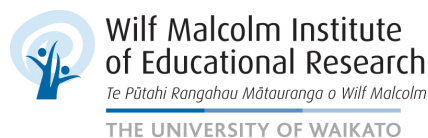


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## Unfurling the PhD process: A reflexive account of key stages and strategies

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### Abstract

*A postgraduate student researcher coming from a context where there is an absence of an active research culture is likely to face several challenges when undertaking doctoral study at a university with a deep-rooted culture of research. They may experience academic writing, researching and thesis structuring struggles, and may specifically encounter difficulties during data collection, especially in communities which are not conversant with research practices. The literature and guides for students seldom give advice on dealing with such challenges as those faced in a research study. I wish to address this gap by providing recounts of my PhD experiences for structuring the literature review, selecting appropriate methodology and adapting data gathering methods; and do so in a reflexive way. My PhD study explores the 'assessment for learning' (AfL) practices of Design and Technology (D&T) teachers in the state secondary schools of Mauritius. The main research question was 'How are the AfL practices of Mauritius D&T teachers framed?' In light of this question, an interpretative naturalistic theoretical perspective (Crotty, 1998; Gray, 2014) was used as the participants were observed in their natural settings. Data were gathered in three stages using a multi-method approach incorporating a survey, interviews and observations along with secondary documents and field notes. In this article I progressively discuss four key stages of the PhD process and elaborate on strategies that were adopted to generate the literature review, refine the research questions as a bridge to methodology, make decisions of design and methods, and respond to the research context. In doing so, I hope to be able to inspire and guide doctoral students in these areas, particularly researchers willing to investigate teachers' practices in their natural settings.*

### Keywords

Reflexivity; researcher; literature review; methodology; data collection; Design and Technology; assessment; Mauritius

### Introduction

I chose to research teachers' 'assessment for learning' (AfL) practices because I was teaching assessment to preservice and in-service teachers at an education institution in Mauritius. The teachers I



taught were from pre-primary, primary and secondary schools, or were intending to work in those three sectors. The programmes in which I was involved ranged from certificate to postgraduate certificate across all subject areas. Unlike in New Zealand, in Mauritius, most teachers enrol for an initial teacher qualification after joining the profession. The Ministry of Education stipulates that the primary school teachers undertake a part-time Diploma qualification in teaching upon their recruitment, while secondary school teachers, in most subjects, are still recruited without an initial teacher qualification. I previously taught the Design and Technology (D&T) subject at the secondary level. Throughout my teaching career, I have observed that teachers focus more on tests and examinations (assessment of learning) than on AfL. The feedback I received while interacting with teachers during their initial teacher education indicates that many continuously use tests and examinations throughout the year. These observations and interactions with the teachers led me to question their AfL practices. I became interested in understanding how teachers change their AfL practices after their initial teacher education. A review of the literature revealed that few research studies have been conducted in the area of assessment in Mauritius, and so I was convinced that this topic would largely contribute to both policy and practice in the local context, and thus would be a significant one for my planned PhD.

I must admit that as an early career researcher, I had an unclear picture of what a doctoral study constituted. My previous research study was a project conducted for my Postgraduate Certificate in Education in Mauritius. Having been accepted to undertake doctoral study at the University of Waikato, I came to understand that I had to upgrade my research practices to that demanded by the University. This realisation led to continual review and refinement of my practices in a number of different areas as I progressed with my studies. For example, I used peer-reviewed journals more than books; I focused on using a more academic writing style and I attempted to adopt a critical lens when writing.

The ability to upgrade my research practices arose from reflexivity. Several types of reflexivity have been identified in the literature such as epistemic, methodological, sociological, individualistic, and narcissistic (Freshwater & Rolfe, 2001; Maton, 2003; Ryan, 2007). I used epistemic reflexivity to understand the process of review and refinement of my practices, which, according to Coghlan and Brannick (2014), is “the constant analysis of [our] lived experience as well as [our] theoretical and methodological presuppositions” (p. 62). Thus, as a researcher, I regularly questioned my philosophical assumptions, which Cunliffe (2003) and McDonald (2013) refer to as the nature of reality and knowledge claims. In simple terms, reflexivity means turning back on itself. For Freshwater and Rolfe (2001), reflexivity could be explained in two different ways: the process of turning thought back on itself, and the process of turning action back on itself. I adopted both strategies during the data collection phase of my study, which is elaborated on briefly in the research resolutions and recommendations section.

