Conducting Qualitative Longitudinal Research on Learning to Teach English Pronunciation: Challenges, Pitfalls...Coffee, and Bubbles!

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Abstract
Inquiries into the impact of second language teacher education on the development of teachers' practices, beliefs, and knowledge have increased substantially in the last few years. However, most studies tend to investigate the process of second language teacher learning over a relatively short period of time, and only limited literature addresses methodological considerations in longitudinal research, making the design of this type of study potentially challenging for researchers. The aim of this paper is to first describe an ongoing project which explores the process of teachers learning to teach English pronunciation over a period of six years. Following an overview of the study design, five major challenges that I have faced while conducting the research project are discussed: (1) design issues; (2) access to teacher-participants; (3) time-related issues; (4) data management; and (5) personal involvement. Included in the discussion are methodological insights I have gained while carrying out the research and several navigational strategies I have used to overcome the aforementioned challenges. The purpose of providing this personal account is to shed light on my own experiences with navigating methodological challenges as a means of empowering researchers in designing and carrying out longitudinal research.

Keywords
Longitudinal Research, Qualitative Research, Teacher Learning, Pronunciation

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Inquiries into the impact of second language teacher education on the development of teachers' practices, beliefs, and knowledge have increased substantially in the last few years. However, most studies tend to investigate the process of second language teacher learning over a relatively short period of time, and only limited literature addresses methodological considerations in longitudinal research, making the design of this type of study potentially challenging for researchers. The aim of this paper is to first describe an ongoing project which explores the process of teachers learning to teach English pronunciation over a period of six years. Following an overview of the study design, five major challenges that I have faced while conducting the research project are discussed: (1) design issues; (2) access to teacher-participants; (3) time-related issues; (4) data management; and (5) personal involvement. Included in the discussion are methodological insights I have gained while carrying out the research and several navigational strategies I have used to overcome the aforementioned challenges. The purpose of providing this personal account is to shed light on my own experiences with navigating methodological challenges as a means of empowering researchers in designing and carrying out longitudinal research. Keywords: Longitudinal Research, Qualitative Research, Teacher Learning, Pronunciation

Introduction

An emerging research paradigm in English language teaching examines the relationship between second language (L2) teacher education programs and the development of student teachers’ beliefs, knowledge, and pedagogical competence (e.g., Busch, 2010; Farrell, 2009; Lee, 2015). This connection is, however, not well understood and some scholars continue to question the efficacy of second language teacher education (SLTE; Farrell, 2015; Johnson, 2015). One solution to this problem is, as Webster (2018) suggests, for research to go beyond the teacher education context and extend it into teachers’ professional careers. Crandall and Christison (2016) assert that “[t]he field of SLTE needs longitudinal research that investigates how teaching expertise emerges, [and] how teachers’ beliefs evolve...” (p. 11). Yet, longitudinal studies on L2 teacher learning are relatively scarce (e.g., Gu, 2013; Kang & Cheng, 2014; Mattheoudakis, 2007; Peacock, 2001; Tsui, 2007; Urmston, 2003), with few extending beyond a year and thus providing limited insights into practitioners’ learning trajectories. As such, the long-term development of L2 teachers’ practices, knowledge, and beliefs remains largely unknown.

The lack of research and understanding in this area provided the impetus for my study to examine how L2 instructors learn to teach English pronunciation. Conducting a qualitative longitudinal study, however, turned out to be more challenging than I had anticipated. Having worked on this study and wrestled with several major issues for the past six years, the aim of
this paper is, therefore, to share five major challenges I have faced, methodological insights I have gained in conducting the study, and navigational strategies I have used to address the challenges. The purpose of this paper does not derive from a transformative, social justice-driven agenda, one of the key criteria of autoethnography (Stanley, 2019); rather, I draw on autoethnographic principles (e.g., Canagarajah, 2012; Casanave, 2012) with the intention of communicating and reflecting on personally lived experiences. While I acknowledge my own positionality and context in which I operate, my goal for providing a first person account (Struthers, 2014) is to assist and possibly empower fellow researchers in designing and carrying out longitudinal research, and, ultimate, improve the professional lives of L2 teachers that are being researched in these studies.

