CHAPTER III
RESEARCH METHODOLOGY

Chapter II has discussed literature related to this research, including underlying theories of professional development programs, PISA Reading, and text-based instructions introduced in the program. This chapter provides further explanation about the research methodology conducted in this study, including the purpose of the study, the research questions, research design, subject, research site, data collection procedure and analysis, and research ethics. The discussion will begin by restating the purpose of the study and research question. It will be then followed by the research design in Section 3.2. Details in regard to the professional training program under this study will be further elaborated in Section 3.3.1. In regards to the data collection and data analyses process, it will be elaborated in Section 3.4 and 3.5.

As stated in previous chapters, the present study aimed to explore the way a training program helped the teacher in teaching PISA-like reading through the use of text-based instructions introduced in the program which is an approach resulted of a synthesis of GBA-R2L and PISA Reading. The researcher took a look at the data obtained from the training program after it finished and endeavored to address the question:

1. How does the training support teachers to improve their ability in teaching PISA-like reading?
2. What changes can be seen in teachers teaching practices as the results of the training program?

In addressing the question, the researcher focused on identifying: 1) professional development processes and practices that resulted in teacher learning to teach PISA-like reading; and 2) features of the training program that leads to teacher's improved knowledge, practice and beliefs. This was done by employing research design, data collection and data analysis processes elaborated in the next sections

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3.1. Research Design

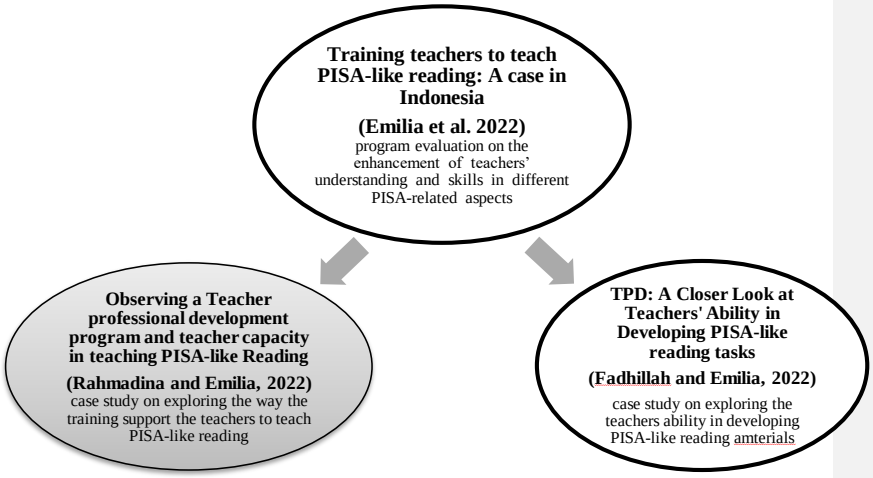
The present study intended to explore and have a look at the implementation process of a professional development program on training teachers to teach PISA-like reading. Hence, a qualitative case study was chosen as it could allow the researcher to gain a comprehensive overview of the professional development program under the study; its logic, arrangements, explicit and implicit rules (Malik & Hamied, 2014). The use of case study in the present study would give the researcher a way to identify issues from the perspective of participants and understand the meanings and interpretations that they give to the training program when it was happening and after it has finished through an intense contact with the subject, which in this study context, are specifically arranged for three English language teachers involved in the program. This is in line with (Moore et al., 2012) who elaborated that case study is an analytical approach employed to investigate a complex phenomenon such as recent events, important issues, or programs in-depth to gain deeper understanding of the phenomena. It provides an organized way of looking at events, collecting data, analyzing information, and reporting the outcomes and it may emanate a sharpened understanding of why the instance happened (Cresswell, 2013; Merriam, 2009).

