University of Wollongong

Research Online

Faculty of Social Sciences - Papers (Archive)

Faculty of Arts, Social Sciences & Humanities

1-1-2019

"I never imagined" pronunciation as "such an interesting thing": Student teacher perception of innovative practices

Michael S. Burri

University of Wollongong, mburri@uow.edu.au

Amanda Ann Baker

University of Wollongong, abaker@uow.edu.au

Follow this and additional works at: <https://ro.uow.edu.au/sspapers>

Part of the [Education Commons](#), and the [Social and Behavioral Sciences Commons](#)

Research Online is the open access institutional repository for the University of Wollongong. For further information contact the UOW Library: research-pubs@uow.edu.au

"I never imagined" pronunciation as "such an interesting thing": Student teacher perception of innovative practices

Abstract

Despite extensive research conducted into language teacher education practices and outcomes, student teachers' uptake of innovative practices is still largely unexplored. This study examined the perception of 15 graduate student teachers of a unique haptic (movement and touch) pronunciation teaching method in which they were trained. Focus group interviews, semi-structured interviews, and weekly observations were triangulated over a period of 16 weeks to attain insights into participants' perceptions of haptic pronunciation teaching. Findings suggested that their overall view of haptic pronunciation instruction was positive, but challenges with performing the pedagogical movements and uncertainty about the method's efficacy clouded some of their perceptions. The paper concludes with a discussion about supporting student teachers in overcoming their doubts about applying innovative pedagogy.

Disciplines

Education | Social and Behavioral Sciences

Publication Details

Burri, M. & Baker, A. (2019). "I never imagined" pronunciation as "such an interesting thing": Student teacher perception of innovative practices. *International Journal of Applied Linguistics*, 29 (1), 95-108.

“I never imagined” pronunciation as “such an interesting thing”: Student teacher perception of innovative practices

Michael Burri, University of Wollongong

Amanda Baker, University of Wollongong

Abstract

Despite extensive research conducted into language teacher education practices and outcomes, student teachers' uptake of innovative practices is still largely unexplored. This study examined the perception of 15 graduate student teachers of a unique haptic (movement and touch) pronunciation teaching method in which they were trained. Focus group interviews, semi-structured interviews, and weekly observations were triangulated over a period of 16 weeks to attain insights into participants' perceptions of haptic pronunciation teaching. Findings suggested that their overall view of haptic pronunciation instruction was positive, but challenges with performing the pedagogical movements and uncertainty about the method's efficacy clouded some of their perceptions. The paper concludes with a discussion about supporting student teachers in overcoming their doubts about applying innovative pedagogy.

言語教師教育の実践やその成果についての研究は数多くされてきたが、学生教師が革新的な実践をいかに理解しているかはまだほとんど明らかになっていない。本研究では、15人の大学院生教師がその修士課程で学ぶ（身体の動きと接触を利用した）触覚発音教授法という独自の教授法に対し、いかなる認識を持っているかについて調査を行った。彼らの触覚発音教授法への認識を把握するため、16週間の期間をかけ、フォーカスグループインタビュー、半構造化インタビュー、毎週の授業観察を行い、これらのデータをトライアングレーションした。その結果は、彼らの触覚発音教授法に対する全体的な見解は肯定的であること、しかしその教授法の身体の動きを実践する難しさや、その有効性に対する疑念が彼らの認識を部分的に曖昧にさせていることを示唆した。本論文は最後に、革新的な教授法の適用への疑念を払拭する際の学生教師に対する支援について考察する。

Keywords

Haptic, pronunciation, second language teacher education, teacher beliefs, teacher perceptions

第2言語教師教育, 教師信念, 教師認識, 発音, 触覚

Introduction

Second language teacher education (SLTE) programs are highly popular around the globe. According to Wright (2010), this demand is the result of an ever growing need for qualified and well-equipped second language (L2) instructors due to the rapid spread of English being used for communication around the globe. Despite an increasing number of studies conducted in a variety of SLTE contexts, uncertainty still exists about the actual effectiveness of L2 teacher preparation programs. Farrell (2015b) and Johnson (2015), to that point, argue that SLTE is in a negative state and has lost some of its relevance due to the ongoing doubts about the efficacy of preparing L2 teachers. The present study is a response to this issue in that it examines student teachers' response to training in

innovative pronunciation techniques that they received during a graduate course on pronunciation pedagogy. The student teachers' perceptions of this contemporary training are particularly important in light of previous research showing that teachers tend to neglect pronunciation instruction in their classes due to a lack of confidence in teaching pronunciation and/or lack of training in this area (Couper, 2017; Macdonald, 2002). Furthermore, as Borg (2003, p. 81) argues, teachers make “instructional choices by drawing on complex, practically-oriented, personalised, and context-sensitive networks of knowledge, thoughts, and beliefs” and thus, as posited by van den Branden (2016, p. 174), any instructional innovation is dependent on the “personal value and reward in adopting the approach.” Thus the perceptions of student teachers are potentially invaluable in the determination of the efficacy of a teacher education program.

Second Language Teacher Education

Research into second language teacher education (SLTE), a term coined by Richards (1990) to define the preparation of L2 instructors who teach English as a second language (ESL) in their classrooms, has led to mixed results over the past couple of decades. Some research has shown limited impact of SLTE programs on student teacher learning and practice (e.g., Borg, 2005; Macalister, 2016; Ogilvie & Dunn, 2010; Tang, Lee, & Chun, 2012). One of the reasons for the inefficiency of SLTE is student teachers' beliefs about teaching and learning that they bring to their programs of study (Borg, 2015; Johnson & Golombek, 2011; Lortie, 1975). These deeply engrained beliefs exert substantial influence on prospective teachers' attempts to acquire knowledge and to adopt new content and practices, particularly when it comes to innovative and unfamiliar teaching techniques (Tang et al., 2012).