The following sections describe the PhD process, in terms of four key stages, which include generating the literature review, refining the research questions as a bridge to methodology, making decisions of design and methods, and responding to the research context. I also elaborate on some strategies adopted in the course of these four stages.

## **Generating the literature review**

I started selecting materials for the literature review through preliminary readings on my topic. Keywords and references (books and journal articles) were obtained from the preliminary readings that helped identify other literature (and recent studies) related to the investigation (Creswell, 2014) about teachers’ AfL practices in D&T. The initial group of articles and books were skim read to determine if these would contribute to the literature review. Similar research studies to my topic were located as well as those filling the gap and extending previous studies.

Various types of literature searching strategies were used that I learned from the different doctoral support workshops. One useful resource was from Cooper (1986) who specifies a number of strategies for literature searching. The most useful are listed below:

- computer and manual search of abstracts and citation index;
- examining the references of reviewed papers, books, and non-reviewed papers;
- formal requests from scholars in the same field of study;
- communication with collaborators to obtain policy documents, and reports;
- informal conversations at conferences, workshops and symposiums; and
- browsing through the University's library shelves.

In conducting the literature review, I partially considered the method recommended by Ogawa and Malen (1991) which Gall, Gall, and Borg (2007) have simplified. First, Gall et al. (2007) suggest that one states the focus of the literature review. A clear statement of the literature made it easier to select what I had to include and what I had to exclude from the literature review. Second, Gall et al. (2007) advise classifying different types of documents. The classification can be carried out based on the organisation of the themes, such as policy statements, context descriptions, methodological concepts, contrary findings, theoretical concepts and contextual influences. Third, Gall et al. (2007) and Randolph (2009) recommend the use of non-research documents and reports such as newspapers and memos. Thus, I did not consider these documents as having less value than journal articles and books. Local newspapers, reports and documents that were helpful in describing the Mauritian context and shortcomings in AfL knowledge and research were incorporated in my literature review.

In the process of identifying useful literature, I designed a *literature map*. In this map I grouped the literature in different categories, which I devised for my work, such as the significance of the study, defining the context, the tensions, seminal works and contemporary influences (Creswell, 2014). The map mainly consisted of themes of three levels such as major themes leading to subthemes and then to sub-subthemes. For example, assessment in education (major theme), formative assessment (subtheme), and improving teaching (sub-subtheme).

Doctoral students often fail to understand that the writing of a thesis is an iterative and dynamic process. It is only after a thorough reading that I realised that the literature themes were too broad and that I had to focus on a specific area of the topic related to my research questions (Gray, 2014). An in-depth literature review was guided by my drawing on Hart's (2001) analogy of trawling and mining—related to the process of looking around and stopping to explore more in depth. The exploration phase involved selecting, analysing and synthesising information in more detail (Gray, 2014).

With the guidance of my supervisors, my research topic focus was narrowed to AfL in D&T at the secondary school level for three reasons. First, I realised that AfL was too broad as a topic. Having discussed with my supervisors, I recognised that the teachers proceeded with their AfL practices in diverse ways in different subject areas. Second, I found gaps related to AfL in the area of D&T that I identified from the literature (Williams, 2016). An analysis of numerous Technology Education research studies (1498 conference publications and journals) from 2006 to 2015, by Williams (2013, 2016), revealed that teachers' AfL practices in Technology Education (including D&T) were under-researched. Third, I was familiar with D&T because, before joining the teacher education institution, I taught the subject for nearly eight years and I completed my postgraduate certificate in Education in D&T.

Cooper's (1988) analysis of literature reviews with six main aspects (focus, goal, perspective, coverage, organisation, and audience) was used to re-structure the literature review of my study. Given this was so helpful, I will detail how each aspect was considered and how my study was shaped.

