

## **“A Big Influence on my Teaching Career and my Life”: A Longitudinal Study of Learning to Teach English Pronunciation**

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### **Abstract**

Inquiry into learning to teach pronunciation is a growing area within the second language teacher education research paradigm. To what extent this learning process extends into instructors' early years of teaching pronunciation has yet to be explored. This article is a response to this need by exploring the 3.5-year trajectory of five teachers learning to teach English pronunciation. The study was conducted in two phases. In Phase 1, pre- and post-course questionnaires, weekly observations of the lectures, focus groups interviews, final post-course interviews, and the participants' final assessment task were triangulated to examine the development of participants' cognitions during a 13-week graduate course on pronunciation pedagogy, which featured an innovative haptic approach to pronunciation teaching. In Phase 2, carried out three years after the participants had completed the course and been teaching for approximately two years, narrative frames were used to elicit the teachers' current practices and cognitions about pronunciation. Findings showed notable development in participants' cognitions occurring at the end of the course. Due to the influence of various contextual factors, this upward progression then tapered off as the instructors began teaching; nonetheless, a gradual overall increase in participants' learning trajectory was clearly evident over the span of 3.5 years. The non-linear development of participants' cognitions and practices warrants future inquiry.

Pronunciation plays an essential role in effective and clear communication (Celce-Murcia, Brinton, Goodwin, & Griner, 2010). Yet, research suggests that second language (L2) instructors are often uncertain and lack confidence in how to address students' pronunciation needs (Baker, 2014; Couper, 2016; Macdonald, 2002). These difficulties could result from pronunciation being considered one of the most challenging aspects of a language to teach (Setter & Jenkins, 2005). Not surprisingly then, pronunciation is taught less frequently than other skills such as grammar and vocabulary in particular. In the event that pronunciation is taught, segmentals (vowels/consonants) are generally prioritized over suprasegmentals (stress, rhythm, intonation) as segmentals are

typically viewed as easier to teach (Foote, Trofimovich, Collins, & Urzúa, 2016; Tergujeff, 2012; Wahid & Sulong, 2013). Another concern is that pronunciation tends to be taught unsystematically due to teacher reliance on their intuition, instructional ideologies, and their own learning experiences (Hismanoglu & Hismanoglu, 2010), resulting in the use of mostly traditional techniques, such as drills and repetition (Baker, 2014; Murphy, 2011). The main reason for instructors' challenges can be attributed to the lack of pronunciation training that is available to L2 teachers (Foote, Holtby, & Derwing, 2011; Henderson et al., 2012). In response to these issues, the purpose of this paper is to explore the longitudinal development of L2 instructors' cognitions (beliefs, attitudes, knowledge) and self-reported pronunciation practices. Specifically, the study follows the 3.5 year journey of five teachers learning to teach pronunciation from the time they were enrolled in a graduate course on pronunciation pedagogy until their early years of teaching pronunciation in their own classrooms. The research, therefore, makes an important contribution to the field by advancing our understanding of teacher learning, particularly in regards to learning to teach English pronunciation over a prolonged period of time.

## Literature Review

### Pronunciation Teacher Preparation in Second Language Teacher Education

Second language teacher education (SLTE) has increased in significance due to the global demand for qualified L2 instructors (Wright & Beaumont, 2015). Subsequently, in the last four decades, a considerable body of research has been conducted in pre-service and in-service SLTE contexts (Crandall & Christison, 2016). This line of inquiry has, however, provided conflicting evidence about the actual effectiveness of L2 teacher preparation. Some studies have suggested that SLTE has a relatively limited impact on teacher learning (Macalister, 2016; Ogilvie & Dunn, 2010; Peacock, 2001; Tang, Lee, & Chun, 2012; Urmston, 2003). Pre-existing knowledge and beliefs (Warford & Reeves, 2003), prior teaching experiences (Kourieos, 2014; Polat, 2010) and curriculum and institutional factors (Tang et al., 2012) may inhibit L2 teacher professional growth. Conversely, other research has shown that SLTE can play an important role in enhancing teachers' knowledge and beliefs about L2 teaching and learning (Borg, 2011; Busch, 2010; Farrell, 2009a; Lee, 2015; Wyatt & Borg, 2011). In spite of these positive findings, Mattheoudakis (2007) posits that "[t]he truth is that we know very little about what actually happens" (p. 1273) in SLTE, and as a result, the actual effectiveness of SLTE continues to be debated among scholars (e.g., Farrell, 2015; Johnson, 2015).

Research on learning to teach English pronunciation is just emerging. The few studies that have explored the topic of pronunciation instruction in teacher education have revealed several important findings. First, such education can result in a positive transformation in non-native speaker student teachers' perceptions of their own identity. This was the case of two Taiwanese graduate student teachers who began to view themselves as legitimate speakers and teachers of English during the course in Golombek and Jordon's (2005) research. In addition, such coursework can have a positive impact on pre-service instructors' cognition about pronunciation, particularly in improving their views regarding explicit pronunciation instruction and their confidence in teaching pronunciation (Buss, 2017). Other research has shown that group work and exposure to different English accents and varieties enhanced graduate student teachers' knowledge about pronunciation teaching, including their perception of the goal of pronunciation instruction (Burri, 2015a), and that the beliefs of student teachers from non-English speaking backgrounds changed notably due to their self-perceived improvement of their own pronunciation (Burri, 2015b). Furthermore, research has suggested that student teachers without any teaching experience find learning to teach English pronunciation more challenging than their classmates with teaching experience (Burri, Baker, &

Chen, 2017), and that the mediational relationship between cognition development and identity construction plays an important role in the process of prospective teachers learning to teach pronunciation (Burri et al., 2017).

These studies have made an invaluable contribution to our understanding of preparing pronunciation teachers. To what extent L2 teachers apply – in their classrooms – knowledge and skills they acquired in a pronunciation teacher preparation setting, and how their cognition and practices develop after completing a course on pronunciation pedagogy remains largely unknown. The present study thus addresses a significant problem by shedding light on the longitudinal process of learning to teach English pronunciation. The goal of the research is to track teachers' cognitions formed during a graduate course on pronunciation pedagogy through to their cognitions and practices used in their current classroom contexts. Such longitudinal research is “expected to help paint a more accurate picture of the domain of teacher learning” (Kang & Cheng, 2014, p. 184).

