From an expert to a beginner: A reversed experience in becoming a novice qualitative researcher

Suhaily Abdullah[1,*], Faizah Abd Majid[2]

[1] General Studies Department, Politeknik Jeli Kelantan, Malaysia
[2] Education Faculty, Universiti Teknologi MARA Puncak Alam, Selangor, Malaysia

Abstract

This case study takes a narrative form to illustrate the involvement of an experienced English Language lecturer as a novice qualitative researcher. It is meant to highlight the issues mostly occurred at the organization stage of data analyses. This sharing serves as the main purpose of this study. Several mistakes occurred despite of the researcher's attempts to learn qualitative procedures and to adopt them into her on-going qualitative inquiry investigation. To identify and explore these mistakes, respondent's personal experience as a novice researcher was reflexively analysed potential themes. Some written literature justifications accompanied the related issue to support the narrative explanations. Based on the findings, it can be concluded that (1) losing track and (2) lack of clarity are the contributing factors to the issues faced by the researcher. These factors disrupt researcher's efforts to arrange the data as she struggled to decide on how to run the analyses. The recommendations to minimize the mistakes in organizing the results of qualitative analyses are included as a guide for future novice researchers.

Keywords: *Qualitative Research, Novice, Data Analysis, Mistake, Autoethnographic*

Introduction

The acceptance of qualitative orientation in educational research has gained favourable attentions by social science researchers. The nature of the subjects being studied influences them to conduct the study in that particular orientation. Furthermore, the exploratory and understanding concepts related to sample characteristics and research scopes influence their preferences (Clark & Creswell, 2010). Besides that, reserving the natural setting as a study site, acknowledging emergent design of the study, varying multiple sources of data used and allowing interpretive inquiry are

suhaily.abdullah@gmail.com

also considered as the contributing factors (Creswell, 2007). Hence, different research designs have appeared and have been employed by the qualitative researchers. One example of research designs is an autoethnographic method. Even though autoethnography is a transformative research method that promote deeper personal narrative, the issue related to the level of honesty, the consistency of revelation and the ethical consideration limit its application (Custer, 2014; Ellis, Adams & Bochner, 2010; Ellis & Levy, 2009; Mendez, 2013). However, the researchers of this case study decided to depart from these criticisms and carried out their first autoethnography attempt to conduct this case study.

Basically, the study shares the details of the issues faced by a novice researcher, Hany. The focus of this study is solely meant to explore Hany's experience as a qualitative researcher. It is hoped to add a few more findings to the existing literature on issues faced by the novice qualitative researchers. Several issues that have been highlighted are academic writing convention (Phakiti & Li, 2011; Wong, 2008), ethical issue (Chambers, 2014), conceptual and theoretical frameworks (Casanave & Li, 2015), and general issues related to research design (Ellis & Levy, 2009; Gesch-Karamanlidis, 2015; Hamida Bee Bi & Nurahimah, 2014; Mark et. al, 2017). In addition, Bailey (2008) brought up the issue faced by the novice researchers to analyse the data particularly at the transcribing stage. With regards to this, the focus of this study extends Bailey's (2008) focus of the study. It highlights the challenges that experienced by a novice qualitative researcher at the organization result management instead of the early stage of data analysis issue. In order to understand the overall overview of the case, the descriptions included illustrate the respondent's background and her on-going postgraduate research (refer to 2.0) and the throwback of respondent's struggles during the data analysis (refer to 3.0).

A background of a novice qualitative inquiry researcher and her on-going postgraduate research

Teacher learning is integrated into English Language (EL) educators' career growth based on different requirements. Getting involved in research is one of the examples required for those who are teaching at higher learning institutions. Generally, this requirement is a part of institutional policy. Somehow, it helps to nurture the on-going learning process among senior or expert EL lecturers to acquire new skills and knowledge. It is also beneficial to avoid experienced lecturers from being complacent with their surroundings or being stagnant due to the routinized teaching practice which have been repeated for many years. In addition, this type of learning is a reversed experience that acts as reskilling or upskilling effort. At this stage, it is expected that an expert would become a novice in order to learn a new skill or upgrade the current skill to newly introduced improvement. The act of an expert lecturer to acquire research skills reflects this description. Hence, the focus of the study describes the challenges experienced by an expert English Language lecturer as a novice qualitative researcher in order to complete her postgraduate study. The following subtopics describe respondent's basic background, the struggle faced, and the brief overview of her on-going postgraduate research.