1. For focus, I identified the material that was of interest to my research. Cooper (1988) considers four areas of interest: research outcomes, research methodology, theories, and practices or applications. In my study, I incorporated all four foci.
2. Randolph (2009) claims that a dissertation has multiple goals, and Cooper (1988) identifies three. I used these three, firstly to integrate and synthesise research literature in the field; secondly to build up a critical analysis of the identified literature; and thirdly to determine dominant issues in the area of study.
3. Cooper (1988) identifies two perspectives: a neutral representation, and an espousal of position. When adopting a neutral representation, initially, investigators review the findings and present “arguments or evidence for or against different interpretations of the literature ... similar to that employed by the original authors” (Cooper, 1988, p. 110). Later, the relevant works are distilled to allocate attention to various theories, issues or methods such that these reflect the author’s relative prominence. However, I adopted the espousal of position perspective in my study, where I limited the attention and selectively ignored certain information so that the evidence represented my arguments in the best possible light. The espousal of position suited my study because I adopted a mixed methods QUAL-quant approach.
4. For coverage, I identified and decided what to include and exclude in the literature. Cooper (1988) identifies four types of coverage: an exhaustive review, an exhaustive review with selective citations, a representative sample, and a purposive sample. An exhaustive review means that the author locates and comprehensively includes all relevant works on the research topic. An exhaustive review with selective citations construct conclusions on the entire literature, but only a sample is described in the review. A representative sample considers a sample of articles and assumptions or judgements made about the whole set of readings from the sample. Finally, a purposive sample consists of selected works examined by the investigator that are significant to the area of study. In my study I used a mixture of exhaustive review and exhaustive review with selective citations in the different sections of the literature review chapter, taking into consideration that random sampling is far from foolproof as emphasised by Randolph (2009).
5. Cooper (1988) gives four different ways of organising a review: historically, conceptually, methodologically, or a combination of the three approaches. This knowledge significantly improved my ability to organise the literature review, and I developed the structure by adopting a mix of the three methods. For example, to describe the context of this study (education system, curriculum, assessment and D&T), the review was initially structured conceptually, then historically.
6. In Cooper’s (1988) view, the audience could include the following: specialised scholars, general researchers, practitioners, policymakers, and/or the public. For this study, the primary audience was my supervisors and the examiners, the secondary audience was the scholars within the field of education, and the tertiary audience was the teachers and policymakers.

### **Refining the research questions as a bridge to methodology**

The formulated research questions also guided me in choosing the appropriate literature. The research questions evolved and changed during the study. The questions were adjusted in a manner that was consistent with the assumptions of the emerging design. Also, the research questions were shaped by the literature (Gray, 2014). An indication of the evolution of the main research question was as follows:

1. Before PhD enrolment: How is AfL employed by qualified teachers in implementing the D&T curriculum in Mauritius lower state secondary schools?

2. Before PhD confirmation: How effective is AfL as practised by Mauritius D&T teachers?
3. After PhD confirmation: How are the AfL practices of Mauritius D&T teachers framed?

When reviewing the literature, I also identified the key methodologies used in the field of education and research on teachers' practices (Hart, 2001; Randolph, 2009). As a starting point, Crotty's (1998) questions: "What methodologies and methods [would be employed] in this research"; and "How do we justify the choice and use of methodologies and methods?" (p. 2), were asked. Then, I adopted Crotty's (1998) four elements: epistemology, theoretical perspective, methodology, and methods. Crotty (1998) states that these elements are interrelated such that one informs another. For example, "What epistemology informs this theoretical perspective?" (Crotty, 1998, p. 2). To organise the methodology chapter, I adopted Gall et al.'s (2007) second point of conducting a literature review and classified the documents based on Crotty's four elements, which I also used as themes for this chapter. The methodology map (or storyboarding) that I designed was similar to the literature map (with theme levels).

With respect to the research questions, a constructionist epistemology (Crotty, 1998) was used, as I perceive the world to be socially constructed. I used an interpretative naturalistic theoretical perspective as I tried to understand the subjective world of my participants by examining them in their natural settings (Crotty, 1998; Gray, 2014). I adopted an ethnographic methodology (Fetterman, 2010; Wolcott, 1985, 2005), in which my main role was, as Hammersley and Atkinson (2007) put it, watching what happened, listening to what was said, collecting documents, and asking questions through formal and informal interviews.

The research questions of this study were of two forms: the main question and related sub-questions. The main question was intended to explore my topic and always needed to be consistent with the emerging methodology (Creswell, 2014) as I developed it. I began writing the main research question by focusing on a single concept that I wanted to investigate in depth, which was exploring D&T teachers' AfL practices. As suggested by Creswell (2014), I began the research questions with the words 'how' and 'what' that conveyed an open and emerging design. For example, one sub-question was: "What AfL guidelines were used by the D&T teachers?"