### **Teacher Learning in the Initial Years of Teaching**

Learning to teach language is a complex process that is situated in a social, cultural, and political context (Crandall & Christison, 2016). Generally, the first three years constitute a critical period for L2 instructors (Farrell, 2009b) because “making the transition from one institutional setting (education) to another (work) can be understandably challenging” (Caspersen & Raaen, 2014, p. 205). Challenges include a heavy workload in the first year of teaching (Farrell, 2009b), insufficient support from colleagues (Fantilli & McDougall, 2009), and the navigation of institutional constraints such as curriculum, teaching materials, school culture, and exam-oriented teaching (Crandall & Christison, 2016; Tang et al., 2012). These factors often exert a strong influence on inexperienced teachers' use of pedagogical principles acquired in SLTE programs (Shin, 2012; Urmston & Pennington, 2008), resulting in an occasional disparity between instructors' beliefs and their actual practices (Phipps & Borg, 2009).

Nevertheless, research on L2 teacher learning over an extended period of time has revealed some promising results. Such research has demonstrated advancements in the pedagogical knowledge of inexperienced L2 instructors (Watzke, 2007) as well as a cyclical relationship between the growth of teacher cognition and practice (Kang & Cheng, 2014). Other studies have focused on the professional identity formation of inexperienced L2 practitioners (Gu, 2013; Kanno & Stuart, 2011; Tsui, 2007; Xu, 2013). This line of inquiry has demonstrated the contextualized nature of practice and the complexity of teachers' long-term professional identity construction. As pronunciation instruction has regained a significant role in the classroom, it is time to explore the longitudinal process of learning to teach English pronunciation, and how this learning trajectory relates to the teachers' education context such as a pronunciation pedagogy course. This research may serve to better equip L2 instructors with the knowledge and skills necessary to teach pronunciation in their classroom and, ultimately, to improve the effectiveness of SLTE (Baecher, 2012). The two research questions that guide this study are:

1. How do beginning pronunciation instructors' practices and cognitions about pronunciation develop longitudinally?
2. To what extent do beginning pronunciation instructors' current practices and cognitions about pronunciation reflect content learned in a graduate course on pronunciation pedagogy?

### **Theoretical Framework**

The theoretical underpinnings of this study are grounded in the notion that beliefs, knowledge, and pedagogical practices are inseparable (Borg, 2006; Golombek & Doran, 2014) and therefore need

to be examined together to understand L2 teachers' longitudinal process of learning to teach pronunciation. Beliefs are viewed as a key component in teacher learning (Borg, 2011; Johnson, 1994) and knowing about pronunciation pedagogy is a vital aspect in learning to teach pronunciation (Murphy, 2014). Research on teacher preparation has drawn on second language teacher cognition (SLTC), a rapidly growing area within TESOL (Burns, Freeman, & Edwards, 2015; Kubanyiova & Feryok, 2015). With the aim of understanding the long-term learning trajectories of L2 teachers, we use Borg's (2006) definition of SLTC as "an often tacit, personally held, practical system of mental constructs held by teachers and which are dynamic, that is, defined and refined on the basis of educational and professional experiences throughout teachers' lives" (p. 35). SLTC has served as a useful theoretical lens for researchers to examine the relationships between teachers' beliefs and their pedagogical practices. An important finding of this line of inquiry is the frequent mismatch between the two aspects (e.g., Hismanoglu & Hismanoglu, 2010; Phipps & Borg, 2009; Urmston & Pennington, 2008). The body of SLTC research exploring English pronunciation is gradually growing. The majority of studies have looked at L2 instructors' practices, beliefs, and knowledge about pronunciation teaching and learning (e.g., Baker, 2014; Buss, 2015; Couper, 2017; Georgiou, 2018; Nagle, Sachs, & Zarate-Sandez, 2018); yet, to the best of our knowledge, none of them have taken a longitudinal perspective of learning to teach pronunciation.

In this study, we use the term 'cognitions' rather 'cognition.' The plural form is not meant to differ from the broader construct of cognition, but it is used to discuss the different types of beliefs and knowledge our study participants may possess. Cognitions (i.e., mental constructs), therefore, comprise our participants' diverse beliefs, thoughts, attitudes, and knowledge about English pronunciation. In that respect, SLTC offers an exploration of "the unobservable dimension of language teaching" (Borg, 2003, p. 81), allowing us to gain important insights into "what [our participants] know, believe, think, and do." From this comprehensive starting point, we can then investigate the longitudinal acquisition process of cognitions and practices necessary to teach English pronunciation.

The conceptualization of learning to teach pronunciation is also underpinned by the idea that the process involves a gradual change in participants' practices and cognitions. Mainstream teacher education literature often differentiates between change and development (Richardson & Placier, 2001). That is, change tends to be associated with short-term behavioural changes occurring in teacher education contexts while development is seen as a process that takes place over a prolonged period of time during a teacher's career. In the present study we follow Kubanyiova's (2012) proposition of using the terms 'change' and 'development' interchangeably, "referring to the process whereby teachers come to alter aspects of their cognitions and practices in response to their encounter with new input" (p. 7). This alteration, taking place over a period of 3.5 years, allows us to capture and identify the growth of student teachers' practices and cognitions about English pronunciation. Research has demonstrated the positive effects teacher education can have on the change process of teachers' cognitions and practices (e.g., Ball, 2009; Liu & Fisher, 2006; Watzke, 2007). Our previous research also exemplified these findings, showing considerable uptake of knowledge and change in cognitions on behalf of the teacher participants when learning to teach English pronunciation (e.g., Burri, 2015a, 2015b; Burri et al., 2017). We thus set out to conduct the current study with the expectation that the teachers apply, and possibly expand, the practices and cognitions about pronunciation they acquired in their graduate program.

## **Method**

To explore the longitudinal development of five L2 teachers' practices and cognitions, the study consisted of two phases. Phase 1 was conducted in a graduate course on pronunciation pedagogy, whereas phase 2 took place approximately three years after the teachers completed the graduate course and had been teaching for 1.5-2.5 years. The two phases enabled us to investigate and follow five L2 teachers' long-term trajectory of learning to teach English pronunciation.