Hany's background and struggles

At the beginning, Hany's knowledge towards what could be written in an academic report was quite limited. Apart of her teaching experience, she came to admit that she has no basic knowledge in qualitative research. As Hany started her postgraduate study, she realized that conducting a qualitative research required an on-going self-regulated learning. During the process to master the necessary skills, applications and knowledge, Hany depended on her supervisor's guide and findings from her reading. She was able to grab basic foundation of research knowledge and pick up some latest information about tools to assist her in conducting the research.

Hany diligently learnt and made herself familiar with the current requirement to conduct a qualitative research. She enrolled herself in a self-paid workshop to know more about document map (doc map). It is basically a guide to utilize Words in speeding up writing process. Besides that, Hany explored a free version of Atlas.ti after frequently coming across this term in an online graduate support group. It is a software for qualitative data analysis (QDA) programme and can be functioned as a literature reading manager. At the same time, Hany was formally introduced to Endnote by the university library staff. However, she opted for Mendeley instead. She discovered this programme online and got hook up to it. In her self-discovery, Hany felt Mendeley was simpler than Endnote. Both are basically reference manager programmes that can benefit researchers to sort their reference sources. Other than that, she also explored how to use Prezi, communicate through Skype and be involved in webinars and online conferences. In short, she tried her best to gain what she thought beneficial for her as a novice qualitative researcher.

Brief description of on-going study

Basically, Hany's on-going study focuses on professional development concern of English language lecturers in a Malaysian polytechnic. She decided to choose a case study research design. As recommended by Fusch, Fusch and Ness (2017), choosing the appropriate blended design for the method means exploring more than one alternative yet it must comply with the time frame & cost as a beginner. In Hany's case, the qualitative case study design allows the in-depth information of data to uncover the phenomenon which the researchers are trying to understand and explain in a specific selected population (Chua, 2012; Clark & Creswell, 2010; Creswell, 2007, 2012). Moreover, being authentic and very close to the real-life arrangement permits the researchers to probe deeper into the characteristics of a specific case being study (Nunan, 1992). Subsequently, the overall view of the studied population can be concluded before it can be generalized to a bigger population, which shares similar characteristics (Chua, 2012; Nunan, 1992).

In her case study, Hany wanted to identify the participants' professional development requirements. Therefore, she had to investigate their teaching concerns in order to specifically address the requirements that contextually reflect the participants' professional development as English Language lecturers in polytechnic. Due to that, Hany employed three research instruments, namely 1) informal semi-structured interview; 2) non-participatory classroom observation; and 3)teaching journal. Six willing participants involved in her study as her purposive sampling. In

regards to this, Hany was lucky as compared to the issues faced by the researchers in a study by Mark et. al, (2017) who faced the recruitment issue related to sampling.

The data collection was conducted within nine consecutive weeks of on-site attachment and more or less two years of on-off attachment at the research site. Hany employed the manual content analysis method. Based on Figure 1, three basic concepts employed as the data analysis procedure included the open coding (refer to Level 1 – 3), the axial coding (Level 4), and the selective coding (Level 5) (Strauss and Corbin in Bhattacherjee, 2012). Throughout the processes, the data reduction, data display, and conclusion drawing or verification by Miles and Huberman (1994) had been repeated carried out to generate the results (Please refer to Appendix A for the details). This procedure calls for the 'constant comparison' process which includes the non-stop rearrangement, aggregation, and refinement of categories, relationships, and interpretations of the codes. These codes are thematically arranged based on deeper and wider views of the phenomenon being study which exclusively attributes to the specific cases involved (Bhattacherjee, 2012).