Other studies, however, have revealed SLTE's influential role in student teachers' learning. Some of these studies have demonstrated that SLTE can foster growth and change in student teachers' pedagogical beliefs and knowledge (Busch, 2010; Farrell, 2009; Lee, 2015; Wyatt & Borg, 2011), as well as enhance instructors' confidence and understanding of pedagogical practices (Kurihara & Samimy, 2007). Our own work on learning to teach English pronunciation has also shown such promise. A graduate course on pronunciation pedagogy, for example, facilitated student teachers' appreciation of English varieties and subsequent understanding of the pedagogical target being intelligibility rather than native-like pronunciation (Burri, 2015a). The course also instilled confidence in student teachers who spoke ESL and, as a result, they began to see themselves as capable pronunciation teachers (Burri, 2015b). Moreover, the intricately intertwined relationship between participants' identity construction and their formation of beliefs and knowledge about pronunciation was an important part of acquiring pronunciation teaching competence (Burri, Chen, & Baker, 2017).

What our research has not yet examined is our student teachers' specific receptivity towards innovative pronunciation teaching techniques. Recent resources on innovation in SLTE contain a range of approaches that are designed to enhance L2 teacher learning, including critical reflection, assessment literacy, materials design, the use of technology, collaborative practices, and action research (Farrell, 2015a; Pickering & Gunashekar, 2015). These are valuable components of teacher education that are used around the world; yet, research into prospective L2 teachers' uptake of specific pedagogical innovations is relatively scarce (Tang et al., 2012), but urgently needed. Research in education has

highlighted the need to improve both learners' language learning outcomes as well as the various innovations that have been implemented to address this need (e.g., Howard & Millar, 2008; Shi, Baker, & Chen, n.d.). Thus, the purpose of this paper is to explore our student teachers' perception of innovative pronunciation teaching techniques. The research draws on the notion of second language teacher cognition (SLTC) which includes the unobservable elements of teaching such as knowledge, beliefs, perceptions, attitudes, and thoughts (Borg, 2006; Burns, Freeman, & Edwards, 2015; Kubanyiova & Feryok, 2015). SLTC has become an important part of SLTE research because it allows researchers to analyse and better understand student teachers' inner lives in relation to their learning and uptake of content that is taught in teacher preparation programs. Although we acknowledge the interconnectedness of the different elements of cognition, in this study we focus on one aspect: student teachers' perception of innovative pronunciation instruction. This enables us to explore how our study participants perceive innovative pronunciation instruction. The next section describes an innovative method to pronunciation teaching in which our graduate students were trained.

Haptic Pronunciation Instruction

Haptic pronunciation teaching encapsulates a systematic combination of movement and touch to teach English pronunciation to L2 learners (e.g., Acton, Baker, Burri, & Teaman, 2013; Burri, Baker, & Acton, 2016; Kielstra, 2017). The actual method of the haptic pronunciation instruction is relatively standard and includes repetition and dialogue work. The expectation is that pronunciation is best learned experientially, not just through presentation or observation. The haptic method was formed under the premise that preparing L2 instructors adequately for pronunciation work remains a challenge (Murphy, 2014). The reasons for this is the lack of pronunciation pedagogy courses in TESOL programs (Foote, Holtby, & Derwing, 2011), and, additionally, there is currently no easily accessible, systematic, and comprehensive model that integrates pronunciation instruction in general speaking and listening instruction (Sicola & Darcy, 2015). Subsequently, L2 teachers find pronunciation challenging to teach and integrate in their classrooms (Baker, 2014; Couper, 2017; Macdonald, 2002).

The theoretical basis of this innovative haptic method is derived from four sources. The first one is Lessac's (1967) work on the voice and stage movement. Lessac was a proponent of the human body serving as an instrument for change of voice and persona. Embodiment theory as applied to TESOL (Holme, 2012) is the second source. This theory suggests that embodiment is critical in L2 acquisition. The third source is current neuro-physiological research on the role of movement and touch in learning (Minogue & Jones, 2006). That is, touch serves to bond a speaker's senses together (Fredembach, de Boisferon, & Gentaz, 2009) and enhances memory of events and language (Propper, McGraw, Brunyé, & Weiss, 2013). The fourth source is the proposition that kinaesthetic approaches to L2 pronunciation instruction facilitate learning (Acton, 1984). In the haptic method, touch is seen as being exploratory and experiential—like picking up a sweater to feel what it is like. Once that happens, sight and tactile memory takes over. Likewise, in haptic-based teaching, touch functions to set up the learning process and bond the other senses. In other words, haptic facilitates learning and then fades out for other modalities to take over. Movement, on the other hand, reinforces the learning of pronunciation features. Research has established strong empirical evidence, showing that L2 instructors' use of gestures facilitate their

students' language learning process (e.g., Macedonia & Klimesch, 2014; McCafferty & Stam, 2008; Morett, 2014; Smotrova & Lantolf, 2013). That includes the uptake of target pronunciation features (Smotrova, 2017) as gesture is closely related to prosody (i.e., stress, rhythm, and intonation) in language acquisition (Nguyen, 2016). In short, the underpinning of haptic pronunciation instruction is that the use of body movement in combination with touch, sight, and sound is essential in helping L2 learners improve their pronunciation.

The haptic method has been designed (and continuously is refined) to be used throughout the curriculum, not just in stand-alone pronunciation classes (Acton, 2018). An additional aim is to enable inexperienced and experienced native speakers (NSs) and non-native speakers (NNSs), regardless of their teaching, cultural, and linguistic background, to integrate pronunciation into their classroom. The method comprises a set of six haptic techniques for classroom-based modelling, spontaneous feedback provision, fluency development, and vocabulary work.

Each technique features specific movements accompanied by touch, which are referred to as pedagogical movement patterns (PMPs). The first technique, called the Vowel Matrix, is used to teach short vowels (monophthongs) and long vowels (diphthongs). The PMPs are connected to vowel sounds located on the IPA chart and to corresponding numbers. Associating specific PMPs with numbers and sounds helps learners to distinguish between the often subtle differences of vowels. Additionally, focusing on the number and on vowel clarity in a stressed syllable, while, at the same time, combining movement, touch, and sound enhances vocabulary instruction and acquisition (Burri, 2014). The matrix can also be customized to accommodate different English varieties.