### Research Context and Participants

Phase 1 of the research project took place in a 13-week graduate course on pronunciation pedagogy offered at an Australian University. The class met once a week for a 3-hour lecture in which pronunciation theory and practice were discussed. The lectures contained a practical component in which student teachers were trained in and experimented with a wide variety of pronunciation teaching techniques, including haptic techniques (e.g., Acton, Baker, Burri, & Teaman, 2013). The underlying premise of these haptic techniques is to combine movement and touch to teach various phonological features systematically to L2 learners. That is, gestures are mapped onto thought groups while both hands touch on the prominent syllable in a thought group. The overall haptic system contains about a dozen techniques to help L2 instructors teach vowels, word stress, rhythm, and intonation in their classrooms (demo videos of some of the haptic techniques can be accessed at <https://www.actonhaptic.com/videos>). In the last part of a lecture, student teachers were given opportunities to analyse various L2 learner speech samples. The course featured a strong collaborative element and emphasized the value of including English varieties and accents in pronunciation instruction. The core text, *Teaching pronunciation* (Celce-Murcia et al., 2010), was supplemented with several journal articles and some Australian-based resources (e.g., Yates & Zielinski, 2009) to make content more relevant to the Australian context. Table 1 contains an overview of the topics covered in the course. Embedded within many of these topics were class discussions of themes relating to learner identity, teacher identity, systematic teaching of pronunciation, fluency development, and innovative teaching practices (in this case, the course's unique focus on haptic techniques). As such, many of these themes are embedded within the narrative frames and rubric used to collect longitudinal data (to be discussed later in this section).

**Table 1. Topics Covered in Pronunciation Course.**

Week	Topic
1	Overview of pronunciation instruction
2	Teaching pronunciation through multimodalities
3	Vowels (1)
4	Vowels (2)
5	Syllables, word stress, and phrasal stress
6	Tone units, sentence stress and rhythm
7	Intonation
8	Consonants (1)
9	Consonants (2) and connected speech
10	Teaching techniques
11	Fluency development and integrating pronunciation into the curriculum
12	Pronunciation and spelling
13	Presentations

Phase 2 aimed at eliciting data on L2 teachers' current practices and cognitions about pronunciation. The five practicing teachers completed the graduate pronunciation pedagogy course in November 2013. Four of the five teachers finished their graduate studies at the Australian university, whereas the one that audited the pronunciation pedagogy course graduated with an undergraduate degree from a university in Hong Kong. At the time of phase 2, the five teachers had 1.5 to 2.5 years of

teaching pronunciation experience: Lucy and Georgia both had 2.5 years, Aoi and Rio possessed two years, and Mark, who finished his studies in Hong Kong, had 1.5 years. Each of the five participants taught in a different context during phase 2. Lucy taught in an English immersion program at an Intensive English Centre in Australia. Georgia taught in an academic English program that prepared international students for their tertiary studies in Australia. Rio worked at a private language school in Australia. Aoi taught English classes at a private high school in Japan, and Mark worked at a primary school in Hong Kong. The teachers were between 25 and 60 years of age and, with the exception of Mark, all had several years of teaching experience prior to their graduate studies, but reported having only limited, if any, pronunciation teaching experience prior to the pronunciation course. We, therefore, classified the five teacher-participants as beginning pronunciation instructors. In both phases, written consent was obtained from the participants to take part in the study. [Appendix A](#) contains more detailed information about the five participants and their teaching contexts.

### **Data Collection and Analysis**

In phase 1, data were collected over 16 weeks (July-November 2013). A pre- and post-course questionnaire, three focus groups interviews, final post-course interviews [1], the participants' final assessment task, and weekly observations of the lectures were triangulated to examine the student teachers' developing cognitions during the pronunciation pedagogy course (see Burri, 2016, for a detailed description of the research instruments used in this phase). The second author taught the course while the first author was the main researcher. All of the collected data were coded thematically in NVivo (Bazeley & Jackson, 2013). The coding structure Baker (2011, 2014) created served as the initial framework for the coding in phase 1. This coding structure linked specifically to various types of teacher knowledge (e.g., subject matter content knowledge, knowledge of learners, general pedagogical knowledge), teacher beliefs regarding this knowledge (e.g., prioritization, usefulness, and importance of pronunciation) as well as more specific pedagogical knowledge of techniques, including controlled (e.g., repetition drill), guided (e.g., referential questions, mutual exchange), and free (e.g., games, drama) activities. As additional themes were discovered, this framework was expanded in NVivo.

For phase 2 (January-April 2017), we designed narrative frames that were emailed to the five participating teachers to elicit their current practices and cognitions about English pronunciation instruction and learning. A narrative frame is a "written story template consisting of a series of incomplete sentences and blank spaces of varying lengths. Structured as a story in skeletal form, [aiming] to produce a coherent story by filling in the spaces according to writers' experiences and reflections on these" (Barkhuizen, 2015, p. 178). Although narrative frames are a relatively new form of research inquiry (Barkhuizen, 2014a, 2014b), they were considered to be the most efficient way to collect data from our study participants given their complex schedules and the time zones in which some of the participants resided, affording them the opportunity to express their personal experiences through a structured, yet unlimited means as the frames easily expanded within the Word document (see [Appendix B](#) for the narrative frame template) [2].

Once the completed narrative frames were returned, we collated a profile for each participant to summarize their current practices and cognitions. We also used the two profiles for each participant that Burri (2016) initially designed. The first author wrote all the profiles by drawing on his intimate knowledge of the qualitative data collected in both phases of the study. The aim was to provide a holistic yet concise overview of participants' cognitions and practices, if any, at the beginning of

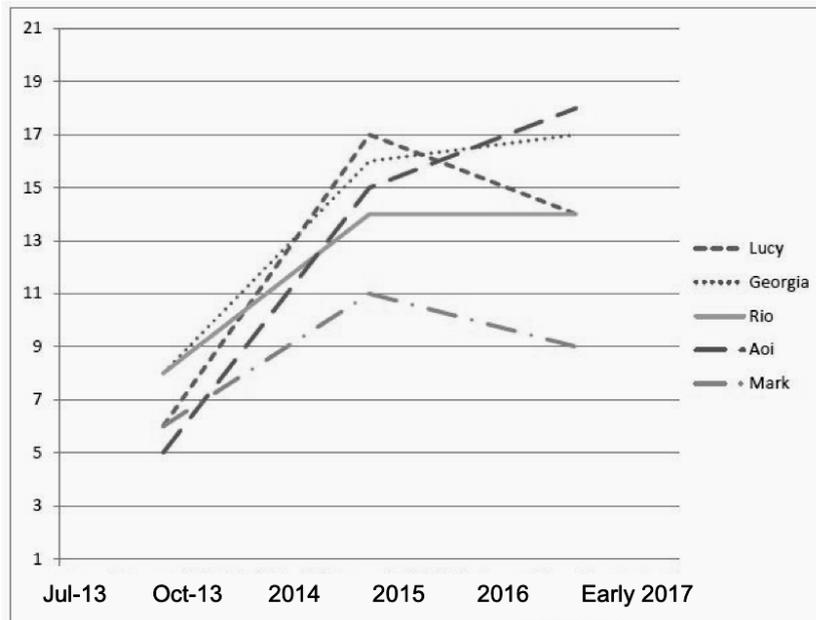
the course, at the end of the course, and in the current teaching context. The profiles were refined several times during the data analysis. The three profiles were then arranged chronologically to facilitate our understanding of the development of each of the participants' practices and cognitions (see [Appendix C](#) for an example). At that point, the authors coded these overviews and identified themes across the three profiles. After a process of coding, discussing, and refining identified themes, we reached coder agreement, and subsequently organized the themes into three main categories: (1) cognitions and values; (2) reported practices; and (3) perceptions and reported use of innovation. 'Cognitions and values' included attitudes, beliefs, and knowledge about what to teach or if to teach it; 'reported practices' comprised the general teaching of pronunciation; and 'perceptions and reported use of innovation' represented various kinaesthetic/tactile (haptic) techniques in which the participants were trained during the pronunciation pedagogy course.