Research Exploring the Process of Learning to Teach English Pronunciation

Inquiry into learning to teach English pronunciation is an area in Teaching English to Speakers of Other Languages (TESOL) that has been gradually growing in the past 15 years. Golombek and Jordan (2005) were the first scholars to explore how graduate students learned to teach pronunciation. They found that engaging with professional literature notably facilitated a perceptual change in two graduate students from Taiwan in that they began to view themselves as legitimate speakers of English and able pronunciation teachers. However, most of the recent research on learning to teach pronunciation has been grounded in second language teacher cognition (SLTC) to shed light on student teacher learning. Borg’s (2003) original definition of SLTC focused on practitioners’ beliefs, knowledge and attitude. Since then, he has refined the definition to take into account the broader context in which SLTC is situated. Accordingly, he now defines SLTC research as “[i]nquiry which seeks, with reference to their personal, professional, social, cultural and historical contexts, to understand teachers’ minds and emotions and the role these play in the process of becoming, being and developing as a teacher” (Borg, 2019, p.20). The point is that SLTC provides a useful and all-encompassing construct to capture the inner dimensions of teachers’ lives in a particular context, as well as to examine how these hidden aspects inform classroom practice and vice versa. Using SLTC as an umbrella term, of course, also allows researchers to circumvent the cumbersome task of trying to separate beliefs from knowledge, attitudes, and perceptions.

Baker (2011), for example, studied the cognitions of five experienced pronunciation instructors and retrospectively compared their beliefs and knowledge with what the teacher-participants learned in their teacher education course. Baker found that the practitioners’ prior L2 learning and teaching experiences exert powerful influence on their learning and current pronunciation practices. Buss’s (2017) research provided compelling evidence about the impact a pronunciation course can have on undergraduate student teachers learning to teach English pronunciation. Buss’s findings demonstrated a growth in student teachers’ own language awareness and an increase in confidence in student teachers’ ability to teach pronunciation towards the end of the course.

To this end, my own work has focused on the development of graduate student teachers’ cognitions about pronunciation. A number of studies have shown the substantial learning that can occur during a pronunciation pedagogy course in respect to student teachers’ understanding of the goal of and approach to pronunciation instruction. The studies have also revealed the connection between identity construction and cognition development in learning to teach pronunciation. Furthermore, the linguistics background and teaching experiences that graduate students bring to their studies can impact the learning of course content, particularly the uptake of new and unfamiliar innovative teaching techniques (see, for example, Burri, 2015a; Burri, 2015b; Burri & Baker, 2019; Burri, Baker, & Chen, 2017, 2018; Burri, Chen, & Baker, 2017).
As for the progression of learning to teach pronunciation beyond a graduate course, this inquiry is still in its infancy. Early findings suggest that a steep increase in student teachers’ learning trajectory occurs during the course, which then may somewhat taper off as the teachers commence their teaching career (see Burri & Baker, 2020). In spite of these promising findings, carrying out this ongoing longitudinal study has involved a substantial learning curve.

I soon came to realize that one of the major challenges in doing this type of work is, with the exception of Neale’s (2019) book on qualitative longitudinal research and Woodward, Graves and Freeman’s (2018) volume on practical activities for teacher development, the lack of literature discussing methodological considerations in longitudinal research, making the design of these studies potentially challenging for researchers. As mentioned above, having wrestled with methodological challenges while finding ways to navigate them has motivated me to narrate my experiences in conducting longitudinal research on L2 teacher learning. An overview of my 6-year study is now provided in order to situate and contextualize the ensuing discussion.

Overview of Longitudinal Study Design

The aim of the longitudinal research project I am currently working on is twofold: (1) to explore the development of L2 teachers’ practices and cognitions about English pronunciation, and (2) to enhance our understanding of the long-term process of L2 teacher learning. The study consists of three distinct phases.

The first phase was my PhD research which was completed in 2016. When I embarked on my journey as a doctoral student in early 2013, with the exception of Golombok and Jordan’s (2005) research, the preparation of pronunciation instructors had not been explored much. Having been an assistant instructor in a pronunciation graduate course at a Canadian university prior to my move to Australia, I had a good idea of what learning to teach English pronunciation entailed but felt that my understanding needed to go beyond a gut feeling. I also felt that in light of the rapidly growing body of SLTE research, a study was urgently needed to shed light on how graduate TESOL students learn to teach English pronunciation. Thus, the goal of my doctoral study was to examine the process of 15 student teachers learning to teach English pronunciation during a graduate course on pronunciation pedagogy offered at an Australian university. To obtain an in-depth understanding of the learning process, the following data sources were triangulated: A pre- and post-course questionnaire, four focus groups with 3-5 members each – interviewed three times during the graduate course (in weeks 5, 9, and 12), classroom observations of all 13 three-hour lectures, a final interview with seven of the 15 participants, and the student teachers’ final assessment task. As mentioned previously, the findings clearly demonstrated the effectiveness of pronunciation teacher preparation. Another outcome of the research was the establishment of a theoretical model for preparing pronunciation instructors (see Burri et al., 2018).