The next three techniques focus on different aspects of syllable production. The second technique, referred to as the Butterfly, aims for students to experience the differences between weak and strong syllables in a thought group (a group of 5–7 syllables in length). Learners tap their right shoulder with their left hand on strong syllables, and tap outside of their left forearm muscle with the fingers of their right hand (Burri & Baker, 2016). The third technique is the Rhythm Fight Club (RFC). The objective is to compress the weak syllables for learners to feel the prominent (more strongly pronounced) syllables and therefore begin to experience the unique nature of the rhythm of the English language (Burri et al., 2016). To achieve this, the learner moves his or her right arm forward in a boxing-like jab when pronouncing a strong syllable. Being able to get a sense of the English rhythm is essential in fluency work as rhythm is “learned in the first year of life and [is] deeply rooted in the minds of students” (Gilbert, 2008, p. 1). In that sense, the RFC serves to re-program the students' embodied rhythm. The fourth technique is called Tai Chi. Students hold a tennis ball in their right hand, positioned in front of them at chin height. The left arm is initially stretched out, but then moves in while the speaker catches the ball on the stressed syllable for the right arm to stretch out. Attention is only paid to strong (i.e., stressed) syllables and the movement from left to right is done to align it with the direction of reading, providing further integration into other skill areas such as reading and writing. The technique creates natural linking and the reduction of vowel quality, and therefore acts as a driver of fluency development and automaticity of speech (Gatbonton & Segalowitz, 2005).

The fifth technique is the Intonation Protocol (Acton, Baker, & Burri, 2008). There are five PMPs to teach five basic intonation patterns: flat, fall, rise, rise-fall, and fall-rise. While the left hand mimics the intonation pattern of an utterance, it touches the right hand—positioned at chest-height in front of the learner—on the strong syllable (see demo video available at Acton, 2018). Some scholars (e.g., Jenkins, 2002) consider intonation to be unteachable; yet, the PMPs are designed to provide a simple, effective, and user-friendly way to assist L2 learners with awareness and production of basic intonation patterns commonly occurring in the English language.

Finally, the sixth technique focuses on consonant sounds. Several PMPs are used to teach the articulation of consonant sounds, including voicing and aspiration of consonants in beginning, medial, and final word position. We often hand out coffee stir sticks in class that our students can use to touch, for example, their alveolar ridge. Being able to physically feel and touch this particular place of articulation increases our students' awareness and ability to produce the consonant sounds /l/ or /n/. The focus on consonants as the last component serves to address any remaining segmental issues that might interfere with a learner's intelligibility.

Despite some of the previously discussed concerns about the ineffectiveness and lack of relevancy of SLTE, we have frequently witnessed L2 teachers' enthusiasm about being trained in the use of haptic techniques. Some of our informal observations suggest that training L2 teachers in haptic techniques instils a high level of teacher interest in implementing the techniques in their classrooms; however, an empirical study has yet to examine practitioners' perceptions of haptic pronunciation teaching. Conducting the present study was motivated by our positive experiences as teacher educators as well as our desire to contribute to the establishment of “an empirical basis that justifies the practices of L2 teacher education” (Johnson, 2015, p. 516). The study was guided by the following research questions:

1. What is the initial perception of student teachers towards haptic pronunciation teaching?
2. What impact does training student teachers in haptic techniques have on their perception of pronunciation instruction?
3. How does the learners' observed ability to learn the haptic techniques reflect their perception of haptic pronunciation teaching?

Methodology

A qualitative case study was chosen for the present research (Duff, 2008; Richards, 2011). This design sheds light on a particular case situated in a specific context, and enabled us to attain an insider perspective on student teachers' perception of the haptic techniques.

Research context

A 13-week graduate course on pronunciation pedagogy, taught by the second author, served as the research site. The class met once a week for a 3-hour lecture, and the weekly topics were structured according to the core text used in the course: Teaching pronunciation: A course book and reference guide (Celce-Murcia, Brinton, Goodwin, & Griner, 2010). In line with the six haptic techniques, vowels were taught first, followed by suprasegmental features (stress, rhythm and intonation), consonants, spelling and

pronunciation, and the integration of pronunciation into other skill areas (e.g. reading, writing). The course featured a strong collaborative learning environment in which groups of student teachers discussed various pronunciation-related issues, practiced the haptic techniques together, or analysed speech samples collaboratively. The first part of a lecture was typically dedicated to theoretical aspects of the English sound system. In the second hour, students were trained in the use of a wide variety of pronunciation teaching (including the haptic techniques), and the third segment typically consisted of various phonological analyses of native and non-native speech samples. The current study is positioned within the second hour in which student teachers were trained in the haptic techniques.

Table 1
Overview of Study Participants

Native English Speakers		Non-Native English Speakers	
Pre-service Teachers (4)	In-service Teachers (1)	Pre-service Teachers (6)	In-service Teachers (4)
Australia (3F) Pakistan (1F)	Australia (1F)	Japan (2F, 1M) Hong Kong (2F, 1M)	Japan (2F, 1M) Iran (1M)

Notes: F=female, M=male

Study participants

Fifteen student teachers agreed to participate in the study (see Table 1). Their written consent was obtained at the beginning of the semester. Of the 15 participants, four were from Australia, six from Japan, three from Hong Kong, one from Iran and one from Pakistan. Five student teachers were male and the other 10 were female participants. One of the five NSs and four of the 10 NNSs reported having pronunciation teaching experience. We classified these five student teachers as in-service teachers (ISTs) as they had taught pronunciation prior to the pronunciation pedagogy course. The other 10 study participants were labelled pre-service teachers (PSTs) because they possessed no previous pronunciation teaching experience. The participants' age ranged from 20 to 60 years.

Data collection

Data from focus group interviews, semi-structured interviews and weekly observations were triangulated and analysed to answer the three research questions. This process unfolded over a 16-week period: 13 weeks of the pronunciation course plus three weeks after the completion of the semester to conduct the semi-structured interviews.