Following the coding, the authors designed a numerical-based rubric to help examine the participants' trajectory of learning to teach pronunciation. We used the three main categories as the evaluative criteria and chose a 7-point scale. While pronunciation researchers typically draw on a 9-point Likert Scale approach (Isaacs & Thomson, 2013), we felt that following Kang's (2010) and Derwing, Munro, and Thomson's (2008) model of using a 7-point scale would help us examine the profiles. Our own extensive knowledge of the pronunciation literature and research also informed the descriptors in the rubric. The finished product was labelled the 'Pronunciation teacher learning continuum' to reflect the continuing, complex nature of learning to teach language (Crandall & Christison, 2016) (see [Appendix D](#) for the continuum). We felt that using a numerical system was an innovative way to more easily identify patterns and points of comparison among the participants in terms of their development over time given the vast diversity of their professional contexts. The continuum allowed us to produce a number for each of the three categories in the qualitative profile data. Aoi's profile at the beginning of the course, for example, received a 2 for 'cognitions and values', 2 for 'reported practices', and 1 for 'perceptions and reported use of innovation.' The continuum, therefore, generated three numbers for each profile (one number for each main category) that were then added up to a total score for each profile. Aoi's profile at the beginning of the course was given an overall score of 5. A total score not only represented the inseparable nature of practices and cognitions (Basturkmen, 2012; Farrell & Tomenson-Filion, 2014), but it provided a visual snapshot of a participant's practices and cognitions about pronunciation at a particular time. This process was then duplicated at the end of the pronunciation pedagogy course and then two years later, receiving scores of 15 and 18 respectively. Comparing the three total scores provided us with insights into a participant's longitudinal process of learning to teach English pronunciation [3]: Aoi's practices and cognitions progressed from 5 to 15, and then to 18 over the span of 3.5 years. To ensure reliability in scoring, we used the continuum independently to evaluate the profiles. Once done, we discussed any scoring discrepancies until rater agreement was reached. The resulting graphs facilitated the examination of qualitative data by allowing us to visually depict and compare the learning development of a diverse range of participants over time.

## Findings

The findings demonstrated a gradual increase in participants' practices and cognitions about English pronunciation over the span of 3.5 years. What the findings also showed is that the learning trajectories of the five participants were unique and differed from each other. This lends support to Woodward, Graves and Freeman's (2018) proposition that teacher development is a complicated process. As can be seen in Figure 1, the trajectories – derived from scores generated by the rubric – rose sharply during the graduate course (from July until October 2013). This relatively uniform upward progression corroborates our previous research that a pronunciation pedagogy course can

have a substantial impact on graduate student- teacher learning (e.g., Burri, 2015a, 2015b; Burri et al., 2017). The qualitative data in the narrative frames provided further evidence of the positive influence of the course on the five participants’ practices and cognitions. After the completion of the course, the trajectories then started to diverge. While Lucy’s and Mark’s line declined as they began teaching, Rio’s remained at the same level, and Georgia’s and Aoi’s path continued to rise.



**Figure 1. Learning Trajectories of Study Participants.**

### Lucy

Lucy progressed during the course from being uncertain about the value of pronunciation to viewing it as an essential component in L2 teaching: “I think [pronunciation teaching is] very important and I’ve gone completely from the beginning of the course thinking... ‘I don’t understand this; is this really important?’ to ‘I think this actually really is quite critical’” (FI). Initially, Lucy also thought that pronunciation teaching was done through repetition and drills, and she expressed doubts about practicing some of the haptic techniques in class. By the end of the course, she did not think segmentals were “really all that hard to teach” (FI). While she was somewhat uncertain about how to teach pronunciation effectively, she imagined spending at least 10 minutes per class on teaching pronunciation. She also thought that “suprasegmentals without this kinaesthetic approach [were] almost unteachable...” (FI), indicating a substantial change in perception that occurred during the pronunciation pedagogy course. Two and a half years later, she integrated pronunciation into all of her lessons by using “speaking games, phonics activities, repetition, exaggeration of sounds and a good sense of humour” (NF) [4]. However, she felt that she still “[lacked] knowledge about how to teach pronunciation effectively to a classroom with a mix of linguistic backgrounds” (NF), but she was “trying to improve student comprehensibility based on the needs of individual students” (NF). Lucy was unable to remember how to use the haptic techniques even though she expressed a strong desire to include them in her teaching repertoire. These uncertainties may explain the slight decline in Lucy’s practices and cognitions from the end of the course into her current teaching position.

## **Georgia**

At the beginning of the course, Georgia indicated having limited pronunciation teaching experience and no prior knowledge of prominence but being fairly confident in using mirrors and drills to teach segmentals and word stress. She feared kinaesthetic learning: “I even find it hard to deal with [it] in an exercise class, following the person exhibiting. I really lack confidence with that” (FI). During the course, however, she began to experiment with several haptic techniques to help a Vietnamese learner with his pronunciation. In the post-course interview, she mentioned noticing an improvement in the students’ pronunciation: “it came together for him. So he can see the benefit of [using these haptic techniques]” (FI). By the end of the semester, she expressed a strong desire to teach pronunciation, advocating the teaching of both segmentals and suprasegmentals. Two and a half years later, Georgia reported incorporating some of the haptic techniques to teach word and sentence stress. She uses the haptic techniques to help her students with pronouncing academic words, and because it “helps them with their writing, particularly with word formation” (NF). She also taught phonemes and rhythm to help her learners “to be understood in a general context” (NF). Given that she was teaching an advanced writing course, integrating pronunciation in her teaching is significant, showing how highly she valued it. Georgia’s narrative frame revealed that the graduate course was, in fact, instrumental in equipping her with the skills and confidence to teach pronunciation: “[The course] contributed to my ability to teach English pronunciation in my classroom by learning all about it and feeling more confident about teaching it” (NF).

