

CHAPTER III

RESEARCH METHODOLOGY

This chapter discussed the type of the research, the setting and time of the research, subjects of the study, sources of data, trustworthiness of data and as well as data analysis techniques.

3.1. Research design

The researcher uses qualitative design that employed a case study approach. Qualitative research is an approach for exploring and understanding the meaning of individuals or groups ascribe to a social or human problem (Creswell, 2014). While Hatch (2002), Vanderstoep & Johnston (2009) added that qualitative research phenomena are examined as they exist in a natural context, and they are viewed from the participants' perspectives. Elaborately, they state that this kind of research does not necessarily offer treatment, nor does it manipulate or change independent variables, but it purely describes a real phenomenon.

On the same note, a case study aimed at analyzing or understanding the features or characteristics of a particular process or phenomenon (Vanderstoep and Johnston, 2009: 210). This current qualitative case study situated within a social constructivist paradigm, which acknowledges that our view of the world is constructed by our own contextually influenced perceptions of our environment (Ritchie & Lewis, 2014). A social constructivist approach to a case study supports an approach where the researcher(s) can have personal interaction with the research and participants (Hyett, Kenny, & Dickson-Swift, 2014). In this situation, the researcher described the meaning of phenomenon from the views of participants. Whereas case study was used and intended upon to draw the voice of learners to gain deeper insight into an issue, and to advance our understanding through analyzing and obtain information on safety of physical play ground or outdoor space in elementary education at Yahya Christian Elementary School in Bandung.

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3.2. Place and Time

The current research study was conducted at Yahya Christian Elementary School in Bandung, Indonesia. The choice of the place was based on the affordability of the research field to the researcher such transport and other costs are kept at minimum. The school was chosen since information can be gathered in relation to the study title and because the school uses Indonesian National Curriculum (Kurikulum 2013) which contains the standard guidelines or measures that suit the issues in the current study about physical playground establishment and expectations in primary school. Beside that participants will help the researcher to gain in depth information during interview since they can communicate in English instead of Bahasa Indonesia to avoid language barrier. Time for data collection and analysis was from late December 2018 to mid-February 2019. Data were collected during the agreed times by the school and the researcher due to the participants convenient time to avoid interrupting normal timetable sessions and business hours of the school operation.

3.3. Research Subjects

Population is the group of interest to the researcher, the group to whom the researcher would like to generalize the results of the study (Fraenkel, & et al, 2012). The population for this study comprises of grade 1-4 teachers and learners, the targeted population were teachers according to their experience for teaching in primary or elementary grades and previously taken part in research. Purposive sampling was utilized in this study. Gay et al (2009) is of the opinion that purposeful or purposive sampling is the most common form of sampling in case study research as the investigator can select cases that are information-rich or from which a researcher can learn a great deal about the problem and get comprehensive understanding.

Therefore 2 elementary teachers were asked to participate in the research interview through audio recorded. The type of purposive sampling is criterion sampling as all the teachers have gone through teacher training programme for early childhood education or elementary grades. Given that, a group of four learners aged 11, each from different elementary class was conveniently selected to participate in the semi-structured interview with the researcher. While observation was done on the playground and the subjects were learners from different grade streams who were using the playground and play equipment that time.

3.4. Data Sources

In this study three types of research instruments were utilized to collect qualitative data. Thus qualitative data were collected through semi structured interviews, observation as well as documentation. The following is a brief description of how each technique and instrument were used.

3.4.1. Semi-Structured Interviews

Gay et al (2009) defined an interview as a “purposeful interaction in which one person obtains information from another” p370. Semi-structured format and the open-ended questions were designed to encourage participants to openly reflect and encourage multiple perspectives rather than consensus (Krueger & Casey, 2000) in (Walters, Duncan, Mcphee, & Atkins, 2018). In this study, the researcher used semi-structured interview guidelines as data collection instrument that was specifically designed to elicit information from teachers and learners from Yahya Christian Elementary School in Bandung.

It is stated that this kind of interview is widely used in qualitative research as it helps the researcher to comprehend the participants’ knowledge, experiences and point of view about issues under investigation (Tracy, 2013: 139). Thus, semi-structured interview guidelines or questions were formulated by the researcher primarily based on the Social-Ecological Model framework. See appendix 11 and 12. Interview was important to extract

data on students intrapersonal (individual) reactions or perceptions plus their views on interpersonal (social interaction skills) with each other. A sample of questions utilized, to demonstrate the application of a Social-Ecological Model framework, is presented in Table 1.