In this research, the researcher explored the way the program nurtures the teachers' ability to teach PISA-like reading for their classroom practices within a designated situation and time (the case, bounded system) using several sources of information (participant observation, interview and document analysis) in order to gain a sharpened understanding of the phenomenon as it focuses on the concept of case, the particular example or instance from a class or group events, issues or programs and how people interact with components of this phenomenon as suggested in Cresswell, (2013) and Moore et al. (2012). The program and the teachers were the center of the case as a small group of social units within the exploration of the teacher professional development program as a way to nurture the ability in teaching reading. The process of exploration itself was done through the lens of theories on professional development programs (Darling-Hammond et al., 2017; Desimone, 2009; Ingvarson et al., 2003,

2005), PISA Reading (OECD, 2019a) and text-based instructions which has been further elaborated in Chapter II.

As has been previously mentioned in Chapter I, the training program under the study lasted for six consecutive meetings for more or less four months beginning from late March until early June 2021. Other results of the training program as a professional development measure has been reported in a joint study conducted by (Emilia et al., (2022); Rahmadina & Emilia (2022) and Fadhillah & Emilia (2022) which mainly focused on the training program and its impact on the teachers' ability in developing PISA-like reading materials. Nevertheless, these studies addressed that its impact on the teachers' teaching reading ability has not yet been explored in greater detail although materials on teaching PISA-like reading through reading instruction have also been provided. Hence, the researcher is interested to explore how the program has provided help and insight for the teachers in teaching PISA-like reading materials. Figure 3.1. illustrates the difference between the larger study and other studies conducted under the umbrella of the larger study.

Figure 3.1. The larger study and other studies under the umbrella of the larger study.



To further differentiate this study and other studies mentioned under the same umbrella of the study, the difference between what has been studied in the larger study conducted by Emilia et al. (2022) and the objective of this study is illustrated in Table 3.1.

Table 3.1.

Difference of objectives in the larger study and in this study

Objectives of the larger study conducted by Emilia, et al. (2022)	Objectives of this study
1. Developing a model of teacher training program on teaching PISA-like reading materials 2. Training teachers to develop PISA-like reading materials 3. Training teachers to teach PISA-like reading materials through the use of text-based instruction 4. Conducting program evaluation to see positive impact and improvements that can be made 5. To identify the value of training program in helping the teacher to teach PISA-like reading	1. Exploring how the program support the teachers to teach PISA-like reading materials through text-based instruction 2. Exploring changes in the teachers' knowledge and practice as a result of participating in the training program

Commented [KR1]: Aligning the objectives of the study with the research questions

Even though the training program has been concluded, the researcher took part as an research assistant for the trainers during the time of training. This allowed the researcher to have intense contact with both the training program and its participant as participant-observer during the input sessions while the program was still on-going, which is in line with one of the characteristics of a case study, that is to be in close contact with the program being studied to understand the process in-depth (Cresswell, 2013). Nonetheless, the role of the researcher as an assistant in the training program and as a researcher in the present study has to be made clear. The roles are summed up in the following table.

Table 3.2.

The researcher's role in the larger study and training program

Role as administrative assistant in the larger study	Role as researcher in the larger study
1. Administrative assistant for noting the participants' attendance 2. Posting materials that has been prepared by the trainers in Google Classroom 3. Being in charge to be the master of ceremony and moderator between input of the training program 4. Recording the process of the training program in written and video form	1. Exploring the process of the training program that has been obtained through the video and written recording of the training program related to the training of teaching of reading 2. Gathering additional data for the research from participating teachers and participating trainers 3. Interpret, analyze and discuss the data obtained from the training program and participants

The researcher took a look and explored the training program through the recording of the input sessions that the researcher took in written and video form while the program was still on-going. The data obtained are then interpreted, analyzed, and discussed in Chapter IV. More on the training program, data collection, and analysis process will be discussed in the following sections.