## **Rio**

In the case of Rio, at the beginning of the course, he indicated having limited knowledge of intonation but he did not “think the class ha[d] something new for [him]” (FG3-1) to learn overall. He also considered haptic teaching to be a “weird thing” (FG3-1). Rio was unable to imagine Persian learners being “eager to learn something new, standing up doing some physical movement in order to learn something that’s related to pronunciation” (FG3-1). By the end of the semester, he viewed intonation and prominence as important features in teaching pronunciation and his phonological awareness increased. He also felt more knowledgeable about English vowels, and he could imagine using several of the kinaesthetic/tactical techniques in class. Two years later, however, the development of Rio’s practices and cognitions appeared to stagnate and his developmental trajectory remained at the same level (as the green line in Figure 1 suggests). In his current teaching position, he viewed the goal of pronunciation instruction to be “intelligible communication” (NF), but intonation and prominence were not mentioned in his narrative frame. Rio recalled learning about haptic teaching and he included movement in his teaching by having his students stand up occasionally in his lessons. Given his reservations at the beginning of his studies, having students engage in such limited physical movement was fairly innovative but did not reflect the true nature of the kinaesthetic/tactile techniques in which he was trained during the course. Nevertheless, Rio considered his approach to be effective and his students desired “to learn more and come to class with more questions” (NF). In his narrative frame, he indicated that the pronunciation pedagogy course had a positive effect on the development of his practices and cognitions: “The [course] opened a new window to [the] pronunciation world for me” (NF).

## **Aoi**

Of the five participants, Aoi’s learning trajectory was the most notable one, displaying a steady development from SLTE to current teaching practice. At the beginning of the course, she explained that even though she had taken a phonology course in Japan, no one had “taught [her] systematic English pronunciation” (FG2-1) and that she had never heard of prosody. When teaching at a Japanese high school prior to her graduate studies, she “rarely gave instruction of how to pronounce English to [her] students. If any, it was very superficial advice” (FA). She occasionally taught

syllables to her students and used face diagrams and tongue twisters. At the end of the pronunciation course, Aoi believed that prosody was one of the most important features of communication and the course provided her with “new perspectives on pronunciation” (FG2-3) and an in-depth understanding of Japanese learner speech. Aoi found the kinaesthetic/tactile techniques interesting, although she questioned her ability to use them in her Japanese classroom. She also thought that her Japanese students would not only enjoy learning pronunciation, but also that teaching it was exciting. Two years into her teaching, she used a wide variety of techniques (phonics CD, repetition, IPA, articulation diagrams, read-aloud from the textbook, haptics, and rap music) and she encouraged her students to speak English as much as possible to increase their confidence. Her pedagogical goal was to familiarise students with English sounds and basic word stress rules, and to have them produce words and sentence stress so that “students [do not] speak like a robot” (NF). Contrary to her concerns at the end of the graduate course, when she introduced her students to one of the haptic techniques, the Rhythm Fight Club (Burri, Baker, & Acton, 2016), “they [did] it without hesitation” (NF). She believed that the technique had a positive impact on her students’ production of word and sentence stress. Aoi thought her approach was effective and she noticed a slight improvement in her students’ pronunciation but she was “not so sure whether their improvement in pronunciation” (NF) was the result of her teaching. Overall, the pronunciation pedagogy course had a profound impact on her current practices and cognitions: “What I learned there [had] a big influence on my teaching career and my life” (NF). As shown in Figure 1, this positive influence continued well into her teaching career, extending Aoi’s learning trajectory over the entire period of 3.5 years.

### **Mark**

Mark had taken a similar pronunciation-pedagogy course in Hong Kong and, therefore, possessed a relatively solid knowledge-base at the beginning of the course. Resembling Lucy’s trajectory, Mark’s practices and cognitions increased during the course and then slightly declined while teaching at a primary school in Hong Kong for 1.5 years. Yet, the amount of kinaesthetic engagement that occurred during the graduate course “very surprised [him]” (FG4-1) and he expressed interest in the haptic approach: it was something new and unexpected. By the end of the semester, Mark believed that haptic pronunciation teaching would help him identify learner problems, and facilitate his awareness of the English sound system. He reported believing that pronunciation instruction could lead to permanent change, although teaching it could be boring. Mark intended to foreground the importance of pronunciation teaching in Hong Kong. He also imagined devoting “around 10 minutes in each lesson to teach one or at most two features of pronunciation” (FI), using minimal pairs, and focusing on a few individual sounds so that his primary school students would not feel overwhelmed. Although he favoured the teaching of suprasegmentals, he believed that young learners would require mostly explicit teaching of segmentals. One and a half years into his teaching career, Mark viewed his ability to identify his “students’ pronunciation problems and correct them” (NF) as one of his strengths. He used listening perception, imitation, and repetition to teach segmental features in his classroom. He also taught the concept of syllables and isolated phonemes to help his learners with their challenges of spelling English words. His aim was “to make spelling easier for [his learners]” (NF) so that they could “get better results in dictations” (NF) and exams. This approach, however, did not correspond with his beliefs about effective pronunciation teaching: “this is not what I believe in pronunciation teaching. The ability of my students greatly hinders me from going further rather than staying in the word level” (NF). He wanted his students to know about suprasegmentals because of their importance in conveying meaning, but Mark considered teaching suprasegmentals to his learners impossible due to their challenges at the word level. He remembered learning about the haptic approach because it “infuses actions with sounds” and “doing actions can help students remember [a] concept that is

relatively abstract to them” (NF), but there was little indication that he was using the haptic approach in his classroom. Nevertheless, even though Mark’s trajectory dipped after he began teaching, he found the pronunciation pedagogy course useful because it gave him “a taste [for] different approaches” (NF) to teaching pronunciation.

In spite of the variability in participants’ learning trajectories, examining each trajectory over the entire 3.5-year period, an overall upward progression is evident in all five participants’ learning process. The numerical values (i.e., scores attained from the continuum) in Table 2 support the gradual development of each of the participants’ practices and cognitions, ranging from the beginning of the pronunciation pedagogy course (33) to the teacher-participants’ current teaching context (72). Lucy’s practices and cognitions rose from 6 to 14, Georgia from 8 to 17, Rio from 8 to 16, Aoi from 5 to 18, and Mark from 6 to 9 [5]. Also notable in Table 2 (and in Figure 1) is the spike in Lucy’s and Mark’s trajectories, and Rio’s stagnating learning process (to be discussed below). Although there is a slight decrease from the end of the course (73) to the current teaching context (72), the fact that the numbers have maintained their overall strength further demonstrates the impact of the course on the participants’ cognitions and/or practices.