The 15 participants were divided into four focus groups with each group containing three to five members. The groups were arranged according to members' availability but also based on pronunciation teaching experience and first language background. The group constellation was as follows: Group A—PST/NNS (3 members); Group B—IST/NNS plus 1 NS (4 members); Group C—PST/NS plus 1 IST/NNS (5 members); and Group D—PST/NNS (3 members). Even though the focus groups were not quite homogeneous, arranging the groups in this way allowed us to elicit data that was relatively specific to each group of student teachers participating in the study. The focus groups met in weeks 5, 9 and 12 during the pronunciation pedagogy course, and they were asked about key (i.e.,

unexpected, memorable) moments experienced during the course, as well as their thoughts on haptic pronunciation teaching. Towards the end of the course, based on participant availability as well as emerging questions about issues in relation to the research aims, the first author invited 1–2 members of each focus group to take part in a 30–45 minute one-on-one semi-structured interview at the end of the course. A total of seven students were interviewed between weeks 13 and 16 of the data collection period. Several clarification questions were asked in addition to questions about participants' preference for particular pronunciation teaching techniques to address L2 learner needs. In addition to the focus groups and semi-structured interviews, the first author conducted weekly observations of the lectures taught by the second author. The purpose of conducting the observation was to obtain data on the participants' reactions to the haptic techniques and to observe their engagement during the training sessions. The observations were used as a secondary data source that triangulated the findings generated by the focus group and interview data.

Data analysis

All the qualitative data was coded thematically in NVivo 10 (Bazeley & Jackson, 2013). Initially, focus group and interview data were divided into positive and negative categories with both groupings being continuously refined according to themes that were discovered within each category. Afterwards, the observation data were coded separately in a new NVivo file, but structured thematically in the same way as the focus group and interview data. Keeping two separate NVivo files helped us to cross-examine the two sets of data, and, at the same time, apply Glaser and Strauss's (1967) constant comparative method across the data sets in NVivo. This approach to coding allowed us to obtain an in-depth understanding of participants' perceptions of haptic pronunciation instruction, as well as the impact the training had on their perceptions.

Findings

In general, findings seem to demonstrate an overall positive reception to haptic pronunciation teaching. That is, the findings derived from focus group, interview, and observation data indicated that participants perceived the haptic pronunciation techniques more positively than negatively. As can be seen in Figure 1, analysis of the focus group and interview data identified 56 instances of evaluative statements as positive perception, nine positive instances with some reservation or uncertainty about the techniques, and 38 instances as negative perception. The observation data confirmed these results in that the majority of student teachers appeared to visibly enjoy being trained in the haptic techniques during the second hour of each lecture. In fact, as the first author observed, the training sessions were often accompanied with much laughter and many of the participants appeared to be physically energized during the sessions. These results are promising as they indicate a solid potential for the student teachers implementing the innovative haptic pronunciation techniques into their future classrooms. As noted by van den Branden (2016, p. 174), it "is the positive energy and engagement of teachers and their learners that drive the process forward, on the one hand, and the conflicts between features of the approach and teachers' or learners' concerns that slow it down, on the other hand."

Figure 1. Participants' overall perception towards haptic techniques

Student teachers' positive perception

This overarching positive theme consisted of a total of 56 coded instances, with PSTs contributing 42 and ISTs 14 instances. The ratio of PSTs vs ISTs in the present study was 3–1, and therefore the breakdown of the number of coded instances demonstrated that participants perceived the haptic techniques positively irrespective of their pronunciation teaching experience. This is an important finding, because previous research suggested that instructor perception can differ substantially based on practical experience (Kourieos, 2014). So why then did the participants perceive the haptic method positively? As Figure 2 depicts, there were three main reasons the haptic techniques were perceived favourably: (1) engagement; (2) language awareness (LA) and one's own pronunciation; and (3) pedagogical awareness and knowledge.

Figure 2. Factors contributing to participants' positive perception

One of the reasons the participants appeared to be positively inclined towards the haptic techniques was that the majority of participants perceived the techniques to be highly engaging. The student teachers thought the techniques were “enjoyable” (Georgia, FI), “new” (Aoi, FG2–3; Mio, FG2–1; Hayley, FG4–3), “interesting” (Aoi, FG2–1; Kirsten, FG4–1; Charlotte, FG3–3), “different” (Lucy, FG3–3), “useful” (Koki, FG1–1; Mark, FG4–1; Hiro, FI), and “practical” (Hiro, FG1–1; Hayley, FG4–3).² Aoi's statement made during the second focus group interview captured this theme:

I never imagined teaching and learning pronunciation is such an interesting thing because when I was in Japan no one taught me systematic English pronunciation way, so I really enjoy this subject because we never use body movement and everything. Everything is new to me and I found it interesting because touching hand is creating power memory ... so I want to teach my students in the future, pronunciation going to be very enjoyable, so that's good experience to me (FG2–1).

Learning these techniques were not only new but enjoyable to her, and subsequently Aoi developed a strong desire to teach pronunciation to her future students in Japan.

The second factor resulting in positive perception was that learning the techniques fostered participants' LA and own pronunciation. Two of the five NSs indicated an increase in LA, and seven of the 10 NNSs participants reported an increase in both their LA and their pronunciation. Kirsten, a NNS, for example, said that learning the haptic techniques enhanced her awareness of prominence (i.e. the most prominently pronounced syllable within a group of words) occurring in the English language; something she had been unaware of up until this point: "I could feel that ... you have to put some stress when you press the ball [referring to the Rhythm Fight Club technique], and that would be good, because I [did] not notice the prominence before" (FG4–3). Similarly, at the beginning of the course, Rio mentioned that his sound perception was not improving; yet, in the final interview he explained that he began to notice "things" more. As was also observed, a key moment for Hiro occurred in week 11 of the semester. In class, the lecturer asked Hiro to demonstrate the Tai Chi technique (video 3; 16:13). At first Hiro encountered difficulties with the hand movements, but after the lecturer gave him some feedback and modelled the technique once again, his fluency and smoothness of the PMP increased remarkably (video 3; 17:15). This was not only a powerful demonstration to the students about the use of a haptic technique but, as Hiro explained at the end of the course, he thought this technique to be valuable because it helped him improve his own pronunciation: "I think through Taichi, myself, I find it's very useful and very important and ... I can see the progress in my pronunciation" (FI).