3.2. Site and Participant

The research took place in the first phase of a teacher professional development program on training teachers to teach PISA-like reading that was conducted online. The researcher was actively involved in the training acted as research assistant, and had the chance to observe the interaction between the instructors and the teachers participating in the training program as well as the design of the program when it lasted. The program lasted for four months beginning from late March to early July 2021 with six consecutive meetings. It was conducted through Zoom video conferencing platform due to the current pandemic situation. Teachers participating in the training programs include ten Indonesian language teachers and fourteen English language teachers in West Java, Indonesia. This present study focused on only English teachers participating in the training program. Specifically in exploring the teachers' process of change in detail, this study selected three participating English teachers as participants of the study. This is further elaborated in the next section.

3.2.1. Participants of the study

Participants of the study includes the training program and the participating teachers. In the larger study, there were twenty-four teachers participating in total with ten Indonesian language teachers and fourteen English language teachers. Relevant to English Education, the present study only focused on the data obtained from English language teachers participating in the training program. This study looked at the process of the training program experienced by the fourteen English teachers and explored the activities provided by the training program, including interactions during the training.

In order to reveal the effect of training on the teachers, this study also took the teachers' peer teaching experience within the program into account. To discuss the result in depth, the data on the teachers' peer teaching practice in teaching PISA-like reading in the training program was limited to three teachers who were chosen based on the researcher's judgement on who can give the best information (Kumar, 2014). At the time of training, the Covid-19 pandemic was still ongoing and some teachers had to miss one to two sessions of the training inevitably as they were infected by the Covid-19 virus. Hence, the three teachers chosen were the teachers who never missed a session in the training program and conducted both of their peer teaching sessions done considering the time and space limitations of the training program. This was also done to ensure that the three teachers selected experienced all the learning activities provided by the training program. Table 3.4 illustrates the participants and schools of the English teachers in this study.

Commented [KR2]: Making the participants of the study clear: 14 teachers vs 3 teachers

Commented [KR3]: Adding more reason in the selection process

Table 3.4
Participants of the study

Focus of exploration	Participants	Levels

Commented [KR4]: Differentiating focus of participants in the training program

Professional development experiences in the training program	14 Participating English teachers	Senior High and Junior High School
Change in the teachers' as a result of participating in the training program	Indah	Senior High School
	Dian	Senior High School
	Fajar	Junior Hig h School

The names of the teachers are written in pseudonyms to ensure the confidentiality of the teachers' personal information. The teachers voluntarily became participants and subjects of the study upon being given information about the training program and the study.

3.3. Data Collections

This study employed several data collection techniques, which include observation of the phase of teaching in the training program, observation of teachers' peer teaching practice, interviews with the teachers and document analysis (questionnaires obtained from the training program as well as the teachers' lesson plans).

Commented [KR5]: Aligning the data collection process with what was written in abstracts

As has been previously mentioned, in order to answer the research question, this study focused on identifying professional development processes and practices that result in teacher learning to teach PISA-like reading and the changes that may or may not occur as a result of professional development activities. In order to do so, data collection process is divided into two (see Table 3.5).

Table 3.5.

Data collection

Identifying professional development	Identifying the professional development

activities and processes	impact
- Observation of the phase of training in the training program - Data from interview with the teachers - Documents: questionnaire at the end of the program document analysis of materials	- Observation of three pre- and post- input peer teaching session - Stimulated recall of their peer teaching session - Data from interview from the three teachers - Document analysis (the three teacher's lesson plan)

Observation of the phase of the teaching in the training program was conducted to explore the kind of input provided by the training program that could contribute to the teachers' professional learning in teaching PISA-like reading.

In order to see the process of change in the teachers' teaching practice in teaching PISA-like reading, observation of the teachers' peer teaching practice during the program was also conducted. Each peer teaching session lasted for around twenty minutes for one teacher. The researcher is aware that the teachers' ability in teaching reading before and after the training program could not be generalized just based on the peer teaching practice. Therefore, the teachers' lesson plans that were submitted by the teachers before the peer teaching session were considered as supplementary data in exploring the teachers' change in teaching practice. This is in line with what is suggested by (Nunan, 2013). As the researcher could not obtain much data on what the teachers are able to do before taking part in the training program, several data collection techniques are involved to provide a snapshot of their ability before and after taking the program, such as their ability in lesson planning and peer-teaching practice.