**Table 2. Numerical Values of Participants’ Practices and Cognitions about Pronunciation.**

	<b>Beginning of Graduate Course</b>	<b>End of Graduate Course</b>	<b>Current Teaching Context</b>
Lucy	6	17	14
Georgia	8	16	17
Rio	8	14	14
Aoi	5	15	18
Mark	6	11	9
Total	33	73	72

## Discussion

The findings of this study demonstrated that the participants’ process of learning to teach pronunciation gradually developed over the course of 3.5 years, even if this development in the long-term decreased from any initial spikes in their learning that were demonstrated immediately upon completion of the course. The research showed that the practices and cognitions of two participants, Lucy and Mark, notably peaked at the end of the course and then tapered off in their initial years of teaching pronunciation. As Kang and Chen’s (2014) study suggests, this spike could be the result of substantial practical and theoretical knowledge the participants acquired during the pronunciation pedagogy course. It could also be that the two participants held a somewhat idealistic view of pronunciation instruction, a common outlook by recent graduates (Gu, 2013). Mark, for instance, initially intended to prioritize pronunciation in Hong Kong, but as the reality of classroom teaching began to set in (Farrell, 2009b), he was unable to follow through with his good intentions, resulting in a slight decline in his learning trajectory. Furthermore, being trained in some of the kinesthetic/tactile techniques may have evoked stronger emotions among participants than learning about more familiar techniques (Agudo, 2018), contributing to the spike of the learning trajectory during the graduate course. In fact, all five participants reported in their narrative frames that learning about haptic pronunciation teaching was the most memorable aspect of the course. Yet, the eventual implementation of some of these kinaesthetic/tactile techniques might have been more challenging for some of the participants than the implementation of familiar and traditional

pedagogy (Woodward et al., 2018), contributing to Lucy's and Mark's slight trajectory drop, or slow down as in the case of Georgia and Aoi.

The narrative frame data provided an explanation for why four of the five participants found the teaching of pronunciation challenging: the influence of contextual factors on participants' practices and cognitions. Lucy, for example, struggled with having students from different linguistic backgrounds in her classroom. She explained that "having a mix of background languages in one classroom" (NF) was one of the greatest challenges for her as a pronunciation teacher, and she considered her "lack of knowledge about how to teach pronunciation effectively to a classroom with a mix of linguistic backgrounds" (NF) as her weakness as a pronunciation instructor. This may also explain why Lucy was unable to remember the haptic techniques learned in the pronunciation pedagogy course. She might have simply felt overwhelmed by the challenge of teaching pronunciation to a group of learners with diverse linguistic backgrounds. For Mark, conversely, student proficiency and the test-based curriculum impacted his cognitions and practices. The low proficiency level of his learners "hinder[ed him] from going further rather than staying in the word level" (NF), and the test-focused curriculum required him "[t]o make spelling easier for [his students] in order to get better results in dictations, a form of assessment" (NF). He explained that this approach stood in contrast to his pedagogical beliefs. Mark strongly believed that "suprasegmentals do have an effect on conveying particular meanings" (NF) and he expressed a desire to teach suprasegmentals but thought "it is impossible...as [his students] are still struggling with how words are pronounced" (NF). The strong contextual influence appeared to prevent Mark from incorporating as much pronunciation as he would have liked. Yet, it must also be noted that Mark was the only participant without any teaching experience prior to the graduate course, lending support to Shin's (2012) position that institutional constraints can prevent inexperienced teachers from implementing teaching methods in which they were trained. Contextual factors yielding a strong influence on Lucy's and Mark's practices and cognitions provide a viable explanation for the gradual decline in their learning trajectory.

Contextual factors also appeared to affect Georgia's and Aoi's trajectories. For Georgia, the academic writing focus of the curriculum made it challenging for her to teach pronunciation. At the end of the pronunciation pedagogy course she believed in a balanced approach that included the teaching of both segmentals and suprasegmentals; however, the mandate to improve her students' writing ability under considerable time constraints made it difficult for Georgia to regularly integrate pronunciation into her current teaching. In Aoi's case, the curriculum and her colleagues were believed to limit her pronunciation instruction, which aligns with the research findings of Fantilli and McDougall (2009). Aoi explained that she needed to cover the same textbook content as her three colleagues teaching the same grade, leaving insufficient "time to teach pronunciation or introduce new techniques" (NF). Nevertheless, Georgia's and Aoi's learning curve continued on an incline even after completing the course (see Figure 1), possibly due to their personal determination to teach pronunciation despite some of the contextual challenges they faced.

This, then, raises the question as to why Rio's learning trajectory stagnated, especially since his narrative frame contained no data on the impact of context on his practices and cognitions. Rio had eight years of teaching experience at the tertiary level in Iran prior to his move to Australia. He began the pronunciation pedagogy course relatively confident in his ability to teach pronunciation as he had taught himself how to teach pronunciation to L2 learners, including the use of IPA symbols, repetition, linking, and the presentation of examples. Even though Rio's theoretical and practical knowledge had developed substantially during the course, it appeared that he continued to hold onto his beliefs in the effectiveness of using mostly controlled practices. In his current teaching position, he focused on his students' segmental issues but thought time was perhaps better

spent on teaching vocabulary. Research has shown that teachers often resort to previous pedagogical experiences (e.g., Lortie, 1975; Tang et al., 2012), and the influence of previous teaching and learning experiences on Rio's practices and cognitions may explain the stagnation of his learning trajectory. Rio might have found it difficult to change his previously held cognitions and thus his current practices bear a resemblance to the way he had taught pronunciation in Iran.

