



Waikato Journal of Education

ISSN 2382-0373

Website: <https://wje.org.nz>



Volume 27, Issue 2 2022: Special Issue: Navigating unexpected terrain in postgraduate research: Reflections from the field

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Applying digital-based methods to educational research in applied linguistics

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Editors: Laura Gurney, Hossein Hosseini, Nicolina Newcombe and Kerry Earl Rinehart

Cite this article: Tachaiyaphum, N. (2022). The global pandemic and a shift in research methods: Applying digital-based methods to educational research in applied linguistics. *Waikato Journal of Education*, 27(2), 59–64. <https://doi.org/10.15663/wje.v27i2.921>

Link to this volume: <https://doi.org/10.15663/wje.v27i2>

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The global pandemic and a shift in research methods: Applying digital-based methods to educational research in applied linguistics

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Abstract

World-wide responses to the global pandemic, such as travel restrictions, border closures and lockdowns, have posed new challenges to researchers. For qualitative researchers conducting fieldwork, gathering data in person can be inapplicable (Howlett, 2021). My research investigates English as a Foreign Language (EFL) pre-service teachers' beliefs and negotiation of meaning in Content and Language Integrated Learning (CLIL) within the Thai secondary education context. Because of the pandemic I was unable to travel to Thailand to gather data, so I had to change my data collection methods to video conferencing interviews and classroom video observations. This article discusses this unexpected shift in research methods through my reflections on conducting digital-based research during the Covid-19 pandemic. It focuses on two main aspects: 1) grappling with emotional distress caused by the unprecedented phenomenon, and 2) redesigning research methods for digital fieldwork. Ethical issues regarding digital-based research are also discussed. The implications highlight the importance of resilience, flexibility and proactivity to surmount unexpected situations during a research journey.

Keywords

Data collection; qualitative research; digital methods; Covid-19; applied linguistics; content; language integrated learning

Introduction

The global pandemic has posed challenges to qualitative researchers in many ways, including physically, emotionally and financially (Castro Superfine, 2020). World-wide responses to the pandemic, such as travel restrictions, border closures and lockdowns, required researchers to reconsider their approaches to carry out research. Most researchers have had to replace traditional face-to-face approaches with remote modes of conducting research (Self, 2021). My PhD research project adopted a multiple case study under the interpretive paradigm to investigate Thai EFL pre-service teachers'



negotiation of meaning in relation to subject-specific terms and concepts, and their beliefs regarding effective CLIL implementation. It consisted of three phases of data collection: semi-structured interviews, classroom observations and stimulated recall interviews. I had intended to travel to Thailand to conduct the interviews and observations in person. Due to Covid-19, I had to change my data collection methods to video conferencing interviews and classroom video observations. This article outlines the challenges the global pandemic had posed to my research and how I responded to those challenges, including grappling with emotional distress, redesigning research methods for digital fieldwork and dealing with ethical issues regarding digital-based research. The implications highlight the importance of resilience, flexibility and proactivity to deal with the challenges during a research journey.

Strategies to grapple with emotional distress

Doing qualitative research has been described as riding an “emotional rollercoaster” (Creswell, 2016, p. 76). Throughout the research process, researchers tend to encounter an array of challenges triggering a range of emotions, including anxiety, fear, frustration and exhilaration (Morrison-Saunders et al., 2010). In early 2020, I encountered a great challenge caused by the Covid-19 pandemic. I remember vividly hearing the news reporting the very first Covid-19 case in New Zealand only a week after booking a flight to Thailand to collect my data. Following the news were countless emails updating restrictions and laws in response to the pandemic, including immediate lockdown and border closure, leading to my flight cancellation and considerable disruption to my data collection plans.

Research shows that doctoral candidates are likely to be in emotional distress when facing uncertainty in research events (Dodd, 2019), especially in the middle stage which “revolved around data collection including fieldwork activities” (Morrison-Saunders et al., 2010, p. 211). In my case, I was unable to travel to Thailand to gather data as planned due to the Covid-19 pandemic, which caused a feeling of frustration. I also felt anxious and feared that I might fail to meet my thesis submission deadline because being unable to gather data as planned could delay the entire process of my research project. I began to reach out to my colleagues in Thailand to monitor the situation and for ideas of possible means to gather data for my research without physically being there. I also met with my supervisors once every two weeks to discuss the ongoing situations and plan how to adjust research methods accordingly. Despite gaining some useful advice, it was overwhelming to give up my original plans because I had put so much effort into them.