The third reason the haptic method was perceived favourably was that the training appeared to foster the student teachers' pedagogical awareness and knowledge. In contrast to LA and own pronunciation contributing to NNSs' perception, most of the NSs (four out of five compared to four of the 10 NNSs) reported that learning the techniques facilitated their awareness and knowledge about pronunciation pedagogy. At the end of the semester, Lucy, for example, was certain that pronunciation needed to be taught kinaesthetically. She posited that "suprasegmentals without this kinaesthetic approach is almost unteachable, right?" (FI). This newly gained and stated belief about the need for a certain aspect of pronunciation to be taught kinaesthetically was confirmed by Georgia's usage of some of the haptic techniques with one of her L2 learners. As Georgia reported, the Butterfly technique helped her learner pronounce new vocabulary:

[My student] couldn't get the pronunciation of a word recently; just yesterday actually, and I did the haptic butterfly. And he got it and he thought it was

amazing, but without that he couldn't actually say this word, but with it he was fine (FG2–2).

Overall, therefore, the data showed that high engagement, an increase in participants' LA and own pronunciation, and growth in pedagogical awareness and knowledge contributed substantially to student teachers viewing haptic pronunciation teaching positively.

Student teachers' negative perception

Despite the fact that the student teachers' perceptions were notably positive, there were negative perceptions as well. As shown in Figure 3, as discerned from the focus group and interview data, two main factors seemed to contribute to participants' negative perception towards haptic pronunciation teaching: (1) challenges with movements and (2) questioning the efficacy of the method.

Figure 3. Factors contributing to participants' negative perception

Five of the 15 student teachers considered learning the PMPs associated with segmental and suprasegmental features to be challenging. As Charlotte explained, first learning and then later remembering the PMPs was difficult for her: “I just don't get the difference between this one, between here and here³ ... I don't remember ... It's like I'm relearning it every time ...” (FG3–2). Similarly, Koki who thought the movements were easy to acquire at the beginning of the course said that the PMPs were “completely difficult” (FG1–2) and therefore he didn't want to do them anymore. The observation data confirmed the participants' challenges. In fact, almost all of the participants encountered difficulties with learning the movements at some point during the course. Learning to move their arms systematically to touch their hands on stressed syllables or prominence, while pronouncing individual words or sentences at the same time was fairly challenging for most participants. Yet, what was apparent during the observations was that the NSs had more notable problems with learning the movements than the NNSs. A closer look at the coded instances in Figure 3 confirms this observation. With one exception (Ken), the seven coded instances of “challenges with movements” belonged to Alizeh, Charlotte, Georgia and Lucy. Nonetheless, as the semester progressed, it became evident in the observations that the majority of student teachers appeared to be more confident in doing the PMPs during the

training sessions as the accuracy of their movements increased markedly over time. It is worth mentioning that several participants considered practising the PMPs to be essential in order to become more comfortable with them and, ultimately, to use the techniques with L2 learners. Monitoring who practised how much during the week was not an objective of the course (and the study), but we assume that the participants who gradually became more comfortable with the PMPs practised them outside the class at least to some extent.

The most noteworthy issue feeding the participants' negative perception was their doubts about the efficacy of the haptic method. Thirty instances of participants questioning the effectiveness of haptic teaching were coded under this particular theme. Of the 30 instances, 22 were connected to uncertainty about the pedagogical application. That is, 13 of the 15 participants expressed doubts in some form or another about the application of the haptic method in an L2 classroom. In Week 9 of the course, for instance, Alizeh said: "I'm still sceptical about it ... I mean, how much it matters to learn the vowel sounds with movements. I'm not sure how much it's going to work in the long run" (FG3–2). At the end of the semester, Rio believed that "[y]ou don't have enough time to start teaching all the haptic system or all of the vowels" (FI), and Lucy questioned the overall objective of teaching pronunciation haptically: "I know there's a purpose for it, but I'm not entirely sure what that purpose is, and how it can make a learner a better speaker" (FG3–3). Interestingly, these concerns expressed by the participants stood in contrast to what the lecturer advocated throughout the course. She often pointed out that the haptic techniques were not time consuming to integrate in L2 lessons and that the techniques were suitable for learners of all ages and proficiency levels, irrespective of the size of the class. Her argument was that the techniques could be quickly and easily integrated at any point in a lesson, whether as part of ad hoc or systematic feedback on a learner's pronunciation or in planned pronunciation instruction (see Baker & Burri, 2016).

The data also revealed that the degree of individual perception of the haptic techniques varied considerably among participants. As Figure 4 illustrates, Alizeh, for example, had only negative instances coded under her name, whereas Mark's perception was exclusively positive. Findings, therefore, confirmed that instructors' acceptance of innovative pedagogical approaches is often "subject to a great deal of variation" (Gutierrez Almarza, 1996, p. 71), that L2 teacher cognition seldom develops homogeneously, and that teacher learning is an individual and complex process (Altan, 2006; Feryok, 2010). Nevertheless, even though there will always be some student teachers who are not open to any particular method, as Figures 1 and 4 depict, haptic pronunciation teaching was, overall, perceived more positively than negatively, suggesting that L2 student teachers were generally receptive to learning about this innovative pronunciation teaching method.

Figure 4. Individual perception of participants

Discussion and Conclusion

The study demonstrated that student teachers perceived haptic pronunciation instruction positively. The findings suggested that the student teachers considered the haptic techniques to be highly engaging and capable of enhancing their own pronunciation and/or overall LA. These findings thus indicate that the haptic-based SLTE achieved a certain degree of efficacy in student teacher learning. What warrants further discussion, however, is the participants' negative perception of the efficacy of haptic pronunciation instruction and its classroom application. As the findings showed, the participants expressed some doubts, partial resistance, and perceptual variance towards haptic pronunciation instruction. It is possible that student teachers' negative perception was the result of the beliefs and knowledge they brought to the course. Teachers can be critical of new content presented in preparation programs due to their pre-existing learning and teaching experiences (Borg, 2005; Lortie, 1975; Mattheoudakis, 2007). Yet, the more pressing issue seems to be how student teachers' uncertainty about the pedagogical application of innovative pedagogy, such as haptic pronunciation teaching, can be addressed in an L2 teacher education program.