The second phase was completed in 2017. Having read extensively during my doctoral studies, I came to realize that the majority of research conducted on L2 teacher learning was relatively short in duration. Also, Crandall and Christison’s (2016) call to examine the longitudinal nature of teacher learning inspired me to extend my doctoral study and obtain further insights into how my study participants learned to teach pronunciation. I believed that connecting my teacher-participants’ self-reported practices and cognitions with content they studied during the graduate course would reveal novel insights into the long-term process of L2 teacher learning. Subsequently, this phase investigated the pedagogical practices and cognitions of five participants from phase 1. The teacher-participants were asked to complete a type of short story, referred to as a narrative frame (Barkhuizen, 2014), to report on their pronunciation practices and cognitions. The frames enabled me to gain valuable insights into
the teachers’ practices and cognitions, and into factors that impacted the practitioners’ ability to integrate pronunciation into their classrooms. Yet, the teachers’ data were self-reported and thus the frames provided only partial understanding of what instructors do in their classrooms.

To address this shortcoming, a third phase was added. Given the self-reported nature of the data obtained in phase 2, I also felt the urge to interview and observe the teachers. I believed that this would help me refine my understanding and gain a more holistic perspective on the phenomena I had been studying for almost five years. I also hoped that adding a third phase and further exploring the long-term trajectories of my teacher-participants would allow me to make stronger recommendations for the preparation of pronunciation instructors and overall teacher learning. As a result, in this third phase, semi-structured interviews, classroom observations, and a student survey were triangulated to examine and better understand: (1) teacher participants’ actual pronunciation teaching practices and cognitions, (2) the L2 learners’ perspectives on the teacher-participants’ pronunciation practices, and (3) the long-term nature of learning to teach English pronunciation over several years. Phase 3 is about to be completed and I am in the planning stages of adding a fourth phase to extend the research project further. Overall, albeit not initially intended, my research progressed from a doctoral study to a 6-year longitudinal study on L2 teacher learning.

As for the study participants, 15 took part in phase 1, five continued in phase 2, and four of them continued in phase 3. It should be noted that, and this warrants future examination, four of the five teachers that continued in phases 2 and 3 were relatively experienced teachers entering their graduate studies. As to why more inexperienced teachers declined to stay on and participate in the study remains unknown at this point but it might be worth exploring in a potential fourth phase of the study. The participants who continued in the research secured teaching and administrative jobs after the completion of their graduate studies, with each career path being unique: two worked in an English Language Intensive Courses for Overseas Students (ELICOS) program, one was employed in an Intensive English Centre (IEC), one at a vocational institution (TAFE: Technical and Further Education), one at a private junior/senior high school in Japan, and one at a primary school in Hong Kong.

Having provided a description of the study design, I will now turn to discussing several methodological challenges I faced in my longitudinal study along with various strategies I used to navigate some of these difficult encounters.

**Challenges and Navigational Strategies in Longitudinal Research**

Carrying out longitudinal research entails a plethora of methodological challenges. To ensure readability and focus, I have organized the challenges I faced in conducting my study into five main categories: (1) Design issues; (2) access to teacher-participants; (3) time-related issues; (4) data management; and (5) personal involvement. Each section includes a few strategies that I used to address the five challenges.

**Design Issues**

Designing my study with its different phases has added gratification to my academic career. Yet, the lack of available resources on qualitative longitudinal research (e.g. Neale, 2019) has made the selection of suitable data sources tricky. The uncertainty of when exactly to utilize the instruments to collect data can be disconcerting, particularly for less experienced researchers. As one gets more experienced in carrying out longitudinal studies, making these decisions becomes easier, but gaining experience is more or less a trial and error type of process. Nevertheless, combing through the methodology sections of relevant journal articles and book chapters has provided me with insights into the use of a wide variety of data sources...
in research studies on teacher learning. Reading the literature has also given me a better understanding of issues that other researchers experienced while collecting data. My engagement with these readings supports research showing that reading professional literature enhances learning (Golombek & Jordan, 2005; Macalister, 2018); in my particular case: learning to design a longitudinal study.