Furthermore, to gain a better understanding of the teachers' experience as the participants of the program, interview sessions were conducted. The three participating teachers in the study (see Section 3.4.3.) were interviewed to talk about their experiences of teaching reading before and after participating in the training program. More about the interview is elaborated in Section 3.4.3.

3.3.1. A Phase of Teaching in the Training Program

The professional development program under this study is a training program organized by three state universities in Bandung which aimed to conduct research and to develop a teacher development program that could help teachers to teach reading and improve students' literacy skills through the use of SFL's text-based instruction. The researcher was involved in the training program as administrative assistant, and helped the instructors run the training as has been previously illustrated in Table 3.2. Other findings and discussion of this training program, as has been previously mentioned in abstract and Chapter I, have also been reported in Emilia et al., (2022) which highlighted the training's success in developing teachers' ability in developing PISA-like reading materials and Rahmadina and Emilia (2022), which highlighted the teachers' initial ability in teaching PISA-like reading. In regards to teaching PISA-like reading ability, this collaborative research project intended to synthesize the 'building of knowledge of the field' stage of the Systemic Functional Linguistic Genre Based Approach (SFL GBA) with 'prepare for reading' and 'detailed reading' of Reading to Learn (R2L) program developed by Rose and Martin (2012) as the model for teaching reading to be introduced in the training program for twenty four Bahasa Indonesia and English language teachers with the goal to enhance students literacy.

The program lasted for three months with a total of six meetings conducted weekly with various input that includes knowledge of measuring text difficulty through lexical density, reading test items and the text-based instructions to teach reading (SFL-GBA and Reading to Learn). In the training program, the researcher took part as an assistant for the trainers and researchers in the larger study, mostly for administrative tasks (see table 3.1). During the input session, the researcher took part as a full non-participant observer. The topic and materials for the input session can be found in Table 3.3.

Table 3.3.
Topic and materials in the training program

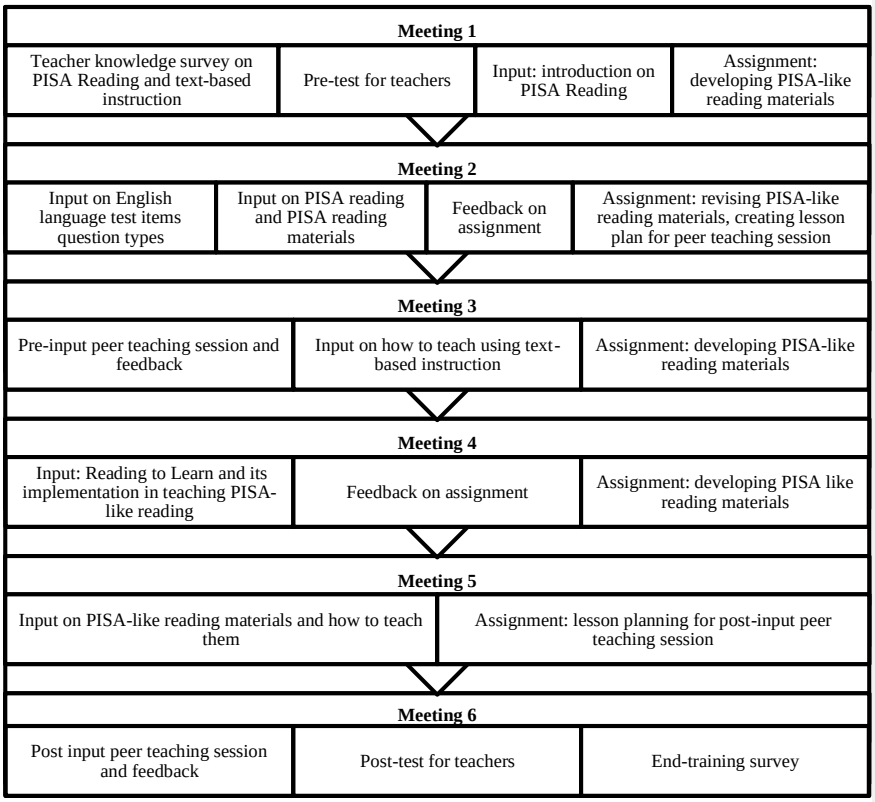
	No.	Date	Training Materials	Duration (Hours)		
				Synchronous Learning	Asynchronous Learning (Structured	