The focus group interview data provide some answers. Halfway through the semester, two participants (Mio and Grace) had the opportunity to observe an L2 classroom in which the second author used haptic techniques to teach English pronunciation to beginning level L2 learners at a neighbouring institution. After the observation, both Mio and Grace reported their amazement at witnessing the students' positive reaction to the haptic techniques. Mio's statement made during the second focus group meeting captures this newly acquired insight:

I didn't believe that haptic way does work well in Japan ... because Japanese people are really shy ... [During the lesson] a lot of international students did very well, so I was convinced that haptic way could be ok in Japan (FG2-2).

Seeing haptic teaching in a real classroom enabled these two participants to gain a better understanding of its genuine benefits. To enhance student teachers' uptake of new and innovative teaching techniques, L2 teacher educators should, therefore, provide opportunities for prospective teachers to observe authentic classrooms in which these techniques are taught effectively, or, alternatively, make video footage of such classroom practices available. This is, of course, speculative, but given Mio's and Grace's positive response, it is reasonable to assume that seeing haptic teaching in use would have likely enhanced the perception of the other 13 participants, and, ultimately, their understanding about the efficacy and application of haptic pronunciation instruction in the L2 classroom.

Besides classroom observations, student teachers should be given opportunities to experiment with innovative pronunciation techniques in actual L2 classroom contexts. As discussed above, Georgia had access to her own L2 classroom and she tried some of the haptic techniques with one of her students. As a result of being able to use the techniques, she perceived haptic instruction to be useful and effective in addressing her learners' pronunciation needs. Noteworthy was also Charlotte's case. Towards the end of the pronunciation pedagogy course, Charlotte commenced a practicum at a local language school. Up to that point, Charlotte's perception towards haptic teaching was primarily negative. Her lack of teaching experience likely inhibited her to integrate innovation into her existing schema, causing a negative emotional reaction (Johnson, 2015). Charlotte's inability "to cope with high levels of uncertainty about an innovation" (Tang et al., 2012, p. 102) due to her pedagogical inexperience may have also contributed to her negative perception towards haptic pronunciation instruction. Once Charlotte was immersed in an L2 teaching context, however, she began to see haptic teaching in a more positive light. In the third focus group interview, she expressed her intention of trying the Tai Chi technique with her students. This positive change suggests that viewing negative perception as simply detrimental to student teacher learning is unwarranted, particularly since emotional highs and lows during L2 teacher preparation are "absolutely critical for the development of teaching expertise" (Johnson, 2015, p. 518). Practical exposure, therefore, appears to have assisted student teachers in connecting new course content with day-to-day teaching activities (such as pronunciation teaching)—a process, which, in turn, translated into enhanced teacher learning.

Future research will continue to track the development of these participants in their careers as English language teaching professionals, especially in relation to haptic pronunciation instruction. Despite the positive impact that the training had on participants' perception of haptic pronunciation teaching, whether participants eventually incorporate some of the haptic techniques in their teaching contexts is, of course, unknown at this point. We expect this line of inquiry to reveal important insights that could be used to refine the preparation of L2 teachers and to further inform our understanding of prospective teachers' adoption of innovative pedagogy.

Acknowledgments

We would like to thank the participants for taking part in this study, Bill Acton for his valuable feedback on an earlier draft of this paper, and Miyako Fuji for translating the abstract and key words into Japanese.

Endnotes

- 1 Although the nine instances were coded as positive with some reservations, discussing them in detail is beyond the scope of this paper.
- 2 To identify the data sources, the following abbreviations are used in this paper: FG2–1 = focus group 2— interview 1; FI = final interview.
- 3 She describes the movement associated with different vowel sounds.

References

- Acton, W. (1984). Changing fossilized pronunciation. *TESOL Quarterly*, 18(1), 71–85.
<https://doi.org/10.2307/3586336>
- Acton, W. (2018). *HICPR: Haptic-integrated clinical pronunciation research and training*. Retrieved 12 August 2018 from <https://hipoeces.blogspot.com.au/>
- Acton, W., Baker, A. A., & Burri, M. (2008). *Haptic approaches to English intonation instruction*. Paper presented at the 42nd annual TESOL convention, New York, NY, USA.
- Acton, W., Baker, A. A., Burri, M., & Teaman, B. (2013). Preliminaries to haptic-integrated pronunciation instruction. In J. Levis, & K. LeVelle (Eds.), *Proceedings of the 4th pronunciation in second language learning and teaching conference* (pp. 234–244). Ames, IA: Iowa State University.
- Altan, M. (2006). Beliefs about language learning of foreign language major university students. *Australian Journal of Teacher Education*, 1(2), 45–52.
<https://doi.org/10.14221/ajte.2006v31n2.5>
- Baker, A. A. (2014). Exploring teachers' knowledge of L2 pronunciation techniques: Teacher cognitions, observed classroom practices and student perceptions. *TESOL Quarterly*, 48(1), 136–163. <https://doi.org/10.1002/tesq.99>
- Baker, A. A., & Burri, M. (2016). Feedback on second language pronunciation: A case study of EAP teacher's beliefs and practices. *Australian Journal of Teacher Education*, 41(6), 1–19.
<https://doi.org/10.14221/ajte.2016v41n6.1>
- Bazeley, P., & Jackson, K. (2013). *Qualitative data analysis with NVivo* (2nd ed.). Thousand Oaks, CA: Sage Publications.
- Borg, M. (2005). A case study of the development in pedagogic thinking of a pre-service teacher. *TESL-EJ*, 9(2), 1–30.
- Borg, S. (2003). Teacher cognition in language teaching: A review of research on what language teachers think, know, believe and do. *Language Teaching*, 36(2), 81–109.
<https://doi.org/10.1017/S0261444803001903>
- Borg, S. (2006). *Teacher cognition and language education: Research and practice*. London: Continuum.