Figure 1: Stages of manual content analysis employed by Hany

A throwback on struggles faced at 3 stages of the data analysis

Pre and at the beginning of data analysis process

As a beginner, Hany struggled to keep up with the common terms in qualitative inquiry. First is the ethical issue (Bhattacherjee, 2012; Chua, 2012; Clark & Creswell, 2010). The consideration on ethical issues revealed the importance of privacy, confidentiality, sensitivity, rapport, trustworthiness, and consistency. These elements had taught Hany to be frank and transparent in coping with the uncertainties. Next, Hany understood that the importance of having conceptual framework (Casanave & Li, 2015). It is meant to direct the literature search on the research purposes. Based on these, she started her qualitative inquiry and then manage to collect the data. Hany's struggle began as she started her data analysis. At the beginning of the analysis process, Hany chose to carry it out manually. However, she changed her mind as she discovered the use of *Atlas*.ti, a QDA software. A suggestion that she obtained after reading Creswell's (2007). The ultimate reason was she believed that it was extremely useful to speed up the coding process. According to Leech and Onwuegbuzie (2007), the software allows the researcher to speed up coding and retrieving data without flipping bundles of papers.

At first, she thought that this option would be uncomplicated process. She expected that it would be simpler as compared to the repetitions of what she had manually done. Hence, she created

new hermeneutic unit to produce the audit trails for her data. At that time, she kept on trying but she struggled to learn how to analyse as well as how to master the programme. It distracted her to be fully focused on the participants' responses. Hany felt disengaged with the studied cases. Her predicament at this stage is in line with Bhattacherjee's (2012) subtle reminder about applying QDA in qualitative data analysis, "…*it cannot decipher the meaning behind the certain words or phrases or the context within which these words or phrases are used (such as those in sarcasms or metaphors)...*" (pg. 116).

In the middle/during of data analysis process
Besides feeling distracted, Hany tended to lose focus and became anxious. Instead of sorting her raw data and started analysing, she ended exploring the functions of each menu by herself. The simple manual seemed to take forever. She got confused and carried away in her own world. This led her to frustration and uncertainty. She tried to sign up for free webinars and go for self-paid workshop. Her effort visualizes a view by Wong (2008) about being self-regulated novice researcher, it takes 'will' and 'skill' to move from beginner to expert. In addition, it also conceptualizes the 'self-evaluated' stage proposed by the same author. It refers to a state when novice researchers require experts' guide and advice, it happens throughout the scholarly journey (Casanave & Li, 2015; Tsai, 2013). In Hany's case, she was oblivious to this solution.

Hany's confidence level reduced when she kept working on the coding process alone. A few hands-on sessions were not enough for her to get a firm grasp on how to apply the software. More time spent on exploring the software had triggered Hany's nerve. She felt anxious. As much this tool was amazingly helpful for analysing bundles of data, it could not self-generate the analyses for the researchers (Leech & Onwuegbuzie, 2007). Despite of she managed to code all the three data sources (i.e. interview transcripts, non-participatory observation notes, and journal entries) separately, she put a stop as she felt her on-going works became haywire. She could not understand the functions and features of 'network view' in this QDA software. It was too complicated for her to link her data across the studied cases. She failed miserably.

Being an expert lecturer taught Hany to be determined. Therefore, she started the whole process all over again. She opted to do it manually. Though the process was tedious and time-consuming, she was able to complete another cycle of data analysis. It echoes the fact that qualitative researchers are indeed a primary instrument and source for data collection and analyses (Chua, 2012; Creswell, 2007; Nunan, 1992). This is because data are mediated through human instrument, rather than through inventories, questionnaires, or machines (Atieno, 2009). At this round, she started off with interview transcript since the prepared protocol was meant to gain information based on the proposed research questions (Gesch-Karamanlidis, 2015). The process of getting the themes is as follows (Figure 2):

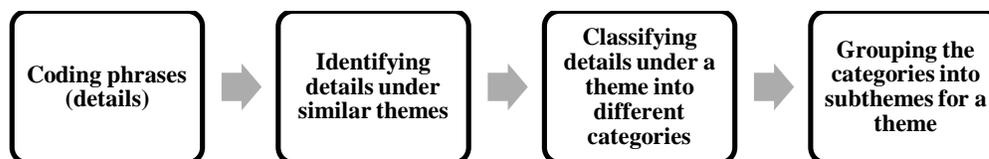| Coding phrases (details)	→	Identifying details under similar themes	→	Classifying details under a theme into different categories	→	Grouping the categories into subthemes for a theme

