

The Conduct of Structured Interviews as Research Implementation Method

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Abstract – Selection of a suitable and appropriate method is an important aspect in ensuring successful implementation of a research. The proposed study aims to obtain weights for sustainable construction criteria from the input and perception of industrial practitioner, and also to explore their opinion on the criteria. Therefore, the selection and use of study implementation method will determine the direction of the study whether the intended objectives can be achieved. This manuscript writing presents the description of the structured interview used to obtain and collect the required data. The suitability and implementation of the methods have been described in this study, in which the ultimate aim of its application is to ensure that the collected data is meaningful to the study. **Copyright** © 2014PenerbitAkademiaBaru - All rights reserved.

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1.0 INTRODUCTION

Interviewing is an approach used for gathering valuable data or information from people, where any person-to-person interaction between the individuals with a specific objective is called an interview [1]. An interview allows researchers to access perception or understand the meaning constructed or developed by the respondent, which also includes respondent's definition of a situation and the reality as seen and experienced by them. An interview is a data collection method that involves question to get answers or desired response from the research participant. The process of asking questions can be either very flexible (able to formulate questions as it crosses the mind) or inflexible (have to keep strictly to the questions decided beforehand). Structured interview is a typical form of interview in survey research. It involves scheduling of questions where the researcher will ask each respondent the same questions in a similar way. Also known as standardized interview, in structured interview the set of questions are predetermined, which are similar in wording and order [1]. This is to ensure that the replies or answers can be aggregated to fit the objective of the study. As being concluded by Kumar [1], one of the advantages of applying structured interview is that it provides uniformity in the answers, which enables the comparison of data.

On the other hand, qualitative research is useful for exploring and understanding complicated matters, for explaining beliefs and behaviour, as well as identifying the norms of a society [2]. Based on the study by Lenferink et al. [3] regarding sustainable infrastructure development

through integrated contracts, with the objective to gain greater insight into current experiences and perception of key participants involved, qualitative study was used as it was more relevant and appropriate. Hence, qualitative study has been chosen for this study as it intends to gain the weight of sustainable construction criteria and explore practitioners' opinion on the criteria. Besides its wide range of applications in many fields, qualitative methods are typically used for providing an in-depth understanding of research issues. Due to that, qualitative research suits this study most. As the intended interview aims to ensure that all interviewees are given the exact same context of questioning, which means that the respondents receive similar interview stimulus as others [4], hence structured interview suits this study based on the objective being set.

2.0 STRUCTURED INTERVIEW

Since content analysis is the previous research implementation method used in identifying the criteria for sustainable construction, additional interview on the finding of the analysis will enhance the objectivity of the study, as previously proposed by Park and Ahn [5] in their previous research that examined strategic environmental management in construction sector. Also known as a standardized interview [1] or a researcher-administered survey [6], this type of interview consists of a series of questions designed to elicit specific response or answer from respondents [7, 8]. The questions are normally specific and always offer a fixed range of answers, relatively quick and easy to administer [8], where the respondents will simply place a tick in a box for the answers selected. The ultimate aim of this type of interview is to ensure that each session of interview is presented with exactly the identical or same questions in similar order [4, 6]. In addition, the context of the questions is the same for all participants involved in the research. Due to that, the response of research participants can be aggregated and comparisons can be made between the sample for a meaningful analysis [6]. During the interview, the interviewer can still gain (if necessary) any other information to answer the research questions [9]. The advantages and disadvantages of structured interview as described by Bryman [4] are summarized as follows.

Table 1: Advantages and disadvantages of structured interview

Advantages	Disadvantages
It promotes standardization, which will minimize error due to variation in the questions asked.	Interviewers' characteristics and attributes can have an influence on the replies.
As the questions are specific, hence the potential for interviewer's variability is reduced.	As the respondent's answers in a more consistent way, it could lead to irrelevance to the topic being measured.
Closed questions will facilitate the data processing, which will limit potential errors.	May exhibit loss of spontaneity.
Able to clarify the meaning of a question with the availability of answers.	Difficult to establish rapport.
Easy to complete.	

Sources: Bryman [4]

2.1 Types of Interview Questions

They are six basic types of questions that can be asked during the interview as briefly described as follows.

- i. Demographic questions; regarding the background characteristics of the respondents.
- ii. Knowledge questions; factual information possessed by the respondents.
- iii. Experience questions; to elicit descriptions of previous experience.
- iv. Feelings questions; concerns on how respondents feel about things and situation. More directed towards emotional responses.
- v. Opinion questions; aiming to the respondents' goals and values.
- vi. Sensory questions; focus on respondents' observation and past exposure.

3.0 RESEARCH CONTEXT AND METHODS

3.1 Study Populations

Construction industry practitioners with a prominent role in the industry, especially with site experience and involved in site environmental management were the targeted respondents for the survey. These include engineers, architects and senior management representatives of several government departments and private sector. All targeted respondents held senior positions in their organizations for example, general manager, chief supervision engineer, senior executive and environmental manager. Therefore, their responses reflect more on the decision maker's point of view as been supported and agreed by Shi et al. [10]. It was also agreed that the interviewees would remain anonymous in order to encourage an open and frank discussion, which in turn, would enhance the quality of the data gathered.

