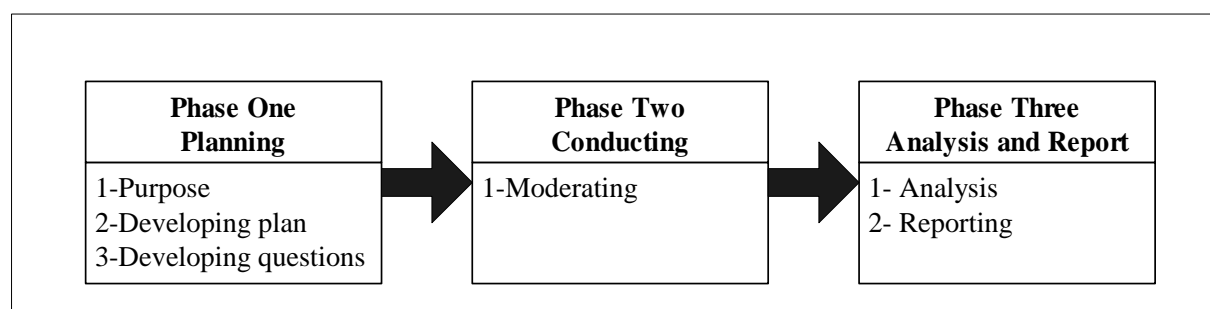


Figure 2: Process of undertaking focus groups (based on Krueger, 1994)

THE PLANNING OF FOCUS GROUPS

Research aims and purpose must be clarified initially together with the topic or issue to be discussed and the expected outcomes. A good research plan includes answers to these questions (adapted from Krueger 1994, p.43):

- Why do this study?
- What is the key topic, issue or problem about which information is needed?
- What kind of information will be produced and what information is important for this project?
- What is the anticipated outcome of the study?

- Who will use this information, how, and for what purposes?

For example, research on integrating business and project processes models aimed to use focus groups as a supplementary research method to reinforce the literature review. Academic specialists in the human resource management process and the Process Protocol (Kagioglou *et al.*, 1998) were enlisted to participate in specific focus groups.

At this stage it is advisable to ask researchers who have conducted focus groups previously for feedback about this method if one does not how to undertake a focus group. Then develop a plan; gathering participants, conducting and analysing information could take a considerable amount of time and organisation.

Litosseliti (2003) suggests a pilot focus group to benefit the researcher to give confidence and a sense of what focus groups are about: “I cannot emphasise enough the benefits of doing a pilot focus group prior to running the actual focus group sessions. I have learned some important lessons and improved my planning of the actual groups by taking the extra time and effort to do this”.

Developing questions is an important phase according to Krueger (1994) who stated, “Typically, a focused interview will include about a dozen questions. If these questions were asked in an individual interview, the respondent could probably tell you everything he or she knows about the subject in just a few minutes. However, when these questions are placed in a group environment the discussion can last for several hours”. To avoid such a lengthy event structured questions will help to gather required information Kruger (1994) suggests the following:

- Opening question: ‘round robin’ question that everyone answers at the beginning of the focus group. It is designed to be answered rather quickly (within 10-20 seconds) and to identify characteristics that the participants have in common.
- Introductory questions: questions that introduce the general topic of discussion and/or provide participants with an opportunity to reflect on past experiences and their connection with the overall topic.
- Transition questions: questions that move the conversation into the key question or questions that drive the study.
- Key questions: questions that drive the study (typically, there are two to five questions in this category).
- Ending questions: these questions bring closure to the discussion, enable participants to reflect on previous comments, and are important to analysis as the answer of these questions includes the final view of the participants.

Evmofofopoulou (1998) suggests that a question route should be designed, the questions should be carefully phrased and sequenced; a conversational manner is appropriate to ask the questions and moderators should alter the sequence of questions if some of them have been discussed previously.

It is also useful for researchers to be aware of time constraints. Focus groups are typically 60 to 120 minutes long; the 2-hour limit however is a physical and psychological limit for most people. Thus, it is sensible not to exceed this, unless there are special circumstances that make it comfortable for participants (e.g. providing lunch or dinner).

CONDUCTING FOCUS GROUPS

After selecting the participants for the focus group, (which may take considerable time to convene experts and/or participants from the construction industry), the moderator or the researcher should send the participants confirmation of the location, time and subject of the focus group. On the day of the focus group the researcher should arrive early to arrange the room, check devices (the voice recorder or the video recorder) that will be used in the session to avoid any delay or problems and ensure that everything is arranged as planned.

Prior to beginning the group discussion ‘small talk’ or a presentation will create a warm and friendly environment and put participants at ease. The following are some guidelines on how moderator/ researchers should behave during this period (Evmorfopoulou, 1998).

- Greet participants on arrival and make them feel comfortable
- Talk casually and in a relaxed way about issues of minor importance
- Avoid key issues that will be discussed later in the session
- Ask participants to fill a registration form
- During the ‘small talk’ period the moderator should observe participant interaction, noting individuals who dominate the group, are excessively shy, or consider themselves experts.
- The ‘small talk’ or presentation period should last only 5-10 minutes or so.