Managing emotions along the research journey is essential for researchers, not only because it allows for emotional relief, but it also promotes self-understanding leading to researchers’ awareness of the impact of their emotions on the research (Herman, 2010). Dodd (2019) suggests that awareness is the threshold to gain control of emotions, and reflection is an effective way to develop awareness (Herman, 2010). Additionally, writing a reflection asking questions concerning the causes of the emotions can be a useful tool that facilitates efficient responses to the issue and supports emotional wellbeing (Bradley et al., 2013; Morrison-Saunders et al., 2010). I started connecting with my mind by writing a journal asking myself: *How are you feeling? What are the causes of the feelings?* Writing my thoughts on a piece of paper allowed me to “see” my emotions, which I was aware of, but tried to suppress. I also listed problems that directly impacted my study, asking questions to myself such as *what are the main problems? How do they impact your research? Is there any alternative approach to conduct your research? What are pros and cons of the approaches?* Asking these questions helped me to analytically reflect on the situation and reconsider all the advice I had received from my supervisors and colleagues. It also allowed me to organise my thoughts and prioritise tasks, focusing on things I could do, rather than things beyond my control.

Shifting research methods from traditional to digital fieldwork

Drawing on my reflective journal and my supervisors' advice, I decided to apply a digital-based approach to gather data because it allowed me to continue with my research without travelling to the research site. There has been an increasing number of reports concerning the use of digital platforms for qualitative research (Castro Superfine, 2020; Deakin & Wakefield, 2014; Gray et al., 2020; Howlett, 2021; Self, 2021), which can be a useful guide to help researchers make an informed decision for a research project. Considering my research purposes and participants' access to the technological tools or platforms (Lobe et al., 2020), the Zoom video conferencing platform appeared to be the most suitable for conducting semi-structured and stimulated recall interviews using its screen-sharing features (Gray et al., 2020) that allowed me to display selected key episodes from the filmed lessons to the participants as stimuli and topics for discussions.

The tricky part was designing a method for remote lesson observation. I became aware that the participants were already recording their classes for a university assessment, thus I sought permission from them and their university to share their filmed lessons with me. When lessons are filmed by participants, it is important to communicate with the participants the clear objectives of the observations. Following Otrell-Cass et al.'s (2010) and McLean and Connor's (2018) advice, I prepared a lesson-filming guideline for my participants based on my research purposes to ensure sufficiency and relevance of data. It aimed to observe the teacher-fronted talk stage, in which they explained subject-specific terms and concepts to students. The guideline was sent to the participants, followed by a short online meeting to briefly discuss the guideline and allow for a question-answer session.

Traditionally, fieldwork involves a researcher "entering a new context, a 'field' site" (Howlett, 2021, p. 3), "meeting real people and engaging with them" (Churchill & Sanders, 2007, p. 168). In my experience, digital fieldwork differed noticeably in locations and means of interaction between a researcher and participants, leading to a shift in their roles as they were engaging with research activities. The digital platform was both my research site and the tool for gathering data. Entering the sites required access to technological tools and an internet connection. Therefore, my role during data collection largely revolved around digital platform management, such as selecting the right platforms, learning how they worked, testing them and preparing alternative tools in case one of the tools failed. Negotiating interview times was another challenging role due to the different time zones between New Zealand and Thailand. Providing an arrangement system is crucial to avoid issues, such as an overlap of interview appointments, or an absent participant due to miscalculation of time zones. A technique that I found useful was to create an interview timetable sheet with dates and times converted to the participants' local time, and then share it with the participants. They could simply select the time slot which suited them.

Participants played a major role in making my digital fieldwork effective. Instead of the need to be present in the same geographical location, they were required to access the "virtual location" for the interviews and to film their lessons. They needed access to the internet and the platforms, and at least basic skills to use the technological tools or platforms (Lefever et al., 2007; Deakin & Wakefield, 2014). The participants in my study did not have a problem accessing and using the tools because they had already used the selected tools for teaching and learning at their university. To support them, I provided information regarding what and how to use the tools specifically for research purposes (Castro Superfine, 2020). However, it should be noted that if the participants do not have access to the internet and the tools, digital data collection may not be the appropriate option (Granello & Wheaton, 2004).

Another aspect to consider in digital data collection is data management. Oddi (2019) highlights that digital data is "vulnerable to data loss or technical threats" (p. 135). Researchers need to consider keeping offline copies of the data, as well as ensuring that the data is stored in private and secure storage (Oddi, 2019). Lobe et al. (2020) suggest storing data on local storage, rather than on the Cloud. However, I could not store all video recordings, especially the twelve filmed lessons, on my computer because of

the limited space. Google Drive File Stream for desktop was a feasible option for me as it provided unlimited space, direct streaming of data from the Cloud, and offline access to the data through my computer. Privacy and security could be ensured since there was an option to grant access to the research team only.