### **Making decisions of design and methods**

In this study I used an embedded design within a qualitative approach (Plano Clark et al., 2013). Creswell and Plano Clark (2011) state that in an embedded design, qualitative and quantitative data are collected and analysed within a conventional quantitative or qualitative design. The literature reveals two embedded design possibilities. First, both methods (qualitative and quantitative) are embedded in a hybrid manner within the central design (Luck, Jackson, & Usher, 2006). Second, one method (quantitative or qualitative) is embedded as an additional element to the central design (Hilton, Budgen, Molzahn, & Attridge, 2001; Weaver-Hightower, 2014). An embedded design within a qualitative approach was considered appropriate based on the decision of using mixed methods QUAL-quan.

I gathered data in three stages over six months from 11 state secondary schools by adopting a multi-method approach (Mackenzie & Knipe, 2006; Wheeldon, 2010). In the first stage, 29 D&T teachers answered a questionnaire. In the second stage, I conducted group and individual interviews with the same teachers. The third stage consisted of two phases: one with teachers and one with students. In the teacher phase, three teachers of different schools were observed (each teacher was observed for 10 weeks) as they taught one 'Year 9' class. Informal interviews were done after each teacher's observation to gain a better understanding of their AfL decisions. Also, I collected secondary documents and recorded field notes in a diary. In the student phase, I conducted interviews with three groups, which involved 16 students.

Based on my past work experience, I was familiar with my context and the majority of the participants. When planning the data gathering process, which was sent for ethical approval, I envisaged that the data collection process would be easy and straightforward. However, during my PhD confirmation, the panel members recommended reducing the number of group teachers' interviews believing that these would be time-consuming and difficult to manage. The committee also advised simplifying the questionnaire because it seemed that I would obtain a considerable amount of data. Before starting the data gathering process, changes were made to the initial data collection plan based on the feedback from the confirmation panel. I believe that as a novice researcher, at that time, I did not realise that conducting 15 group interviews with 45 teachers from 15 schools would generate extensive data. Equally, I did not comprehend that a considerable amount of time would be spent in transcribing, approving, coding and analysing the data. It was only when going through the process of transcribing to analysing that I experienced its complexity. Despite reducing the number of teachers for the group interviews, an extensive amount of time was still spent during this process of transcribing to analysing.

### Responding to the research context

When collecting data, again, I had to deviate from my plans and adapt to the context. Changes were required due to the painful realities I faced on the sites. Several authors document the challenges they have encountered in the field (Hobbs & Kubanyiova, 2008; Holden, Mcdougald Scott, Hoonakker, Hundt, & Carayon, 2015; Mercer, 2007; Mukeredzi, 2012; Rimando et al., 2015; Roth, Shani, & Leary, 2007). These challenges include difficulties to access the participants, poor conditions and challenging locations of sites, worries when dealing with sensitive information, and researchers' fatigue. I sincerely wish I had cognizance of these challenges before entering the field. The difficulties I encountered included the struggle to gain access and consent, time constraints, limitations associated with using audio recording, no support from participants and those in the position of authority, and feelings of anxiety and frustration.

First, gaining access to and obtaining participants' consent in this study was arduous. Two principals took between three and four weeks to approve access to their schools. I had to visit them on several occasions to check whether I could proceed to meet the participants. In another school, one teacher took nearly three weeks to inform me of his reluctance to participate in the study, thus delaying the group interview process. Also, I had to track several students on various occasions to find out if they were willing to take part in my study. I had to accept the situation and keep track of the principals' and participants' approvals.

Second, there were time constraints for several issues. Given that I had six months for data collection, and bearing in mind that schools had a two-week break during that period, I intended gaining access to the schools and completing the teachers' interviews within five weeks. I was aware that I would be left with 20 weeks for observations, students' group interviews and gathering of secondary documents. However, as mentioned above, there were delays in gaining access, obtaining participants' consent and conducting interviews. Another complexity was the fact that the research was conducted on multiple sites. For example, there were time constraints due to teaching time clashes when preparing to observe three teachers of different schools. As a result, I had to end the class observation of two teachers, and then proceed with the third. On other occasions, despite reminder phone messages, one of the participants was not on the research site for group interviews. Thus, group interviews were postponed. In one school, a sudden timetable change of the participant led to missing an observation and rescheduling of the remaining ones. Finally, due to several unforeseen issues (teacher's absence, school assemblies and sports events) several teacher observations were delayed.

Third, I planned to use audio recordings to avoid the loss of valuable data. However, I observed that teachers expressed themselves more freely when our conversations were not recorded. As a result,

during the informal interviews, audio recordings were not carried out with the expectation of gaining valuable evidence. Thus, I had to note down the conversations during the informal interviews.