				Assignment)
1	20/03/21	PISA: What is it and why?	6	2
2	27/03/21	Logical Reasoning Question Types	6	2
3	10/04/21	Factual Texts and Planning How to Teach Each Text (Peer Teaching Session 1)	6	2
4	24/04/21	Reading to Learn and its Implementation in Teaching PISA-like Reading	6	2
5	05/06/21	Discussion on PISA-like reading materials and items and how to teach them	6	2
6	07/07/21	Peer Teaching Session 2 and Post-Test	6	2
Subtotal			36	12
Total			**48**	

No.	Assignments	Duration (Hours)	
1	Developing PISA-like items	8 x 4 set	32
2	Lesson planning	4 x 2	8
3	Peer teaching video making	2	2
Total		**42**	

As seen in Table 3.3, the program was conducted with one meeting lasting for eight hours a day, with six hours of synchronous meetings through a video conferencing platform and two hours asynchronous meetings for doing the tasks given by the training program. The program consisted of a variety of activities including pre- and post- test on PISA-like reading test items, interactive lectures, peer teaching and feedback sessions. Briefly, the activities done in the training program are illustrated in Figure 3.2.

Figure 3.2. Set of activities in the training program



This research considered all of the activities conducted in the training program related to training teachers to teach PISA-like reading in the attempt of exploring the programs' professional development endeavor, which will be further elaborated on in Chapter IV.

As has been previously mentioned in the background of the study (see section 1.1.), this study is a part of a larger study on a professional development program that trains teachers to develop PISA-like reading materials and tasks and how to teach them. This program was conducted from late March to early July 2021. Hence, the data on the phase of teaching in the training program were already obtained and recorded in a

form of written field notes and video recordings by the researcher as administrative assistant of the training program.

The training was conducted weekly every Saturday beginning from late March until the beginning of July. Each of the meetings had three sessions, with three input sessions on the first meeting, two input sessions on the second meeting, and one input session each on the third and fourth meeting. The researcher of this study took part in the training as a research assistant, organizing administrative duties of the training while also observing and noting down the input sessions, including the interactions between the instructor and teachers. As an observer, the researcher wrote the observation notes simultaneously as the instructors in the program provide input for the teachers by focusing on what was said and done by the instructors and the teachers in the interactional setting of the program in order to gain a comprehensive insight of how the program scaffold the knowledge on teaching PISA-like reading for the teachers. In addition to observing the interaction, the researcher also took notes on the characteristics of effective professional development programs that emerge from the program (see Chapter II, Section 2.3). The observation results were used to provide context for specific incidents, behaviors and so on that can be used as reference points for subsequent interviews (Merriam & Tisdell, 2016).

The interaction between the instructors and teachers in this study is of benefit for the research to answer the research question and will be elaborated by the researcher to explore how the training helps the teachers enhance their teaching reading practice.

3.3.2. Observation of the Teachers' Teaching Practice

Previously, it has been discussed that the researcher has taken part as research assistant and has observed all of the activities in the teacher development program held in collaboration of the three state universities in Bandung by the instructors. The observation of the phase of teaching in the professional development program focused on fourteen participating English teachers as well as the instructors. However, in exploring the teachers' teaching practice in teaching PISA-like reading, this study

focused on only three teachers, as has been mentioned in Section 3.3.1. This is done so that any process of change in the teachers' practice can be explored in more depth.