Coming to the realization that the design of my project does not need to be – in fact it cannot be – perfect has also been helpful. Of course, a researcher needs to strive towards a sound study design, but understanding that the aim is trustworthiness (Creswell, 2013; Svalberg, 2015) rather than perfection has been empowering. Important in this type of research is the triangulation of multiple data sources (Duff, 2008). Triangulating a number of different instruments (e.g., semi-structured interviews, classroom observations, questionnaires, focus group interviews) enabled me to get an in-depth understanding of my teacher-participants’ process of learning to teach English pronunciation, which, in turn, allowed me to provide a rich description of their trajectory. Furthermore, transparency in regards to any shortcoming of my research design is quite critical. Initially, I associated this with weakness, but now I know that acknowledging methodological flaws is in fact a reflection of a researcher’s awareness and knowledge of methodological issues. These insights have helped me enjoy the process of designing my research project immensely.

Access to Teacher-Participants

Researching my study participants’ learning trajectory has been a real privilege. Establishing trust early on in the research journey was absolutely key in having the participants join my research in phase 1 and then gaining access to their teaching contexts in phase 3. I find that teachers are generally keen on participating in research, but the investment in gaining practitioners’ trust is probably the most important step in carrying out successful longitudinal research on teacher learning. There are multiple ways to achieve this; however, viewing teachers as colleagues rather than research subjects is paramount. I want my participants to feel that I am genuinely interested in who they are and what they do. Conversations often take place over a cup of coffee, but this rapport building process, of course, requires a relatively high level of interpersonal skills and a sincere attitude. I feel that researchers can at times appear to be a bit cold and data-driven. With teachers, that does not work; you need to get their buy-in for them to agree to participate in your study. Once trust has been established, the result is often long-lasting friendships that go beyond the research parameter. It becomes a mutually beneficial relationship that has led me, for example, to conduct workshops at some of the teachers’ schools, paving the way for potentially larger scale studies in the future.

I must admit, however, that gaining access to teachers and their classrooms can be a challenging undertaking for researchers. As we all know, teaching is a busy profession and teachers’ schedules are often not conducive to a researcher wanting to conduct a study during or after teaching hours. Once a teacher has agreed to take part in the research, dropping out of the study due to work-related commitments or personal reasons is always a possibility. Although understandable, this attrition can be difficult for longitudinal researchers trying to follow teachers over a prolonged period of time. Enormous energy (and possibly resources) is invested in, for example, organising classroom observations and interviews, only for a participant to withdraw. The opposite has also happened to me in that one of the teacher-participant who was previously non-contactable suddenly emerged and indicated her interest in re-joining the study. Although this was exciting, organising her participation required flexibility and quick thinking because I did not want to miss the opportunity of having access to another classroom. Developing flexibility is paramount when researching teacher learning. Put differently, things cannot (and should not) be set in stone when working with teachers. In
Tokyo, for example, I was unable to conduct the phase 3 interview at the participants’ school due to an institutional anniversary holiday. In the search for a quiet spot we ended up at a large Starbucks in Ginza. With significant background noise, this was far from being an ideal site, but we found a relatively quiet corner and conducted the 30-minute interview over a large cappuccino.

**Time-Related Issues**

Finding time to conduct this type of research (or for that matter, any kind of research) is one of the most significant challenges I am constantly wrestling with. Designing a longitudinal study is time-consuming, but so are the complexities of collecting data (i.e., visiting schools, video recording classroom teaching, conducting interviews, and administering student surveys), keeping up-to-date on the literature, and analysing data. I enjoy visiting schools, talking to teachers, and diving into the data; yet, having enough time to get all this done, among the myriad other responsibilities that come with an academic position, is difficult. It is often tempting to brush the research part of my job aside with the intention of getting it done during a quieter period of the year, which, unfortunately, rarely arrives. Another issue I have faced is the ethics approval of my research. At my institution, without obtaining clearance from the ethics committee it is impossible to go ahead with a research project. The problem is that the committee only meets once a month and the entire review process, depending on the nature of the research project, can stretch out over a prolonged period of time. This is particularly true if young learners and vulnerable groups are researched.

To deal with these time-related matters, I had to learn to be patient and take the longitudinal perspective (pardon the pun). Being patient is not one of my strengths, but as one of my colleagues reminded me the other day, our academic work is seldom a matter of life and death. If things do not get done today, they will get tackled tomorrow. While patience is definitely an asset, I also plan my research as systematically and as meticulously as possible. That includes setting long-term and ambitious but manageable goals I intend to achieve within a given timeframe. Having a game plan, even though things may change at some point, provides me with a sense of control and calms my nerves. Another useful means to address time-related challenges is to set aside a specific research day. Mine is Wednesday or Friday, depending on my teaching schedule. On this designated day, I try to focus solely on my research and keep distractions such as email correspondence to a minimum. I, therefore, often work from home or at one of the local cafés while enjoying a large cappuccino.