Fourth, some authority figures and teachers were not supportive and seemed uninterested in the research. Surprisingly, after one week when I went to collect one principal's approval to enter the site, he stated, "I could not read your documents (research guidelines, and access approval form) and I have no idea where I placed them. You know, I have a lot to do in this school. Please come next week." In a different school, two teachers were not willing to participate in a group interview because of conflict between them, which was not revealed at any point. Having experienced such situations in the past (as a teacher), I recognised that there were some issues between the two participants and so individual interviews were carried out with these teachers. Also, two authority figures did not respond to requests for me to collect secondary data in their respective departments (non-school). Consequently, this refusal led to the elimination of the fourth stage of my study. Though not critical or central, data obtained from these departments could have been used for triangulation purposes.

The above four points reinforce that researching the education sector in Mauritius, or similar contexts, demand commitment. Because several stakeholders in Mauritius were not familiar with researching, gaining access to the various educational institutions and departments was difficult. Moreover, obtaining teacher's consent was challenging, especially when intending to observe them in their natural settings and envisaging to use their private documents as also stressed by Holden et al. (2015).

Fifth, the planning deviations and challenges I faced (detailed above) gave rise to anxiety and frustration as a novice researcher (Mukeredzi, 2012; Rimando et al., 2015). Despite being conscious that as a researcher I had to be open-minded, there was a feeling of fear. The deviations from the planning tormented my mind with several questions such as: "Is the gathered evidence sufficient?"; "What if I am unable to collect enough data?" I believe these feelings of uncertainty were due to my lack of data collection experience. However, the continuous support from my mentors reassured me that I was experiencing the realities of research. The main advice I obtained was to document challenges, advice also suggested by Bruce (2007). From this data collection experience, I understood that no manual could fully account for specific and unpredictable problems each research context brings (Hobbs & Kubanyiova, 2008) and that I had to go through a learning-by-doing approach.

## Research resolutions and recommendations

This study has certainly developed and enhanced my skills and understanding to carry out research in several ways. First, it is clear that being more creative in identifying research sites is important. Hobbs and Kubanyiova (2008) claim that the research site should be relevant to the research focus. For example, it is essential to know if valuable evidence can be obtained. Through this study, I have learned that a researcher needs to explore the availability of the research sites before embarking on any investigation.

Second, after collecting data, I have understood that researchers need to familiarise themselves with the context of the study ensuring that data gathering plans align with what is feasible. I decided to gather data from teachers' group interviews, which happened to be very complex, due to timetabling issues and participants' lack of seriousness. Major delays during my data collection were mostly due to group interviews. I recognise that adopting a simpler approach and having individual teachers' interviews would have been better than the group interviews. Clearly, familiarisation with the research context allows the researcher to make better choices.

Third, I believe that it is worthwhile to promote the research project as suggested by Hobbs and Kubanyiova (2008). Initially, I did not think about promoting my research study before starting my data collection. I prepared the guidelines for those in the position of authority and the participants, but explained the research to most participants, as several were unavailable. Later, I realised that the participants needed to know why they should trust me and how and what they would learn from my



project. I recognised that a conversation with the person of authority and the participants might increase the number of responses from participants who are not familiar with research practices. I also realised that an educational institution or the Ministry of Education backing should not be underestimated for promoting one's research project.

Fourth, I recognised that researchers should be aware of reciprocity issues as advised by Marshall and Rossman (2016). Because the participants gave their time, the researcher should plan to reciprocate. The investigator could take different positions to ensure that participants benefit from volunteering. In my study several participants benefited from the sharing of AfL rubrics and explanation of the definitions and characteristics of AfL. An experienced researcher could also advise in other areas such as career opportunities. Benefits could take place through simple actions, like circulating handouts offering suggestions that reduce teachers' efforts and increase the outcomes. When participants benefit from researchers, a researcher-participant rapport is built, thus making the data collection process smoother. However, researchers should think ahead about boundaries because they might experience uncomfortable situations (Marshall & Rossman, 2016) if boundaries are transgressed.