Commented [KR6]: Highlighting the number of participants in observation of teachers' teaching practice (limited to three teachers only)

There were two peer teaching sessions in the training program. The first peer teaching session was conducted before the teachers had any input session on teaching PISA-like reading. This would provide a snapshot of the teachers' ability in teaching reading prior to the training. The first peer teaching session was also considered as a point of departure for the second peer teaching session.

Observations in the second peer teaching session were conducted to review if there was any change present in the teachers' peer teaching practice after the input on teaching PISA-like reading. This observation is particularly important to conduct as it could also give a snapshot of the teachers' professional learning experiences from the training program. The result of observation was then descriptively elaborated on field notes and supported by evidence to strengthen observation results (Merriam & Tisdell, 2016).

To promote the reliability of the observation, the researcher invited another researcher to observe the program to check her observation and ensure accuracy of the observation and reduce bias. The field notes of the observation are then combined and condensed (See Appendix A, Training program field notes).

3.3.3. Document Analysis

This research also employed analysis of documents as a data collection technique. The documents analyzed were considered for the context of this study: questionnaires that were distributed by the training program, and the teachers' peer teaching lesson plans during the time of training.

3.3.3.1. Questionnaire at the end of The Training Program

In order to find out the teachers' response to the program as soon as the training was finished, the training program distributed survey questionnaires for the teachers. The questionnaires were developed based on the characteristics of a well-designed professional development program suggested by Darling-Hammond et al., (2017). It

involved open-ended questions related to what they have learned in the program, including knowledge on PISA Reading and the SFL's text-based instruction and how they think it has contributed to their professional learning process. This was done to get immediate feedback from the teachers' point of view about the program and the impact they think it has on their ability to teach reading.

As this questionnaire was developed by the training program and not by the researcher for the purpose of this study, this questionnaire is considered a document which would be further analyzed. This questionnaire is used in this study as a supporting data of the observation of the training program. This would allow the researcher to triangulate the data which would strengthen the result of the study (Cohen et al., 2018; Cresswell, 2013). Through the questionnaire, the researcher aimed to further explored the participating teachers' thoughts upon participating in the training program

3.3.3.2.Lesson Plans

Lesson plans as a form of documentation were the second source of documents to be analyzed in this study. In order to explore how the teachers would translate the knowledge they had before the training program and after participating in the training program, this research analyzed the peer teaching lesson plans written by the three selected teachers before and after the intervention of the program's input. This were done with intention to provide support to the observation result of the pre-to-post-training changes in teachers' ability to teach reading.

Lesson planning is the process of putting the knowledge of teaching and learning and the students to design one lesson (Purgason, 2014). Lesson planning is an important aspect in teaching and learning activity as it could produce a unified lesson and ensure the lesson to flow more smoothly (Ashcraft, 2014) Furthermore, it can also serve as evidence of the teachers' professionality as well as their way to evaluate their knowledge as a teacher (ibid.). This research used three teachers' lesson plan as a way to observe the three teachers' change in knowledge and practice before and after the

training program, as an addition to the peer teaching observation in order to triangulate the data.

Lesson plans can differ in terms of forms and templates, nevertheless, it has several core elements that includes: learning objectives or learning outcomes, procedures (sequencing, timing, grouping), teaching materials, contingency plan, and assessment (Ashcraft, 2014; Purgason, 2014). In planning a reading lesson, the structure of the lesson plan usually organised according to the pre-skill practice, during-skill practice, and post-skill practice (Ashcraft, 2014), which is in line with the teaching reading activities in Wallace (1992) and Emilia (2011). The reading activities will reflect based on the learning outcomes the lesson seeks to achieve. The learning outcomes could be to increase the students' skimming or scanning rate, identify main ideas in paragraphs, make inferences, answer comprehension questions, and more (Day, 2020). Regadless of the activity, however, the teachers should ensure that reading should be the major activity of the reading lesson (Farrell, 2009).