The spike and subsequent decline, slow-down, or stagnation of participants' cognitions and practices in their early years of teaching pronunciation may be at first concerning to L2 teacher educators, but we believe that such concerns may be unwarranted. The narrative frame data provided evidence that the pedagogy of all five participants reflected a needs-based approach to pronunciation instruction. As such, the participants seemed to be able to adapt to their current teaching context (Faez & Valeo, 2012) and tailor their practices to meet their learners' needs. Lucy taught word-final consonants to improve the pronunciation of her South-east Asian students, whereas Georgia included pronunciation in her academic writing course to enhance her students' literacy development, an approach that research has shown to be effective (Lundetræ & J. M. Thomson, 2018). Rio focused on problematic sounds to improve his students' intelligibility, while Aoi taught sentence stress and rhythm to increase her learners' confidence and pronunciation, and Mark included segmentals, syllables, and spelling in his lessons to enhance student outcomes on tests. The extent of participants' needs-based approach varied, but the fact that they focused on improving their learners' pronunciation needs is significant. It mirrors the needs-based approach for which the lecturer advocated in the pronunciation pedagogy course, and identifying meaningful ways in which to integrate pronunciation instruction to address these needs. Long-term learning evidently occurred in that the teachers implemented the content-specific knowledge they acquired during the graduate course into their current classrooms. Overall, the findings provided evidence that learning to teach pronunciation is a gradual process that continues well into an L2 teacher's professional life.

## Conclusion

The present study showed an overall increase in participants' practices and cognitions from the beginning of the course through to their current teaching practices 3.5 years later. The research also demonstrated that learning to teach pronunciation is shaped by various contextual factors, and that developing the necessary skills and knowledge to teach pronunciation is a complicated process; teacher professional learning is, after all, a long-term process (Crandall & Christison, 2016; Freeman, 2002; Xu, 2013), and to what extent these trajectories may decline or rise as the teachers advance in their professional careers is unknown. Such queries, however, warrant future investigation, which we expect to pursue as time progresses.

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### Notes

[1] Aoi was unable to attend the final post-course interview due to scheduling difficulties. The purpose of the interview was to solidify our understanding of the participants' cognitions; yet,

multiple data sources were triangulated in phase 1 of the study and we are, therefore, confident that we obtained an in-depth understanding of Aoi's developing cognitions about English pronunciation. [[back](#)]

[2] We acknowledge the control we had in designing the frames, potentially impacting the process of participants constructing meaning. However, given that the second author designed and delivered the subject and therefore her voice would have an unavoidable impact on how any material/content was conveyed, the design of the frames aligned with the content that students were exposed to in the subject. Thus, in line with Barkhuizen's (2014b) proposition of narrative frames being exploratory in nature, we specifically designed them to elicit a snapshot of participants' self-reported practices and cognitions that were "directly relevant to the topic of [our] research" (p.13) and directly tied to content delivered in the subject by the second author. [[back](#)]

[3] The pronunciation teacher learning continuum is meant to be a guide and not a set of absolute criteria on our participants' learning trajectory. That is, the intertwined nature of the three categories required a holistic reading and interpretation of the profiles, and the continuum facilitated our understanding of the long-term process of learning to teach pronunciation. [[back](#)]

[4] Quotation annotation key: NF = narrative frame; FI = final interview; FA = final assessment; FG3-1 = focus group 3, interview 1. [[back](#)]

[5] Mark was still working on his undergraduate degree in Hong Kong and entered the course without any teaching experience; therefore, his first profile did not contain any 'reported practices.' As a result, we excluded this category from the continuum calculations which explains his slightly lower numbers in Table 2 and lower situated trajectory in Figure 1. [[back](#)]

## Appendix A: Overview of Participants and their Current Teaching Contexts

Participant (pseudonym)	Gender; Age	L1	Pre-Course Background (years teaching/ institution/ country)	Post-Course Experience (years teaching/ institution/ country)	Program Type	Learner Background
Lucy	Female 50	English Dutch	20 <i>primary &amp; high school</i> Australia	2.5 <i>intensive English centre</i> Australia	1-year immersion program	New arrivals (e.g., refugees); age 11-18; 8-18 ss/class; intermediate/upper-intermediate
Georgia	Female 60	English	20 <i>tertiary level &amp; primary school</i> Australia	2.5 <i>ELICOS (English Language Intensive Courses for Overseas Students)</i> Australia	Academic skills	Mainly Chinese, Indian, Nepalese; age 20-40; 12-15 ss/class; intermediate
Rio	Male 30	Persian	8 <i>tertiary level</i> Iran	2 <i>private organisation</i> Australia	Competency-based English as additional language program	Mainly Southeast Asia & Latin America; age 20-30; 12-15 ss/class; beginners
Aoi	Female 30	Japanese	5 <i>High school</i> Japan	2 <i>private junior and senior high school</i> Japan	Comprehensive English	Japanese; age 14; 15-23 ss/class; pre-intermediate
Mark	Male 25	Cantonese	0	1.5 <i>primary school</i> Hong Kong	Chinese-medium instruction school; 50% special education needs	Hong Kong + Mainland Chinese; age 5-8; + 29 ss/class; beginners

## Appendix B: Narrative Frames Template

Instructions: Please fill out the “story” below based on your pronunciation practices in your classroom and beliefs and knowledge about English pronunciation. You may type as much or as little as you like. The blank spaces will expand if you wish to provide more details or give extra explanations. You may choose to leave a space blank if you think it doesn’t apply to your situation.

### *Background*

My name is \_\_\_\_\_, and I have been in my current teaching position for \_\_\_\_\_ months/years (underline one). My current teaching context looks like the following (describe type of school, students, curriculum, number of classes you teach per week, type of classes you teach etc.): \_\_\_\_\_.

### *Pronunciation teaching*

When I teach English pronunciation in my classroom, I typically teach pronunciation using the following methods or techniques \_\_\_\_\_. I teach English pronunciation in this way, because \_\_\_\_\_. When I teach English pronunciation to my students, I focus on teaching \_\_\_\_\_ because \_\_\_\_\_. The goal of teaching pronunciation to my students is \_\_\_\_\_. I feel my way of teaching English pronunciation to my students is effective/ineffective (underline one), because \_\_\_\_\_. The most memorable moment when teaching pronunciation to my students has been \_\_\_\_\_. The greatest challenge I experience when teaching pronunciation in my classroom is \_\_\_\_\_. I overcome this challenge by \_\_\_\_\_. I have not been able to overcome this challenge because \_\_\_\_\_. Overall, I think my strength as a teacher of English pronunciation is \_\_\_\_\_. However, I think my weakness as a teacher of English pronunciation is \_\_\_\_\_.

### *Reflecting on [the pronunciation graduate course]*

Overall, I feel the [course] contributed to my ability to teach English pronunciation in my classroom by \_\_\_\_\_. One major theme or issue that I remember from this [course] was \_\_\_\_\_. This theme or issue influences my current teaching or beliefs in the following way: \_\_\_\_\_. Another theme or issue from this [course] was \_\_\_\_\_ but it does not influence my teaching or beliefs because \_\_\_\_\_. I believe the [course] was useful/not useful (underline one) because \_\_\_\_\_.