Fifth, I have realised that winning the trust of potential participants before requesting them to participate is crucial. I understood that the researcher should spend time with the participants and show genuine interests in the participants' concerns. During the data collection, I learned that the researcher should avoid evaluating the participants' practices, even when participants ask for such comments. To build trust I shared my past struggles (as a teacher) in AfL with my participants. This conversation was in a language (non-academic and non-technical) that the participants understood, and did not feel intimidated by. In my study, once the participants' trust was obtained (when they recognised that the ethical considerations were and would be respected), they shared their AfL plans (if any), talked about their challenges, explained their AfL decisions, and were willing to contribute to my research study in various possible ways.

Sixth, from this study I understood the worth of using a research journal. For Jasper (2005) and Lamb (2013), an essential point about using research journals is that the credibility of the research is enhanced when investigators portray their experiences. During the data collection process, I have learned to use the research journal for recording, reflecting and examining my personal experiences. The research journal offered an outlet for observations that I could not record from other methods. Bearing in mind that limited time could be available to reflect on the data and findings, researchers need to ensure that key points are noted, and reflections are performed once they leave the field. A useful method could be the use of a digital audio recorder to capture immediate thoughts, and they would be honed at a later stage. In this study my reflective diary was efficient to describe the data collection procedure, conduct the data analysis and write the findings. An example of how I structured my journal entry, which was also suggested by Lamb (2013), is as follows: what worked, what did not work, lessons learned, evidence recorded, personal reflections. My research journal also provided another lens for critical analysis and thinking through reflexivity.

Seventh, I used the notion of reflexivity for understanding the research process and my own self as a researcher. To pursue these two aims, I mainly adopted Seidel's (1998) model (noticing, collecting and thinking about things), and Schön's (1983, 1987) and Killion and Todnem's (1991) reflection types (reflection-in-action, reflection-on-action and reflection-for-action) during and after the data collecting period. Killion and Todnem's (1991) explain that reflection-on-action is a reflection after the practice, reflection-in-action is in the midst of the action, and reflection-for-action is a reflection to guide future action. In her ethnographic research, Adam (2013, 2015) used these two reflexive techniques to become conscious as an inquirer and of the participants. For example, in my study, while transcribing the pilot teachers' interview, I thought it would be useful to ask the teachers to indicate clearly when (and how often) they communicated the learning intentions to their students. With the help of these reflexive strategies, I was able to balance my insider and outsider perspectives as well as gain better perspectives of my thoughts and on my investigation.

## Conclusion

This article is a reflexive account of my doctoral study experiences. It unfurled key stages of the PhD process of structuring the literature review, selecting appropriate methodology and adapting data gathering methods, and elaborated on several strategies used during these stages. The article also shared my research resolutions and provided recommendations to those conducting their research in similar contexts to my research.

My doctoral journey allowed me to realise that researching teachers' practices is a complex process, especially as a novice researcher. However, reflexivity emerged as a means that helped me navigate through this complexity. In my research I used reflexivity to monitor and audit the research process continually. It is through reflexivity that I was able to recognise several challenges, which led me to tackle them. Several authors argue that reflexivity is a defining feature of research containing a qualitative element (Banister et al., 2011; Holloway & Biley, 2011). Holloway and Biley (2011) claim "reflexivity is about the researchers' reactions to the study, their position and location in the study, and the relationships encountered, which are reciprocal" (p. 971). Hence it is advised that qualitative researchers embrace reflexivity when collecting and analysing data. Doyle (2013) suggests researchers should adopt the concept of reflexivity despite the literature revealing it to be an intricate process. As illustrated in this article, engaging with reflexivity is beneficial and necessary when conducting research. However, one has to understand that it is not an easy concept, which takes time to master. Thus, a novice researcher should not be discouraged, but self-appraise and self-critique continuously.

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## References

- Adam, A. S. (2013). Managing insider issues through reflexive techniques: An insider researcher's journey. *Te Kura Kete Aronui*, 5, 1–14. Retrieved from <http://www.waikato.ac.nz/fass/research/tkka>
- Adam, A. S. (2015). *Understanding teacher educators' pedagogical and technological cultural habitus (PATCH): An ethnographic study in the Maldives* (Doctoral thesis, University of Waikato, Hamilton, New Zealand). Retrieved from <http://researchcommons.waikato.ac.nz/handle/10289/9552>
- Banister, P., Bunn, G., Burman, E., Daniels, J., Duckett, P., Goodley, D., ... Whelan, P. (2011). *Qualitative methods in psychology: A research guide* (2nd ed.). Buckingham, England: Open University Press.
- Bruce, C. D. (2007). Questions arising about emergence, data collection, and its interaction with analysis in a grounded theory study. *International Journal of Qualitative Methods*, 6(1), 1–12. <https://doi.org/10.1177/160940690700600105>
- Coghlan, D., & Brannick, T. (2014). *Doing action research in your own organisation*. Los Angeles, CA: Sage.