**Data Management**

Longitudinal studies generate an incredible amount of data. Efficient data management is therefore of great importance for researchers engaging in this type of work. Having said that, I find it difficult at times to break the data into digestible pieces or decide what part of the data to focus on. Once the data analysis has progressed to the extent that I feel confident in my understanding of a certain feature or focus, communicating the findings in 6,000-8,000 words is a monumental task. Simply put, the richness of the data can make it difficult to pack everything into a journal article or book chapter. One way I address the data management issue is to discuss the data and preliminary findings with colleagues. That includes seeking advice from more experienced researchers. My long-standing research partnership with Amanda Baker has been invaluable in that regard. We schedule regular research meetings at a local pub to discuss our research over a beverage or two. Our talks often include decisions as to what aspects to focus on in the data or through what theoretical lens to examine the data. These discussions have been incredibly valuable in helping me conceptualize my research.
Another solution to managing data effectively is to obtain a solid understanding of qualitative analysis software such as NVivo (Bazeley & Jackson, 2013). Although learning how to use NVivo was a bit tedious initially (I attended a 3-day workshop at my institution and watched several YouTube clips numerous times), being able to code efficiently, analyse specific data sets or attributes depending on the focus of a paper, quantify data, and generate graphs has been enormously useful. Managing data is a critical element of conducting longitudinal studies successfully, but there is also a personal element with which I have struggled and will discuss now.

**Personal Involvement**

The intense personal investment that longitudinal studies require of researchers is the fifth major challenge I have come across. It is not just designing the study, organising access to the participants’ teaching contexts, and managing time and data, but the entire research process is incredibly demanding to the extent that the study has become a part of my life. Magnifying the demanding nature of the research is when my teacher-participants share personal and confidential information. The decision as to whether and how to explore and later disseminate this personal data is a difficult one. On the one hand, I feel that this is valuable information which should be shared with the wider society to highlight some of the struggles practitioners typically experience in their profession. On the other hand, I am hesitant to disclose too much information that my participants may find uncomfortable sharing or that may identify them. This deep personal involvement, in addition to all the aforementioned challenges, can occasionally result in the researcher feeling utterly overwhelmed. Doubts about the purpose of doing this type of research begin to arise. When that happens I need to remind myself that being able to carry out longitudinal studies is a privilege and a rewarding undertaking. My participants’ strong desire to continue taking part in my research also motivates me to press on. Nevertheless, sometimes I just need to disconnect and clear my head. The connection between physical activity and emotional health is a well-established fact. Going for long walks helps me decompress. It also provides me with opportunities to think and ponder about research-related issues. Some of my best ideas have emerged during a walk along the coast (with a coffee in hand).

My last point, and this might be one of the most important strategies I have used to navigate challenges in conducting my longitudinal study, is to celebrate successes – no matter how small they are – as often as possible. In our TESOL program we have a tradition of celebrating milestones with bubbles. We are a close-knit team and getting together for a beverage to share our successes increases the enjoyment factor substantially. It also reminds me of the fact that I am doing important and meaningful research that has a positive impact on the well-being of our society. Encountering challenges in researching teachers’ professional trajectories is normal. It is how we, as researchers, respond and navigate these difficulties that really matters to ultimately make a difference in teachers’ professional lives.

**Implications and Conclusion**

So, what does this all mean for researchers currently engaging in or planning to carry out longitudinal studies on L2 teacher learning? First and foremost, they need to find ways to navigate the challenges they encounter in conducting their research projects. By no means do I claim to have all the answers, but I hope this paper has shed light on my own attempts (that have gone beyond my love for coffee) to navigate methodological challenges and will in turn make this type of research a somewhat less daunting undertaking. I would like to end this article by encouraging researchers to take (calculated) methodological risks and pursue opportunities
to collaborate with colleagues. Conducting longitudinal research is demanding and can be a lonely and overwhelming endeavour, but it does not need to be. In spite of the challenges discussed in this article, carrying out my longitudinal study has been incredibly rewarding. It has equipped me with invaluable knowledge and skills that I can now pass on to the doctoral students I supervise. Also, the published papers coming out of my longitudinal study have been well received and the friendships formed with my teacher-participants have enriched me personally and professionally. In that sense, conducting this study has been incredibly transformative, and I would love to hear from researchers about their experiences and continue the conversation over a virtual glass of bubbly beverage.

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