Borg, S. (2015). Researching language teacher education. In B. Paltridge, & A. Phakiti (Eds.), *Research methods in applied linguistics: A practical resource* (pp. 541–560). New York, NY: Bloomsbury.

Burns, A., Freeman, D., & Edwards, E. (2015). Theorizing and studying the language-teaching mind: Mapping research on language teacher cognition. *The Modern Language Journal*, 99(3), 585–601. <https://doi.org/10.1111/modl.12245>

Burri, M. (2014). Haptic-assisted vocabulary and pronunciation teaching technique. In A. Coxhead (Ed.), *New ways in teaching vocabulary* (2nd ed.) (pp. 189–191). Alexandria, VA: Teachers of English to Speakers of Other Languages, Inc.

Burri, M. (2015a). “My perspective changed dramatically”: A case for preparing L2 instructors to teach pronunciation. *English Australia Journal*, 31(1), 19–37.

Burri, M. (2015b). Student teachers' cognition about L2 pronunciation instruction: A case study. *Australian Journal of Teacher Education*, 40(10), 66–87. <https://doi.org/10.14221/ajte.2015v40n10.5>

Burri, M., & Baker, A. A. (2016). Teaching rhythm and rhythm grouping: The butterfly technique. *English Australia Journal*, 31(2), 72–77.

Burri, M., Baker, A. A., & Acton, W. (2016). Anchoring academic vocabulary with a “hard hitting” haptic pronunciation teaching technique. In T. Jones (Ed.), *Pronunciation in the classroom: The overlooked essential* (pp. 17–26). Alexandria, VA: TESOL Press.

Burri, M., Chen, H., & Baker, A. (2017). Joint development of teacher cognition and identity through learning to teach L2 pronunciation. *The Modern Language Journal*, 101(1), 128–142. <https://doi.org/10.1111/modl.12388>

Busch, D. (2010). Pre-service teacher beliefs about language learning: The second language acquisition course as an agent for change. *Language Teaching Research*, 14(3), 318–337. <https://doi.org/10.1177/1362168810365239>

Celce-Murcia, M., Brinton, D., Goodwin, J., & Griner, B. (2010). *Teaching pronunciation: A course book and reference guide* (2nd ed.). New York, NY: Cambridge University Press.

Couper, G. (2017). Teacher cognition of pronunciation teaching: Teachers' concerns and issues. *TESOL Quarterly*, 51(4), 820–843. <https://doi.org/10.1002/tesq.354>

Duff, P. (2008). *Case study research in applied linguistics*. New York, NY: Lawrence Erlbaum Associates.

Farrell, T. (2009). Critical reflection in a TESL course: Mapping conceptual change. *ELT Journal*, 63(3), 221–229. <https://doi.org/10.1093/elt/ccn058>

- Farrell, T. (Ed.) (2015a). *International perspectives on English language teacher education: Innovations from the field*. New York, NY: Palgrave Macmillan.
<https://doi.org/10.1057/9781137440068>
- Farrell, T. (2015b). Second language teacher education: A reality check. In T. Farrell (Ed.), *International perspectives on English language teacher education: Innovations from the field* (pp. 1–15). New York, NY: Palgrave Macmillan.
- Feryok, A. (2010). Language teacher cognitions: Complex dynamic systems? *System*, 38(2), 272–279. <https://doi.org/10.1016/j.system.2010.02.001>
- Foote, J., Holtby, A., & Derwing, T. (2011). Survey of the teaching of pronunciation in adult ESL programs in Canada, 2010. *TESL Canada Journal*, 29(1), 1–22.
<https://doi.org/10.18806/tesl.v29i1.1086>
- Fredembach, B., de Boisferon, A., & Gentaz, E. (2009). Learning of arbitrary association between visual and auditory novel stimuli in adults: The “bond effect” of haptic exploration. *PLoS One*, 4(3), e4844. <https://doi.org/10.1371/journal.pone.0004844>
- Gatbonton, E., & Segalowitz, N. (2005). Rethinking communicative language teaching: A focus on access to fluency. *The Canadian Modern Language Review*, 61(3), 325–353.
<https://doi.org/10.3138/cmlr.61.3.325>
- Gilbert, J. (2008). *Teaching pronunciation: Using the prosody pyramid*. New York, NY: Cambridge University Press.
- Glaser, B., & Strauss, A. (1967). *The discovery of grounded theory: Strategies for qualitative research*. Hawthorne, NY: Aldine de Gruyter.
- Gutierrez Almarza, G. (1996). Student foreign language teachers' knowledge growth. In D. Freeman, & J. C. Richards (Eds.), *Teacher learning in language teaching* (pp. 50–78). Cambridge: Cambridge University Press.
- Holme, R. (2012). Cognitive linguistics and the second language classroom. *TESOL Quarterly*, 46(1), 6–29. <https://doi.org/10.1002/tesq.5>
- Howard, J., & Millar, S. (2008). Ongoing challenges with language curriculum innovations in Asia: A South Korean case study. *Pacific-Asian Education Journal*, 20(2), 59–75.
- Jenkins, J. (2002). A sociolinguistically based, empirically researched pronunciation syllabus for English as an international language. *Applied Linguistics*, 23(1), 83–103.
<https://doi.org/10.1093/applin/23.1.83>
- Johnson, K. (2015). Reclaiming the relevance of L2 teacher education. *The Modern Language Journal*, 99(3), 515–528. <https://doi.org/10.1111/modl.12242>

Johnson, K., & Golombek, P. (Eds.) (2011). *Research on second language teacher education: A sociocultural perspective on professional development*. London: Routledge.
<https://doi.org/10.4324/9780203844991>

Kielstra, N. (2017). A haptic pronunciation course for first-year ESL college students. In J. Murphy (Ed.), *Teaching the pronunciation of English: Focus on whole courses* (pp. 262–284). Ann Arbor, MI: University of Michigan Press.