- Cooper, H. M. (1986). Literature-searching strategies of integrative research reviewers. *Knowledge: Creation, Diffusion, Utilisation*, 8(2), 372–383. <https://doi.org/10.1177/107554708600800217>
- Cooper, H. M. (1988). Organizing knowledge syntheses: A taxonomy of literature reviews. *Knowledge in Society*, 1(1), 104–126. <https://doi.org/10.1007/BF03177550>
- Creswell, J. W. (2014). *Research design: Qualitative, quantitative and mixed methods approaches* (4th ed.). Thousand Oaks, CA: Sage.
- Creswell, J. W., & Plano Clark, V. L. (2011). *Designing and conducting mixed methods research* (2nd ed.). Thousand Oaks, CA: Sage.
- Crotty, M. (1998). *The foundations of social research: Meaning and perspective in the research process*. London, England: Sage.
- Cunliffe, A. L. (2003). Reflexive inquiry in organizational research: Questions and possibilities. *Human Relations*, 56(8), 983–1003. <https://doi.org/10.1177/00187267030568004>
- Doyle, S. (2013). Reflexivity and the capacity to think. *Qualitative Health Research*, 23(2), 248–255. <https://doi.org/10.1177/1049732312467854>
- Fetterman, D. M. (2010). *Ethnography: Step-by-step* (3rd ed.). Los Angeles, CA: Sage.
- Freshwater, D., & Rolfe, G. (2001). Critical reflexivity: A politically and ethically engaged research method for nursing. *NT Research*, 6(1), 526–537. <https://doi.org/10.1177/136140960100600109>
- Gall, M., Gall, J., & Borg, W. (2007). *Educational research: An introduction* (8th ed.). Boston, MA: Allyn & Bacon.
- Gray, D. (2014). *Doing research in the real world* (3rd ed.). London, England: Sage.
- Hammersley, M., & Atkinson, P. (2007). *Ethnography: Principles in practice* (3rd ed.). New York, NY: Routledge.
- Hart, C. (2001). *Doing a literature review: Releasing the social science research imagination*. London, England: Sage.
- Hilton, A. B., Budgen, C., Molzahn, A. E., & Attridge, C. B. (2001). Developing and testing instruments to measure client outcomes at the Comox Valley Nursing Center. *Public Health Nursing*, 18(5), 327–339. <https://doi.org/10.1046/j.1525-1446.2001.00327.x>
- Hobbs, V., & Kubanyiova, M. (2008). The challenges of researching language teachers: What research manuals don't tell us. *Language Teaching Research*, 12(4), 495–513. <https://doi.org/10.1177/1362168808097162>
- Holden, R. J., McDougald Scott, A. M., Hoonakker, P. L., Hundt, A. S., & Carayon, P. (2015). Data collection challenges in community settings: Insights from two field studies of patients with chronic disease. *Quality of Life Research*, 24(5), 1043–1055. <https://doi.org/10.1007/s11136-014-0780-y>
- Holloway, I., & Biley, F. C. (2011). Being a qualitative researcher. *Qualitative Health Research*, 21(7), 968–975. <https://doi.org/10.1177/1049732310395607>
- Jasper, M. A. (2005). Using reflective writing within research. *Journal of Research in Nursing*, 10(3), 247–260. <https://doi.org/10.1177/174498710501000303>
- Killion, J. P., & Todnem, G. R. (1991). A process for personal theory building. *Educational Leadership*, 48(6), 14. Retrieved from <http://www.ascd.org/publications/educational-leadership.aspx>
- Lamb, D. (2013). Research in the first person: Reflection on the research experience using a research journal. *Market & Social Research*, 21(2), 32–39. Retrieved from <https://www.amsrcs.com.au/publicationsresources/market-social-research/msr-2013---present>
- Luck, L., Jackson, D., & Usher, K. (2006). Case study: A bridge across the paradigms. *Nursing Inquiry*, 13(2), 103–109. <https://doi.org/10.1111/j.1440-1800.2006.00309.x>
- Mackenzie, N., & Kipe, S. (2006). Research dilemmas: Paradigms, methods and methodology. *Issues in Educational Research*, 16(2), 193–205. Retrieved from <http://www.iier.org.au/iier.html>