Figure 2: Process of organizing the results into themes

No codebook presented at this stage. The process was mainly done through inductive, rather than, deductive coding. She kept her own notes in order to ensure her consistency. The process was repeated for non-participatory observation notes and journal entries. Hany also came out with an audit trail for the reliability purpose (Bloor & Wood, 2006). After a while, Hany started to wander around again. The more data being analysed, she got more excited due to more discoveries that were not meant for her on-going study purpose. In her opinion, the best practice was to keep on doing the works on 'try and error' basis. Hence, she ended coding and sorting the data more than she needed for her postgraduate research.

Lapses happened and she lost her focus. She sensed the mismatched with her results and research focus. Yet, she continued what she thought helpful in order to get work done. Starting off by manual coding and then opting to try QDA and then changing back to manual process, her analysis procedure did not settle until she repeated it for the fourth circle. Upon her completion of this stage (whereby she thought she did), she organized the results based on a single data source. Hany did not have ideas how to link the shared features across the themes, she knew something was not right. Once again, Hany felt that she was doing meaningless job and did not realized her absence from the supervision slots contributes to her current dilemma.

Post data analysis process
Hany's works during her absence from consultation slots had been remarked by her supervisor as *shooting the ghost in the dark*. She admitted her mistakes on this issue. The best practice that she read and relied on as well as the advanced tool failed her. Somehow, Hany was able to encounter one missing puzzle; how would she link all the results of across cases from one data source to another. She met the dead end. As a result, her nine months agony of analysing was actually meaningless. There were no coherence between the themes across the data sources. The triangulation was missing. It resonates the inadequate variety in kinds of evidence (Jones et al., 2006). It is a state where researchers fail to provide proofs across a range of different kinds of sources (in this case interview transcripts, non-participatory observation notes, and journal entries) to permit significant claims through triangulation. Though it is acceptable for novice researchers to go back and forth in drawing the whole picture of their study (Tsai, 2013), this fact hit her hard. There was no surprise she lost her track. She did not have a proper framework to serve as an anchor for her reference at the data interpretation stage (Baxter & Jack, 2008).

Hany consulted her supervisor. Luckily, Hany's supervisor helped her out. She drafted a very simple outline. She briefly explained that the results across the cases from each source should be classified into themes that shared similar terms. In regards to this, all sort of connections or links

could be derived to form better yet simpler interpretative findings. The way she drew the whole picture seemed as easy as she was outlining the contents of an essay in a form of 'text organizer'. Her ability to put all puzzles at once pronounces the credibility of being an expert qualitative researcher. No doubt seeking experts is one of the novice's crucial ways to survive in qualitative inquiry (Casanave & Li, 2015; Ellis & Levy, 2009; Gesch-Karamanlidis, 2015; Hamida Bee Bi & Nurahimah, 2014; Rimando et al., 2015; Tsai, 2013)

As a result, she started over her fifth cycle of data analysis. Picking up her supervisor's advice, she saw her works in different perspective. Qualitative inquiry does not revolved around what have been written; it is more towards what have been gotten and how it is obtained. What she read about constant comparative analysis did not permit a perfect solution. Consequently, a simple standard guide (theory), an eclectic approach (conceptual ideas) and a living practitioner (practice) are enough to generate her on-going effort to obtain the results. This is permitted in qualitative approach since its nature of flexibility allows the structured design to be modified once the researcher enters his or her fieldwork (Bernard & Ryan, 2010; Bhattacherjee, 2012; Creswell, 2007, 2012; Nunan, 1992).