Teachers were interviewed for 20 minutes while learner’s interview scheduled for 15 minutes. Teachers were interviewed individually on their leisure time. Due to hectic school schedule and the need for learners not to miss any lessons, they were interviewed in pairs provided each learner was asked the same questions that the peer is asked. The researcher tried to get as much information as possible from each question and used the audio recorder to record the conversation. The researcher ensured that all the participants have an opportunity to respond and field notes were taken to allow easy analysis.

Table 1: Sample semi-structured interview questions applying a Social-Ecological Model

Social-Ecological Model Component	Sample question
Intrapersonal (Individual)	<ul style="list-style-type: none"> • Do you think a safe play space is fun? • Do you think a safe play space is boring?
Interpersonal (Social)	<ul style="list-style-type: none"> • What would you include to play safely with your friends?
Physical Environment	<ul style="list-style-type: none"> • Do you feel safe in the playground where you play?
Policy/Organizational	<ul style="list-style-type: none"> • How supervised is your school play space?

3.4.2. Observations

Observation is one of the data collection techniques that were used in this research study. Observation is described by Heigham and Croker (2009: 166) as an act of conscious noticing and detailed inspection of participants’ natural occurring behaviors in a given naturalistic setting. Observation is the process of gathering open-ended, firsthand

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information by observing people and places at a research site (Creswell, 2012:213). In addition to that, Heigham and Croker state that observation is used to specifically gain a deeper understanding of the behaviors of participants during the process of teaching and learning rather than passing judgments about them. Observation guidelines formulated based on the Social- Ecological Model framework were used this is represented by appendix 13. Observations were done to assess and elicit information on the features of the physical playground. For the school chosen, in this study the researcher visited the school playground at different times and used observation guides as an instrument to record/memoing the safety features and attitudes of learners on playground. Pictures were taken on the observation site, to support the findings. The researcher observed 7 times for two weeks at the school.

3.4.3.Documentation

The researcher also used documentation as data collection technique. Documents are a form of data collection technique in qualitative research because they provide rich information that is not only authoritative hence credible, but also both objective and factual (Denscombe, 2010: 217). Thus, in order to get rich information that is credible, objective and factual from various documents, a document study approach was employed in order to gather clear evidence in Indonesian context on how primary school physical playground should be planned and established in schools according to standard guidelines and expectations that are put in place by the government. The target documents for analysis included government policy or curriculum for Primary grade, syllabus for Physical Education and playground rules document formulated by the school among other available documents. Unfortunately they don't have playground rules formal document in place

3.5. Data Validity

In case studies, there are usually different techniques that can be used to check the validity and reliability of the data. One of the common practices of ensuring the quality of

the research is through triangulation. This study employed three data collection techniques. This means that gathering data from multiple sources will strengthen the credibility of the data thereby increasing its validity. Put simply, data obtained from all techniques will be used to authenticate the worthiness of the research findings. Again, to ensure validity and reliability, data collection instruments went through peer review and expert judgment validation process. Last but definitely not the least, in order to ensure the credibility and accuracy of data, data transcription from the participants had gone through the process of respondent validation, or member check as Creswell (2012) puts it, before an analysis done. Responded validation is very crucial in qualitative research as it remarkably reduces personal bias and misinterpretation of data (Denscombe, 2010: 299).

Furthermore, preliminary observation was carried on a playground that has play equipment at elementary schools in Bandung. Instruments has been also validated by carrying a preliminary study on the same topic in four schools (2 urban and two rural) in Namibia. Whereby the participants were three female teachers and one male teacher; all of them were primary grade teachers. This was done due to their teaching experience in elementary grades and background information on playground. In addition to that, the observation guidelines were adopted from Hyndman, Telford, & Telford (2015), who conducted out the related study in Australia.

3.6. Data Analysis Techniques

Data analysis is central to credible qualitative research (Maguire & Delahunt, 2017). According to Suter (2012), qualitative data are often organized into reduced but meaningful chunks (categories/themes). Thematic analysis is the most common and the simplest form of analysis in qualitative research (Javadi & Zarea, 2016). Thematic analysis is the process of identifying patterns or themes within qualitative data (Maguire & Delahunt, 2017). The goal of a thematic analysis is to identify themes for instance; patterns in the data that are important or interesting, and use these themes to address the research or say something about an issue (Clarke & Braun, 2013). In this current research thematic

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analysis technique was employed whereby themes were used to categorize information obtained from all methods i.e. observation, documentation and semi-structured interview. In applying categories and themes to analyze data, the research study adopted a Social-Ecological Model levels of school playground safety influences initiated by Hyndman, Telford, & Telford (2015).