- Marshall, C., & Rossman, G. B. (2016). *Designing qualitative research* (6th ed.). Thousand Oaks, CA: Sage.
- Maton, K. (2003). Reflexivity, relationism, and research: Pierre Bourdieu and the epistemic conditions of social scientific knowledge. *Space & Culture*, 6(1), 52–65. <https://doi.org/10.1177/1206331202238962>
- McDonald, J. (2013). Coming out in the field: A queer reflexive account of shifting researcher identity. *Management Learning*, 44(2), 127–143. <https://doi.org/10.1177/1350507612473711>
- Mercer, J. (2007). The challenges of insider research in educational institutions: Wielding a double-edged sword and resolving delicate dilemmas. *Oxford Review of Education*, 33(1), 1–17. <https://doi.org/10.1080/03054980601094651>
- Mukeredzi, T. G. (2012). Qualitative data gathering challenges in a politically unstable rural environment: A Zimbabwean experience. *International Journal of Qualitative Methods*, 11(1), 1–11. Retrieved from <http://journals.sagepub.com/loi/ijqa>
- Ogawa, R. T., & Malen, B. (1991). A response to commentaries on “towards rigor in reviews of multivocal literatures”. *Review of Educational Research*, 61(3), 307–313. <https://doi.org/10.2307/1170634>
- Plano Clark, V. L., Schumacher, K., West, C., Edrington, J., Dunn, L. B., Harzstark, A., Miaskowski, C. (2013). Practices for embedding an interpretive qualitative approach within a randomized clinical trial. *Journal of Mixed Methods Research*, 7(3), 219–242. <https://doi.org/10.1177/1558689812474372>
- Randolph, J. J. (2009). A guide to writing the dissertation literature review. *Practical Assessment, Research & Evaluation*, 14(13), 1–13. Retrieved from <http://pareonline.net/>
- Rimando, M., Brace, A., Namageyo-Funa, A., Parr, T. L., Sealy, D.-A., Davis, T. L., Christiana, R. W. (2015). Data collection challenges and recommendations for early career researchers. *The Qualitative Report*, 20(12), 2025–2036. Retrieved from <http://nsuworks.nova.edu/tqr/>
- Roth, J., Shani, A. B., & Leary, M. M. (2007). Insider action research: Facing the challenges of new capability development within a biopharma company. *Action Research*, 5(1), 41–60. <https://doi.org/10.1177/1476750307072875>
- Ryan, T. (2007). Leading while looking back and within: Reflective and reflexive modes. In S. Donahoo & R. C. Hunter (Eds.), *Teaching leaders to lead teachers: Educational administration in the era of constant crisis* (pp. 365–372). Amsterdam, Netherlands: Elsevier Science. [https://doi.org/10.1016/S1479-3660\(07\)10022-6](https://doi.org/10.1016/S1479-3660(07)10022-6)
- Schön, D. (1983). *The reflective practitioner: How professionals think in action*. New York, NY: Basic Books.
- Schön, D. (1987). *Educating the reflective practitioner: Toward a new design for teaching and learning in the professions*. San Francisco, CA: Jossey-Bass.
- Seidel, J. (1998). *Qualitative data analysis*. Retrieved from <http://www.qualisresearch.com/DownLoads/qda.pdf>
- Weaver-Hightower, M. B. (2014). A mixed methods approach for identifying influence on public policy. *Journal of Mixed Methods Research*, 8(2), 115–138. <https://doi.org/10.1177/1558689813490996>
- Wheeldon, J. (2010). Mapping mixed methods research: Methods, measures, and meaning. *Journal of Mixed Methods Research*, 4(2), 87–102. <https://doi.org/10.1177/1558689809358755>
- Williams, P. J. (2013). Research in technology education: Looking back to move forward. *International Journal of Technology and Design Education*, 23(1), 1–9. <https://doi.org/10.1007/s10798-011-9170-8>
- Williams, P. J. (2016). Learning through research. In H. Middleton (Ed.), *Proceedings of the 9th Biennial International Conference on Technology Education* (pp. 269–275). Queensland, Australia: Griffith University.
- Wolcott, H. F. (1985). On ethnographic intent. *Educational Administration Quarterly*, 21(3), 187–203. <https://doi.org/10.1177/0013161X85021003004>
- Wolcott, H. F. (2005). *The art of fieldwork* (2nd ed.). Walnut Creek, CA: Altamira Press.