Kourieos, S. (2014). The knowledge base of primary EFL teachers: Pre-service and in-service teachers' perceptions. *Journal of Language Teaching and Research*, 5(2), 291–300.
<https://doi.org/10.4304/jltr.5.2.291-300>

Kubanyiova, M., & Feryok, A. (2015). Language teacher cognition in applied linguistics research: Revisiting the territory, redrawing the boundaries, reclaiming the relevance. *The Modern Language Journal*, 99(3), 435–449. <https://doi.org/10.1111/modl.12239>

Kurihara, Y., & Samimy, K. (2007). The impact of a U.S. teacher training program on teaching beliefs and practices: A case study of secondary school level Japanese teachers of English. *JALT Journal*, 29(1), 99–122.

Lee, I. (2015). Student teachers' changing beliefs on a pre-service teacher education course in Hong Kong. In T. Wright, & M. Beaumont (Eds.), *Experiences of second language teacher education* (pp. 15–39). New York, NY: Palgrave Macmillan.

Lessac, A. (1967). *The use and training of the human voice: A practical approach to speech and voice dynamics*. Boston, MA: McGraw-Hill Education.

Lortie, D. (1975). *Schoolteacher: A sociological study*. Chicago, IL: University of Chicago Press.

Macalister, J. (2016). Tracing it back: Identifying the impact of a trans-national language teacher education programme on classroom practice. *RELC Journal*, 47(1), 59–70.
<https://doi.org/10.1177/0033688216631204>

Macdonald, S. (2002). Pronunciation—views and practices of reluctant teachers. *Prospects*, 17(3), 3–18.

Macedonia, M., & Klimesch, W. (2014). Long-term effects of gestures on memory for foreign language words trained in the classroom. *Mind, Brain, and Education*, 8(2), 74–88.
<https://doi.org/10.1111/mbe.12047>

Mattheoudakis, M. (2007). Tracking changes in pre-service EFL teacher beliefs in Greece: A longitudinal study. *Teaching and Teacher Education*, 23(8), 1272–1288.
<https://doi.org/10.1016/j.tate.2006.06.001>

McCafferty, S., & Stam, G. (Eds.) (2008). *Gesture: Second language acquisition and classroom research*. New York, NY: Routledge.

- Minogue, J., & Jones, G. (2006). Haptics in education: Exploring an untapped sensory modality. *Review of Educational Research*, 76(3), 317–348. <https://doi.org/10.3102/00346543076003317>
- Morett, L. (2014). When hands speak louder than words: The role of gesture in the communication, encoding, and recall of words in a novel second language. *The Modern Language Journal*, 98(3), 834–853. <https://doi.org/10.1111/modl.12125>
- Murphy, J. (2014). Teacher training programs provide adequate preparation in how to teach pronunciation. In L. Grant (Ed.), *Pronunciation myths: Applying second language research to classroom teaching* (pp. 188–224). Ann Arbor, MI: The University of Michigan Press.
- Nguyen, M. (2016). A micro-analysis of embodiments and speech in the pronunciation instruction of one ESL teacher. *Issues in Applied Linguistics*, 20(1), 111–134.
- Ogilvie, G., & Dunn, W. (2010). Taking teacher education to task: Exploring the role of teacher education in promoting the utilization of task-based language teaching. *Language Teaching Research*, 14(2), 161–181. <https://doi.org/10.1177/1362168809353875>
- Pickering, G., & Gunashekar, P. (Eds.) (2015). *Innovation in English language teacher education*. New Delhi: British Council.
- Propper, R., McGraw, S., Brunyé, T., & Weiss, M. (2013). Getting a grip on memory: Unilateral hand clenching alters episodic recall. *PLoS One*, 8(5), e62474. <https://doi.org/10.1371/journal.pone.0062474>
- Richards, J. C. (1990). The dilemma of teacher education in second language teaching. In J. C. Richards, & D. Nunan (Eds.), *Second language teacher education* (pp. 3–15). Cambridge: Cambridge University Press.
- Richards, K. (2011). Case study. In E. Hinkel (Ed.), *Handbook of research in second language teaching and learning: Volume 2* (pp. 207–221). New York, NY: Taylor and Francis.
- Shi, L., Baker, A., & Chen, H. (n.d.). Chinese EFL teachers' cognition about the effectiveness of genre pedagogy: A case study. *RELC Journal*. <https://doi.org/10.1177/0033688217716506>
- Sicola, L., & Darcy, I. (2015). Integrating pronunciation into the language classroom. In M. Reed, & J. Levis (Eds.), *The handbook of English pronunciation* (pp. 471–487). Malden, MA: Wiley Blackwell.
- Smotrova, T. (2017). Making pronunciation visible: Gesture in teaching pronunciation. *TESOL Quarterly*, 51(1), 59–89. <https://doi.org/10.1002/tesq.276>
- Smotrova, T., & Lantolf, J. (2013). The function of gesture in lexically focused L2 instructional conversations. *The Modern Language Journal*, 97(2), 397–416. <https://doi.org/10.1111/j.1540-4781.2013.12008.x>

Tang, E., Lee, J., & Chun, C. (2012). Development of teaching beliefs and the focus of change in the process of pre-service ESL teacher education. *Australian Journal of Teacher Education*, 37(5), 90–107. <https://doi.org/10.14221/ajte.2012v37n5.8>

van den Branden, K. (2016). The role of teachers in task-based language education. *Annual Review of Applied Linguistics*, 36, 164–181. <https://doi.org/10.1017/S0267190515000070>

Wright, T. (2010). Second language teacher education: Review of recent research on practice. *Language Teaching*, 43(3), 259–296. <https://doi.org/10.1017/S0261444810000030>

Wyatt, M., & Borg, S. (2011). Development in the practical knowledge of language teachers: A comparative study of three teachers designing and using communicative tasks on an in-service BA TESOL programme in the Middle East. *Innovation in Language Learning and Teaching*, 5(3), 233–252. <https://doi.org/10.1080/17501229.2010.537340>