Findings and discussions
In this autoethnographic case study, Hany's personal experience during data analysis stage reveals the mistakes made at the result management stage as a novice researcher. The findings highlight two mistakes; 1) losing track issue and 2) lack of clarity issue. Both issues are quite common for novice researchers at different stages of academic exploration. For example, the participants in Hamida Bee Bi and Nurahimah's (2014) brought out the issue that they fail to see where and when to stop particularly during data collection and data analysis stage. Meanwhile, Gesch-Karamanlidis (2015) shared her mistakes in collecting her data through interview. She lost track of her role as interviewer, became over-directed the conversation and clarity in stating the questions. On the other hand, Casanave and Li (2015) illustrated the issues that novice faced in framing their study. They listed ten related issues, from no framework to missing methodology, in order to emphasize the importance to avoid lack of clarity. Bailey (2010) kept on reminding the novice researchers to be selective in deciding what they should do based on the research objectives. With regards to these, the justification on Hany's mistakes is likely due to her over-excitement in learning new things as an experienced lecturer in the process of becoming a novice researcher. Therefore, she failed to notice the dependency on self-discovery knowledge may lead to confusion without the guide by an expert from the field.

Losing track in Hany's case refers to the state where she lost her stand as a qualitative inquiry researcher. Struggling to learn new concepts and explore new tools steered her to focus on data analysis process particularly during her result management stage. Although she was able to manually analyse the data from three different sources, she missed to see the overall diagram in connecting the findings across the sources. Next, Hany's struggle was caused by being away of the expert's guide. She forgot to constantly be in touch with her supervisor. After seeking her supervisor advice then she was able to see what she had missed. This is a sign that being away

from supervisor for a long term is not a good practice even a proposal has been approved and the methodology of the study has been properly planned. The written theory, in case study, does not spell out the rules applied in real life (refers to ontology in qualitative scope).

The comment by Hany's supervisor (i.e *shooting ghosts in the dark*) is fairly true and applicable to conclude her lack of clarity issue as a novice researcher. This remark mainly describes a state of working without a proper framework. In Hany's case, she was distracted and did not realized her hard work were meaningless due to her decision to keep on working though she sensed something was not right. She was also overexcited towards the information that were not related to the study focus. As a result, Hany did not know where to stop even though there was lack of clarity in what she was doing. It is in line with Baxter and Jack's (2008) claims that many novice researchers incline to be distracted by the mounds of interesting data that are unessential to the research questions. As a result, they worked aimlessly and wasted their time and effort. Other than that, despite of the recommendation that novice researchers should explore new tools to speed out analyses (Leech & Onwuegbuzie, 2007), they must realize that the dependency on these tools could disengage them from the focus of the study (Bhattacherjee, 2012). Therefore, the novice researchers must be conscious that the strengths of qualitative data is derived from the proficiency displayed during the process. Besides being aware of multiple ways of analysing data (Miles & Huberman, 1994), they must be able to spell out the underpinning concepts and theories that guard their research objectives (Rimando et al., 2015).

In relation to the abovementioned issue, Hany's mistake is also derived from her absence to constant literature reading. According to Tsai (2013), novices must do their homework on the literature. The requirement to read does not only applicable before conducting the research, but it is required during and after the data collection and data analysis phase. This effort serves the novice researchers to stay focus and gain more insightful information on common and current points that related to their research scope. Casanave and Li (2015) stated that the novices' struggle, confusion, and complication are on-going '…*but through diligent reading, studying, discussing and studious reiterations between readings and their research*…' (p. 116) it will definitely direct the novice researchers in their interpretative analysis even after one or two steering moments.

Conclusion

This study started with a brief note on autoethnographic method as an alternative in qualitative research. Then, Hany's background as a novice researcher and her on-going postgraduate study. The narration is mainly to highlight the struggle of occupying knowledge, skill and requirement to become a qualitative researcher. It can be concluded that as an expert English lecturer, Hany is a self-regulated learner who is committed to her professional learning. However, being an expert lecturer requires more that commitment in order to becoming a being a good qualitative researcher. Self-regulated professional learning should be accompanied by the experts in the fields and learning things reflectively. Besides that, engaging in research allows the novice to experiment their ways in different things as they acquire related knowledge, skill and requirement may contribute to: 1) entail a specific framework (Casanave & Li, 2015; Tsai, 2013) and 2) a spiral