The model comprises of four levels or themes which were used to analyze the data, namely: intrapersonal (individual), interpersonal (social), physical environment and policy/organizational level. According to Clarke & Braun(2013) themes are coherent and meaningful pattern in the data relevant to the research questions, the research themes are also presented in relation to the study research questions. This is much more than simply summarizing the data; a good thematic analysis interprets and makes sense of it (Clarke & Braun, 2013). One of the advantages of thematic analysis is that it is a flexible tool which can potentially provide rich outcomes when analyzing interviews (Mohamed, 2016). Thematic analysis not only provides a flexible method of data analysis in qualitative research, it establishes the more systematic and explicit form of it without threatening depth of analysis (Javari& Zarea, 2016).

3.7. Research Procedure

The purpose of this study is to analyze and provide an insight feedback on the issue of the physical playground safety in Indonesia. In order to achieve these goals, the following are the formal processes that were followed in this research:

1. Preparation phase
 - a. Identify the problem and literature review
 - b. Observation of physical playground or outdoor spaces in schools
 - c. Preparation of observational field notes on safe playground equipment's plus interview questions for both teachers and learners

- d. Expert judgments and peer reviews of observational field notes and interview questions
 - e. Prepare items that can be used to conduct the study
 - f. Seek formal entry to the research field by presenting a formal introductory letter to the school, which intended to grant permission for the researcher to enter into the desired field: Yahya Primary School (Appendix 2 and 3). Research subjects identified (2 teachers and 4 learners), were explained the purpose of the study and they were told when the study will commence. Research subjects: teachers and parents of learners that participated in the study signed consent forms as a proof that they teachers were willing and parent authorized their children to take part in the study (appendix 5 to 10).
2. Implementation phase
 - a. Observe playground at the school
 - b. Interview session
 3. Data analysis phase
 - a. Analyze the results of the play ground
 - b. Analyze interview results
 - c. Writing research report
 - d. Presentation of the report

3.8. Research Ethics

The researcher obtained a permission letter from UPI and also a letter asking for permission was written and addressed to the principal of Yahya Christian Elementary School. The whole study is free from plagiarism and the study is the original work of the researcher and other ideas and materials were obtained from other sources that are cited and referenced in the study. Recently, there has been increased global concern towards the involvement of children in research for the protection of their rights by the ethical research practice. It emphasizes upon the ongoing nature of ethical considerations that ethical issues

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need to be considered throughout the research process and even the post research ethical issues are equally significant (Ferdousi, 2016).

Informed consent should be obtained from legal guardians for individuals unable to provide consent example, young children (John et al., 2013, pg.67). Since children under the age of 18 formed the subjects of the research and taking into consideration issues of confidentiality for participant's identity, informed consent letter (appendix 7 to 10) were presented to all parents of children that participated in the study, outlining the purpose of research (Evelyn & Rita 1982). Thus respondents were informed in detail about the purpose of the research and what it entails before they participate. Teachers who have participated in the study were also provided with letter of consent.

According to Evelyn & Rita, (1982:161) throughout a project, researchers are responsible for the safety of the subjects, as well as the protection of their rights. While Markowska-manista, (2018) added that the protection of rights, including the right to safety, and the consideration of the needs of children as vulnerable research participants irrespective of their place of living or the country of temporary stay, should be inherent elements of all research conducted with children. Thus, it is the obligation of researchers to protect both the rights and welfare of research subjects. Hence, children should be given the chance to express their opinions, learn about themselves and their rights, while research activity must be regulated and the researchers must ensure that their rights of consent, confidentiality and unobstructed communication are protected at all times (Ferdousi, 2016).

Therefore in order to safeguard and promote the rights, dignity and well-being of children in and through research, the researcher did her best and informed the children that she respect their right to withdraw from the research at any stage. Researcher maintained high standards of professional conduct and intellectual honesty in the conduct of the research. Participants were treated with dignity, and their rights were protected. Individuals were asked to voluntarily participate in the study. Nobody was forced to take part.

For child protection and well-being: research involving children is important for the benefit of all children and should be supported, encouraged and conducted in an ethical

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manner (Ethics guidance 2012). In the course of research, to make children free and open up during interview, they were interviewed in pairs provided they are asked and given chance to answer same questions individually this was done in the presence of a teacher sitting on the background to protect learners' well-being without jeopardizing or interfering in the study. In Indonesia context pictures remained an important aspects of social life and learning, therefore pictures were taken during observation and interviews and they are also used in the thesis per agreement made by the researcher and the place of researcher. However pictures or photo showing learners is prohibited and withdrawn in case of publication.

The data and results of the study should be handled and communicated with great care (Evelyn & Rita 1982:161). In this case confidentiality of the audio recorded will not be leaked or shared and results for each subject are respected. The participants remained anonymous throughout the study and the information will be treated confidentially. Personal details such as names were not recorded. As part of an ethical approach to the research at the end of each interview the interviewee were thanked and asked if they will mind if the information is shared.