Elements of lesson plans above is in line with the theory of lesson planning in R2L Method that has been discussed in Chapter II (see Section 2.7.2.). This research will consider review core elements of the lesson plans, the structure of the lesson plan, as well as the activities written in the lesson plan based on the theories discussed above.

3.3.4. Interview

After the training finished, one-on-one interviews with the three participating teachers (See Table 3.4.) were conducted face to face (online) through Zoom video call. This was done to investigate the teacher's thoughts, emotions, and response on their experiences upon joining the teacher development program and the knowledge they obtained for teaching PISA-like reading in more depth. Open-ended questions in a semi-structured interview format are arranged in order to gather diverse and in-depth answers regarding the professional development program (Merriam & Tisdell, 2016) and their thoughts of the changes they felt upon participating in the training program.

The interview with the three teachers, Indah, Dian and Fajar was conducted once after the program has finished. It was done at a time where the teachers are

assumed to have tried implementing the knowledge on PISA Reading and the instruction promoted by the program. This is to see how far the training program impacted the teachers' practice after participating in the training. The questions for the interview were developed by taking the characteristics of effective teacher development programs into consideration, as well as the aspect of impact resulted from the training (Ingvarson et al., (2003, 2005) (See Chapter II, Section 2.6.). The interviews were conducted both in Indonesian and English in order to ensure a comprehensive and flexible answer from the participants.

3.4. Data Analysis

The data that were obtained from participant observation, interview, questionnaire, and document analysis in this research are descriptively elaborated using a triangulation technique as it could further validate the data gained through the observation and interview, as aligned with Cresswell (2013) "in triangulation, researchers make use of multiple and different sources, methods, investigators, and theories to provide corroborating evidence.

As there is no set formula that the researcher can follow in interpreting qualitative data, the researcher will follow the common steps of data analysis process as synthesized from Cresswell (2013), Gibbs (2008), Marshall & Rossman (2016), Newby (2014) and Patton (2014), which is sequenced as follows:

1. Preparing and organizing the data into formats and systems that will ease the analysis process (e.g., transcripts of interview; field-notes of observation, etc.)
2. Describing and presenting the data
3. Analysing the data (exploring and making meaning out of the data; doing coding, creating linkages and relationships between the data, doing a thematic analysis, etc. More on this can be found in Cohen [2018, p. 644])
4. Interpreting the data
5. Drawing conclusions

6. Reporting findings
7. Ensuring accuracy, reliability, coherence and corroboration, validity and reliability.

In interpreting the data, the researcher will follow thematic analysis as proposed by (Braun & Clarke, 2006) by focusing on identifying themes, (patterns of meaning) in qualitative data. To add on, data will be coded and developed directed by the content of the data (inductive way) and is organized through theory generated-themes. The potential themes for data interpretation is as follows:

1. Characteristics of well-designed TPD emerged from the program as according to Darling-Hammond (2017).
2. The pre-to-post teacher's ability in teaching reading
3. Other factors that contribute to the result of the program.

The data from observation is organized to fit the themes. The interview result is also transcribed and categorized following the initial themes that had been set above.

3.5. Ethical Considerations

Prior to the study, the participants were informed of what the study will be about and what they are expected to do in the training. All participants involved in the study were those who had agreed to participate upon being given the information.

This research has also ensured that all personal information of the participants and the school will be kept confidential. All names mentioned in the study are pseudonyms. The interviews and classroom observations will also be conducted after being agreed upon by the teachers.

3.6. Conclusion

This chapter has focused on the methodological description of the study, including the research design, subject and research site, data collection and analysis process, along with ethical considerations for the study. The findings and discussion resulted in the research will be discussed in depth in the following chapter.