### *Additional thoughts*

I feel the researchers should also know that \_\_\_\_\_.

## Appendix C: Chronological Arrangement of Aoi's Profiles

Beginning of Course	End of Course	Current Teaching Context
<p>Aoi reported having taken a course on phonology at a university in Japan prior to her postgraduate studies, but little time was spent on pronunciation in her classes and she gave superficial advice to her students (e.g., some drawing of pictures/mouth, tongue twisters, and rare teaching of syllables). No one had taught her how to teach pronunciation systematically and kinaesthetically; she had never heard of prosody. Aoi also mentioned that before doing this course, she thought that non-native teachers could not teach pronunciation properly, and that British or American English were the ideal role model.</p>	<p>The course allowed Aoi to obtain an in-depth understanding of Japanese learner speech, and it provided her with a new perspective. She gained confidence in her ability to teach pronunciation as a non-native speaker, she began to view herself as a competent pronunciation instructor, and she came to understand that she didn't need to speak like a native speaker. Aoi believed that prosody was one of the most important features of communication, and she favoured the teaching of suprasegmentals. She found kinaesthetic/tactile activities interesting and useful although she questioned her ability to use them in her classroom in Japan. She thought that it was not necessary for non-native speakers to attain native-like pronunciation, but agreed that the goal of pronunciation instruction was accent elimination. Aoi believed that L2 learners enjoy learning pronunciation and that teaching it was exciting, but she questioned students' desire to be taught pronunciation.</p>	<p>Aoi's goal of teaching pronunciation is to familiarise her students with English sounds and basic word stress rules, and to have them produce words and sentence stress necessary to be understood. She doesn't want her "students to speak like a robot." Aoi teaches sounds (phonics CD, repetition, IPA), uses articulation diagrams, and rap music to work on words and sentences. The textbook is used for read-aloud tasks and she encourages her students speak English to increase their confidence. She also uses the Flight Club, and contrary to her initial concerns about student reluctance, learners use the technique without hesitation. In fact, she believes that the Fight Club has a positive impact on her students' production of word and sentence stress. Aoi considers knowing about haptic teaching to be one of her strengths as pronunciation teacher, but desires further improvement of her skills to teach pronunciation with more confidence. She considers her approach to be effective and she has noticed a slight improvement in her learners' recitation tests that she conducts every three weeks; however, she is somewhat unsure whether this the result of her teaching. Colleagues and having to stick to the textbook results in time constraints and limited opportunities for Aoi to introduce new techniques and to teach pronunciation on a regular basis. She explained that learning about the importance of sentence stress to help Japanese students work on English rhythm was a memorable part of her graduate course: "what I learned there [had] a big influence on my teaching career and my life."</p>

## Appendix D: Pronunciation Teacher Learning Continuum

	1	2	3	4 (5-7 follow below)
<b>Cognitions about Pronunciation and Valuing Pronunciation Teaching</b> (attitudes, beliefs, knowledge about what to teach or if to teach it)	<u>Negative Valuing</u> No cognitions about pronunciation/doesn't believe in the need to teach/include pronunciation in the classroom.	Few cognitions about pronunciation; sees little value in teaching pronunciation.	Some cognitions about pronunciation; some value placed on teaching pronunciation on an ad hoc basis but is not specified as a goal of teaching.	<u>Hazily Defined Valuing</u> Cognitions about pronunciation are evident; pronunciation is identified as a goal but it is not clearly defined/specified.
<b>Reported Practices</b> (how to teach)	<u>No Practice</u> No stated or observable understanding of how to teach pronunciation.	Little time spent on pronunciation and/or teaching through repetition (traditional/non-trained approach); may express lack of confidence and/or uncertainty how to teach pronunciation.	Teaching through repetition (teacher-centred) but is able to isolate target pronunciation; may express uncertainty (or lack of clarity) about alternate ways of teaching pronunciation.	<u>Ad-hoc Targeted Practice</u> Teaching specific target feature but as an add-on (not contextualized or integrated); may express uncertainty about alternate ways of teaching pronunciation and/or about students' desire to be taught pronunciation.
<b>Perceptions and Reported Use of Innovation</b> (e.g., kinaesthetic/tactile)	<u>No Innovation</u> No knowledge of innovation and no confidence in its effectiveness in improving learner pronunciation.	No knowledge of innovation and unsure of/disbelief in its effectiveness in improving learner pronunciation	Has some knowledge of innovation but doesn't remember the system/ techniques.	Believes that innovation is a beneficial method but doesn't use it in current teaching.

	5	6	7	Notes
<b>Cognitions about Pronunciation and Valuing Pronunciation Teaching</b> (attitudes, beliefs, knowledge about what to teach or if to teach it)	Knowledgeable about/believes in teaching 1-2 specific target features to help improve students' pronunciation. Acknowledgment of suprasegmental features in addition to segmental features; goal of pronunciation instruction is somewhat defined.	Well-developed knowledge and/or understanding about pronunciation; suprasegmentals are seen as being important to enhance students' intelligibility; goal of pronunciation instruction is clear; believes that pronunciation teaching can lead to change.	<u>Highly Defined Valuing</u> In-depth knowledge and/or understanding about pronunciation; considers pronunciation instruction to be critically important; believes in teaching segmentals and suprasegmentals; goal of pronunciation is clearly defined to meet learners' needs in a particular context.	Lacks knowledge: -1. Believes pronunciation is boring: -1. Beliefs do not match practice: -1.
<b>Reported Practices</b> (how to teach)	Teaching specific target feature as part of a lesson to improve students' pronunciation and/or to meet students' pronunciation needs.	Integrating pronunciation into lessons and/or teaching balanced approach (segmentals and suprasegmentals); using several different techniques to improve students' pronunciation and/or to meet students' needs	<u>Highly Systematic and Targeted Practice</u> Integrating pronunciation systematically and incorporating a variety of C/G/F techniques to improve students' pronunciation and/or to meet students' needs and/or to support development toward automated fluency outside of the classroom.	Confident and/or expressing strong desire and/or effectiveness of pronunciation teaching: +1.
<b>Perceptions and Reported Use of Innovation</b> (e.g., kinaesthetic/tactile)	Believes that innovation is a beneficial method and/or occasionally uses in current teaching.	Believes that innovation is a beneficial method and/or uses it regularly in current teaching.	<u>Highly Innovative-oriented Practice/Position</u> Is convinced that innovation is a beneficial method and/or uses it frequently in current teaching.	Uncertainty, anxiety, fear and/or lack of confidence: -1. Confident and/or expressing strong desire and/or effectiveness of innovative method: +1.

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