learning process (Phakiti & Li, 2011; Wong, 2008). Hany's lack of experience and knowledge has caused her to lose her track on data analysis which contributes to lack of clarity on what she was doing. Hence, losing track and lacking of clarity are the pitfalls experienced by the novice researchers. Yet, these challenges actively promote and contribute more to expert-lecturer-cum-novice-researcher's professional learning. This calls for more positive drives that are crucial factors to becoming a good researcher. Last but not least, the autoethnographic case study proves that the in-depth narration of Hany's revelation produces honest voice on a novice qualitative researcher's struggle. Indirectly, her experience highlights that novice researchers should make sure they acquire a high level of patience and perseverance in pursuing their scholarly journey (Gesch-Karamanlidis, 2015; Hamida Bee Bi & Nurahimah, 2014; Tsai, 2013).

References

Atieno, O. P. (2009). An analysis of the strengths and limitation of qualitative and quantitative research paradigms. *Problems of Education in the 21st Century*, 13, pp. 13–18.

Baxter, P., & Jack, S. (2008). Qualitative case study methodology : Study design and implementation for novice researchers. *The Qualitative Report*, 13(4), pp. 544–559. Retrieved from http://nsuworks.nova.edu/tqr/vol13/iss4/2

Bernard, H. R., & Ryan, G. W. (2010). Analyzing qualitative data: Systematic approach. California: Sage Publication.

Bhattacherjee, A. (2012). Social science research: Principles, methods, and practices: CreateSpace Independent Publishing Platform.

Bloor, M., & Wood, F. (2006). Keywords in qualitative methods - A vocabulary of research concepts. London: Sage Publication.

Casanave, C. P., & Li, Y. (2015). Novices' struggles with conceptual and theoretical framing in writing dissertations and papers for publication, *Publications.* 3.pp. 104–119. http://doi.org/10.3390/publications3020104

Chambers, A. (2014). *Expecting the unexpected : How novice researchers negotiate unexpected ethical issues.* Unpublished master's thesis, University of Otago, New Zealand.

Chua, Y. P. (2012). Mastering researh methods. Shah Alam, Selangor: McGraw-Hill (Malaysia) Sdn Bhd.

Clark, V. L. P., & Creswell, J. W. (2010). Understanding research: A consumer's guide. New Jersey: Merrill.

Creswell, J. W. (2007). Qualitative inquiry & research design - Choosing among five approaches (2nd ed.). California: Sage Publication.

Creswell, J. W. (2012). Educational research: Planning, conducting, and evaluating quantitative and qualitative research (4th ed.). Boston: Pearson.

Custer, D. (2014). Autoethnography as a transformative research method. *The Qualitative Repor*t, 21, pp. 1-13. Retrieved from http://www.nova.edu/ssss/QR/QR19/custer21.pdf

Ellis, T. J., & Levy, Y. (2009). Towards a guide for novice researchers on research methodology: Review and proposed methods. *Issues in Informing Science and Informaion Technology*, 6, pp. 323–337.

Ellis, C., Adams, T. E., & Bochner, A. P. (2011). Autoethnography: An overview. *Qualitative Social Research*, 12(1). Retrieved from http://nbn-resolving.de/urn:nbn:de:0114-fqs1101108.

Fusch, P. I., Fusch, G. E., & Ness, L. R. (2017). How to conduct a mini-ethnographic case study: A guide for novice researchers. *The Qualitative Report*, 22(3), pp. 923-941. Retrieved from https://nsuworks.nova.edu/tqr/vol22/iss3/16

Gesch-Karamanlidis, E. (2015). Reflecting on novice qualitative interviewer mistakes, *The Qualitative Report.* 20(5), pp. 712–726. Retrieved from https://nsuworks.nova.edu/tqr/vol20/iss5/12/

Hamida Bee Bi, A. K., & Nurahimah, M. Y. (2014). Issues and challenges in qualitative inquiry: Novice researchers' experiences. *Sains Humanika*, 4(7), pp. 73–78.

Jones, S. R., Torres, V., & Arminio, J. (2006). *Negotiating the complexities of qualitative research in higher education*. Routledge.