Ethical considerations in digital-based research

Making changes to research methods requires approval from the university research ethics committee. As approval for my research project was obtained before the Covid-19 pandemic, I was required to advise the research committee of my planned changes and seek approval. My supervisors were helpful because they were “aware of any restrictions or legal requirements” (Bell & Waters, 2014, p. 47) relevant to my research project, and thus could provide useful advice and raise my awareness of potential ethical issues. I also communicated with the Thai university and schools at which data was to be collected, to ensure that the local rules and requirements were followed (Bell & Waters, 2014). There are two main things I learned about ethics when changes are made to research methods. Firstly, the signed consent forms obtained from participants prior to the adjustment of research methods cannot be applied to the adjusted methods. Participants must be informed of the changes in the research methods and their consent sought before proceeding with the plans.

Secondly, the new form of data collection meant that I needed to consider my former role as a lecturer at the participants’ university. I was aware that participants might feel uncomfortable sharing their filmed lessons with me because of a fear of being evaluated, which might affect the assessment of their teaching practicum. Reassurance that the filmed lessons would not be used for evaluation of their performance (Hockly, 2018), and communication of the observation purposes, as well as my role as a researcher, were important to mitigate the potential problems. Researchers also need to be aware of the impact of video recordings on the participants’ anonymity (Jewitt, 2012), privacy and confidentiality (Hockly, 2018). Although the focus of my research was only on the participants’ teaching practice, anonymity and confidentiality of both the participants and the students in their classrooms must be ensured. To provide an example, I clearly described in the memo and the updated information letter that: “Photos from the filmed lessons might be included in my thesis, providing that all possibly identifying features were removed or obscured. Students might appear in the videos, but no data will be used in my thesis.” Furthermore, even when written consent has been obtained for video recording, researchers should ask for participants’ consent to be recorded orally before beginning the interview (Deakin & Wakefield, 2014) and inform them of their right of withdrawal. I remember being asked to pause recording in the middle of an interview because a participant was not comfortable having her personal opinions recorded. It is important to ensure that no records in any forms were kept when the participants did not wish their conversations to be recorded.

Recommendations and conclusion

Reflecting on my experience in conducting research during the Covid-19 pandemic, I realise that a researcher needs flexibility, resilience and proactivity in dealing with research challenges. The following is some advice that I would like to share. Firstly, unforeseen problems affecting research may cause a range of emotions. Researchers need to find techniques to manage their emotions; for example, sitting for a moment to mindfully reflect on the emotions and their effects on the research. This mindfulness helps researchers develop an awareness of the emotions, which may activate a positive reaction to a situation (Bradley et al., 2013).

Secondly, making changes to research methods under unsettled circumstances is challenging, as there is no guarantee that the new methods will work throughout the entire data collection process. When encountering research challenges, the primary support for doctoral candidates is their supervisors

(Cotterall, 2013). Supervisors should be aware of their students' research challenges and support them accordingly. In my experience, supervisors' advice and support concerning research design, from digital tool selection to ethical consideration, throughout the process reassured me that the digital-based approach was an appropriate alternative to the former methods. This allowed me to proceed with my data collection with confidence and a sense of security.

Thirdly, digital-based research depends largely on technological tools. Researchers need to ensure that participants have access to the required tools and the internet, and are capable of using the tools. It is also important to have alternative plans in case of technical issues (Castro Superfine, 2020) and to make careful preparations. Confirming the time frame and online tools with participants and testing the technological tools and the features that will be used (Salmons, 2015) are essential. I recommend reminding the participants via the agreed communication channel a day before an interview to confirm the appointment.

Finally, Churchill and Sanders (2007) suggest that "adapting your plans in ways that enhance your chances of success and contribution can be viewed in quite positive ways" (p. 170). Having completed gathering data, I learned that I gained benefits from the shift to digital-based methods. Without having to travel, financial costs were considerably reduced (Deakin & Wakefield, 2014; Self, 2021). More importantly, I could revisit the recordings of the interviews and the observed lessons to ensure the accuracy of the transcripts and analysis. Despite the benefits, it is worth noting that "digital approaches are not necessarily appropriate for every project or type of research" (Howlett, 2021, p. 11). The nature of research contexts and digital platform accessibility to researchers and participants, as well ethical issues, should be carefully reviewed before deciding to carry out digital research.

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