The moderator introduces the focus group briefly creating a thoughtful, accommodating atmosphere. Much of the success of group interviewing can be attributed to this 2-4 minute introduction. Too much formality and stiffness can suffocate the possibility of dynamic interaction among participants. By contrast too much informality and humour can cause problems e.g. participants might not take the discussion seriously. The recommended pattern for introducing the group discussion consists of a welcome, overview, ground rules and opening question (Evmorfopoulou, 1998).

One of the greatest challenges for novice moderators/ researchers is to detect the difference between people just talking and actually answering the question. It is dangerous to assume that participants are answering the question that was just asked because they are talking. Therefore moderators should pull the discussion back to the original intent if it goes off topic and decide when enough has been said on a particular topic and when to ask the next question.

- The researcher has several options for closing the focus group. Some of the most common ones are the following (Evmorfopoulou, 1998):
- Summarise briefly the main points and ask if this perception is accurate.
- After the 2 to 3 minutes summary is completed, the moderator should invite comments, amendments or corrections.
- Ask if the participants have any questions (inviting questions can be illuminating and provide insights that can be incorporated into subsequent focus groups).

ANALYSIS AND REPORTING FOCUS GROUPS

The researcher and/or the moderator will most likely be responsible for analysing the data emerging from the discussions. Litosseliti (2003) states that this gives the researcher the advantage of having more insight and in-context knowledge about the research overall to be able to establish a variety of important links between the research questions/aims and the data gathered. While some projects may require a single 'expert' analyst from outside the project, it is advisable that this analyst works closely with those involved in the planning and running of the groups (researcher, observers, research supervisors). Similarly, it will be better if the analyst and/or researcher works in collaboration with the transcriber (if a transcriber is hired). Such collaboration will not only help to identify and clarify gaps in the transcription, but will also lead to a better understanding of the data.

Transcription is determined by the amount of analysis required in any focus group project. The researcher will need to decide whether to transcribe the complete group discussions or to use abridged transcripts in analysis. The former can be difficult, slow and time-consuming, but are usually more rigorous and productive than abridged transcripts or a simple debriefing report. A summary or report, on the other hand, together with some transcribed examples, may be more appropriate for some projects, depending on the objectives, their complexity, and the questions they aim to address. The advantage for researchers of analysing their own focus groups is that they will be able to consider analysis of the data, as it is gathered. Early and continuous analysis of each of a series of focus groups will help to determine the number and focus of subsequent meetings, and will allow the researcher to revise the topic guide or moderating techniques in the light of the information gathered. Allow for a few days between focus groups, to carry out some analysis of each discussion before the next (Litosseliti 2003).

Assuming that one is working with a word-processed transcript, the first step is to read the transcript for general impressions before gradually looking for specific opinions and topics. Identify substantive parts in the transcript that relate to the research questions, as well as any new topics or issues, and classify or code them. This means marking each section of the transcript with code words, which describe what participants are talking about, and which are repeated every time an idea or topic reappears. This process can be assisted by using computer programs such as Ethnograph, 'NVivo' or 'NUD*IST' (Bryman and Bell, 2003), which assign designated codes to sections of the text. At a later stage in the analysis one can select, review and reframe the coded information in different ways.

CONCLUSION

Focus groups are used in advertising and market research, in political campaigning, education, linguistics, health, feminist research and research on social movements and phenomena since the World War II. The main advantages of using focus groups are revealing the beliefs, attitudes, experiences and feelings of participants through interaction and the flexibility of how, why and when they are undertaken. The main disadvantages are the difficulty of analysing the gathered information and the relatively expensive cost of undertaking them.

Awareness of these pros and cons should enable pitfalls to be avoided as much as possible, and for the usefulness of the focus group as a method to be maximised. Similarly, discussion of the practical details concerning the planning and conducting

of focus groups should help to ensure that the most appropriate types of approaches are employed and the most productive results are employed.

Three focus groups are to be used in the author's¹ research to support the findings of the data collected from the literature review. The first focus group was conducted at Loughborough University under the title "Human resource management processes/models" with academics working in HRM. The second one was carried out at Salford University with members of the Process Protocol academic team. The last focus group is about strategy process in the construction industry. Valuable information for the research was gathered from these focus groups; for example in the first two focus groups; it was concluded that "To-Be" process maps would be more effective than that using "As-Is".

Literature on focus groups (as a qualitative and quantitative research method) has been reviewed in this paper with a view to providing an opportunity for construction management researchers to apply this useful methodology. Focus groups are flexible and provide in-depth understanding, which adds to the strength of research undertaken in paradigms such as construction management where complex interrelationships between individuals and/or organisations tend to prevail and where 'shallower' research methods may not necessarily provide sufficient insight into a particular issue. It can be concluded that a further, detailed examination of the research methods used by construction management researchers would be useful to establish the scope for a focus group methodology specific to this sphere of research.

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