3.2 Sampling of Respondents

For the purpose of conducting the structured interview, purposive sampling approach was chosen for this study, which involved the practitioners of the Malaysian construction industry including engineers, architects, quantity surveyors and also environmental officers involved in road construction project. Using purposive sampling, the samples were chosen based on their experience in environmental management, especially during the stage of physical construction. The primary consideration in purposive sampling is the judgement as to who can give the best information to answer the questions or objectives of the study [1]. The researcher approached those in his opinion that were likely to have the required information and would be willing to share. In this type of sampling, it is entirely the researcher's judgement to select the respondents based on their ability, compatibility and knowledge on the subject matter. Hence, from several considerations, purposive sampling was the best option to fulfil the study scope and objectives.

3.3 Data Collection Methods

Individual face-to-face interviews were the source of data regarding practitioners' perceptions of the criteria to achieve sustainable construction. Industrial practitioners with a prominent role in the construction industry were the targeted respondents for the survey, especially those with site exposure in supervising and managing the environment from several government agencies, contractors and consultancy firms. The structured interviews involved several stakeholders including government agencies such as Public Work Department, the Department of Environment, the Non-government Organisation (NGOs), environmental consultants, contractor's environmental officers and other selected technical executives from the contractors involved in implementing environmental protection works at the projects site.

3.4 Data Collection Process

The interviews were conducted in-person with key informants and lasted approximately one-and-a-half hours for each session. By using purposive sampling, also known as judgement sampling, it allowed the researcher to use the knowledge of the population to determine whether the sample was the representative of the population or not. The samples were contacted directly through researcher's judgement as who can provide the best information and feedback to achieve the objective of the study. Aside from that, some respondents were also suggested or nominated by their respective head of companies or department to provide the required information. Taking into consideration that the information saturation (saturation point) would be achieved during the interview session, where no new information or data was obtained during the collection, this study should reach an agreement that the numbers of samples were sufficient. This view was also supported by Kumar [1] and Hennink et al. [2]. In qualitative research, data is usually collected to a point where no new information is obtained or it is negligible, which is known as data saturation point. This stage determines the sample size. At this saturation point, the information begins to repeat itself, where further data collection becomes redundant [2]. During the interviews, the respondents were asked to rate the degree of importance of each of the proposed item (criteria) based on a four-point Likert scale as follows: not very important = 1, unimportant = 2, important = 3, and very important = 4. Although the items were largely identified from content analysis in the previous part, it might have been useful to provide an opportunity for the practitioners to suggest others if any. This may lead to the identification of other reasonably important criteria to be considered. In ensuring the reliability of the data obtained from the interview and for the purpose of enhancing the accuracy of this study interpretation, the triangulation concept was adopted for the interview as the respondents came from two major sectors of government and private, and also were not limited to engineers but also include architects, quantity surveyors and environmental officers. Hence, the respondents involved came from diverse educational and technical backgrounds, as well as different experiences and expertise.

3.5 Survey Instrument

Initially, the items (criteria) were identified through systematic literature review and content analysis from the academic and practitioner journals during the previous stage. The identified criteria then became the foundation to develop the question and survey tool that were used for the structured interview purpose. This was a modification of the previous research which was conducted by Shi et al. [11] who produced survey forms based on the items derived from the literature review. Overall, survey forms were developed and were divided into three (3) main components. It was modified from the proposal submitted by Patton [12], who identified six

(6) basic questions that can be submitted during the interview which include; background (or demographic) questions, knowledge questions, experience questions, opinion (or values) questions, feelings questions and sensory questions. However for the purpose of this study, some modifications were made to the construction of the questions. Feeling question was unsuitable for the purpose of the study, hence, it was excluded from the set of questions. The questions that were built could be divided into three (3) sections as follows:

- Part (1) is the part of demographic background of the department or company of the respondents. It covers;
 - Class of contractors;
 - The Contractor Service Centre (PKK) (if the respondents worked with a private construction company);
 - The post held by respondents;
 - Academic and professional qualifications;
 - ISO certified (if any certification); and
 - Number of years of experience in site environmental management.
- Part (2) is related to the information of the supervised project:
 - The average cost of the entire supervised projects;
 - Funding (whether federal or state government projects or private funding);
 - Whether the projects fall under the requirement of EIA (Environmental Impact Assessment);
 - Implementation of environmental management plans for the project;
 - Location of the project site (whether urban, sub-urban or rural); and
 - Location of the state of the project.
- Part (3) contains a list of proposed criteria for achieving sustainable construction. This is the part that requires consideration of two (2) types of questions; the knowledge questions and experience questions, as the respondents have to give the perception of the criteria and classify its level of importance in accordance to the Likert scale.
- Part (4) is a section for open-ended question, where respondents may propose additional criteria which are deemed necessary, and make recommendation to improve the environmental management practices at site. This part includes the opinion (or values) questions, together with sensory type questions as it requires consideration in terms of attitudes and values of the respondents, as well as their personal experience in expressing the views and suggestions for the purpose of improving the environmental management practices at construction site.

All survey questions were prepared in English. However, the use of language during the interview session depends on the comfort of the respondents, where in some situations the use of Malay language gave better understanding to the respondents and facilitated them to issue their statements and views.

4.0 CONCLUSIONS

Structured interview is regarded as a typical form of interview in the survey study. One of the main advantage is it provides uniformity for the information obtained, which assures the data comparability. Structured interview is usually designed to elicit specific answers from respondents to suit the study objective. As most structured interviews are usually very specific, hence the possibility for variability is minimized, which will reduce error and facilitate data processing and analysis. With the selection of this method, the study has focused on the subject matter; hence the respondents are greatly directed to the main study objective.

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