Leech, N. L., & Onwuegbuzie, A. J. (2007). An array of qualitative data analysis tools: A call for data analysis triangulation. *School Psychology Quarterly*, 22(4), pp. 557–584. http://doi.org/10.1037/1045-3830.22.4.557

Marks A, Wilkes L, Blythe S et al (2017) A novice researcher's reflection on recruiting participants for qualitative research. *Nurse Researcher*, 25(2), pp. 34-38. Retrieved from https://www.researchgate.net/profile/Anne_Marks/publication/319972694_A_novice_researcher%27s_reflection_on_recruiting_participants_for_qualitative_research/links/5a03704d4585151f478b9be9/A-novice-researchers-reflection-on-recruiting-participants-for-qualitative-research.pdf

Mendez, M. (2013). Autoethnography as a research method: Advantages, limitations, and criticisms. *Colombia Applied Linguistics Journal,* 15(2), pp. 279-28

Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis*. (2nd ed.). California: Sage Publication.

Nunan, D. (1992). *Research Methods in Language Learning* (18th ed.). Cambridge: Cambridge University Press.

Phakiti, A., & Li, L. (2011). General academic difficulties and reading and writing difficulties among Asian ESL postgraduate students in TESOL at an Australian University. *RELC Journal*, 42(3), pp. 227–264. http://doi.org/10.1177/0033688211421417

Rimando, M., Brace, A. M., & Parr, T. L. (2015). Data collection challenges and recommendations for early career researchers. *The Qualitative Report*, 20(12), pp. 2025–2036.

Tsai, K. C. (2013). A Journey to the qualitative wonderland : Lessons learned for novice researchers. *Anadolu Journal of Educational Sciences International*, 3(1), pp. 95–102.

Wong, R. (2008). Non-native English-speaking novice researchers developing research skills in the ESL research community. *ESP Across Cultures.* 5, pp. 153-176.

Appendix a

Details of Data Analysis Procedure based on Open Coding, Axial Coding and Selective Coding (Figure 1).

On the first basis, all documents (i.e. transcripts, field notes, and entries) of data sources were analysed separately. It is known as Open Coding process (based on Strauss and Corbin in Bhattacherjee, 2012). The explicit explanation Open Coding (includes Level 1, Level 2, and Level 3) as follow:

1. Read and re-read line by line all the textual data to get sense of the whole.

2. Identify, uncover and highlight 'chunks' of responses or direct statements (as many as possible) by marking them into specific meaningful 'units'.
3. Label each 'unit' using any phrases or terms that relevant to the general research focus based on their surface descriptions or direct meanings.
4. Once similar features or patterns of identified 'chunks' and statements were recognized, categories were created for each bundle of those units.
5. For some uncategorized 'units', they were used as the basis for constructing new category or modifying the existing one.
6. Any remaining and meaningless 'units' were omitted. As for the 'clashed' and 'resembled' units, they were merged.

After the emergent themes were identified, the initial findings were reported based on multiple data sources of each participant's case. Then, the second basis is Axial Coding process (based on Strauss and Corbin in Bhattacherjee, 2012). The explicit explanation (represents Level 4) as follow:

7. The links and relationships among the 'units' were further analysed under each category in order to tie up them into underlying themes. This is because, when categories are grouped by their conceptual relationship with each other, key categories are created (Jones, Torres, & Arminio, 2006).
8. Then, each unit was marked by labelling it with the specific standardized 'code' under each key category, or theme, for simplify the next evaluation process. Brief summary of general remark was also drawn.

Lastly, the commonalities across the cases from each type of data source were highlighted and compared to be concluded based on the requirements of the research questions. This actually describes Level 5. It is known as Selective Coding process (based on Strauss and Corbin in Bhattacherjee, 2012). The explicit explanation as follow:

9. Based on the emerging themes, more interpretative summary were concluded in order to form anticipated discussion related to the research questions
10. The process was conducted across the cases in order to get the central commonalities exhibited by all the participants in their responses
11. Appropriate theoretical justifications were made so the elements of the proposed model can be formed.