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English Language Teachers' Required Knowledge and Self-Efficacy Beliefs about Pronunciation Instruction

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Abstract

This study investigated ESL teachers' perceived level of self-efficacy in pronunciation instruction, perceived level of language and pronunciation proficiency, and level of pronunciation instruction knowledge. An online survey and follow-up interviews were administered. Results showed that, overall, ESL teachers in Canada report high levels of self-efficacy, language and pronunciation proficiency, and knowledge of pronunciation instruction. When comparing native English-speaking teachers (NESTs) with non-native English-speaking teachers (NNESTs), NESTs reported higher ratings on their self-perceived language and pronunciation proficiency, and self-perceived knowledge of pronunciation instruction. On the other hand, NNESTs reported higher ratings on their self-efficacy, desired levels of language and pronunciation proficiency, and desired knowledge of pronunciation instruction when compared to NESTs. Interview findings reveal that teacher education and explicit learning experiences of NNESTs contributed to their high reporting of pronunciation efficacy and knowledge for pronunciation instruction. In addition, results indicated that ESL teachers' language proficiency did not correlate with their self-efficacy in pronunciation instruction, but their pronunciation proficiency and self-reported level of pronunciation instruction knowledge correlated with their self-efficacy. These findings have significant implications for teacher education programs and the need to offer courses in pronunciation instruction.

Keywords

ESL teacher, pronunciation instruction, self-efficacy, language proficiency, pronunciation proficiency, knowledge of pronunciation instruction

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Chapter 1 Introduction

1.1 Background

Pronunciation is a key component of acquiring oral skills in second language learning and teaching (MacDonald, 2002). Students usually cite pronunciation as being very important during their English as a Second Language (ESL) learning (Saito, 2012). Several studies have shown that students can benefit from pronunciation instruction while acquiring oral skills in class (e.g. Derwing & Rossiter, 2003; Saito 2007; 2011; 2012; Thomson & Derwing, 2015; Flege, 1988; MacDonald, Yule, & Powers, 1994; Derwing, Munro, & Wiebe, 1998). However, matching instructional content to ESL learners' needs is a challenge. There are three reasons for such a situation: a lack of confidence (MacDonald, 2002; Thomson, 2013), level of language proficiency (Eslami & Fatahi, 2008; Chacon, 2005);, and a lack of pronunciation knowledge (Derwing & Rossiter, 2003).

Teachers' self-confidence plays an important role in teachers' practices and students' achievement in class. Bandura (1993, 1997), and Knoblauch and Woolfolk (2008) indicate that teachers' sense of instructional efficacy has an impact on their teaching practices, teaching effectiveness, and students' academic achievement in class. Thus, understanding ESL teachers' self-beliefs for instructional efficacy will be useful for improving their abilities and confidence. Buss (2016) investigated EFL teachers' self-beliefs on pronunciation teaching in Brazil and showed that teachers were confident teaching pronunciation in class. However, there is little research that has been done similarly in an ESL context.

In addition, levels of language proficiency can influence teachers' self-esteem and hinder their achievement of pedagogical requirements for language teaching (Chacon, 2005; Ghasemboland and Hashim 2013). Nevertheless, limited research has investigated whether

teachers' language proficiency and their pronunciation proficiency have an impact on their self-efficacy in pronunciation instruction in an ESL context, respectively.

A lack of training and knowledge contributes to ineffective pronunciation teaching (Breitkreutz, Derwing, & Rossiter, 2001; Foote, Holtby & Derwing, 2011). Most teachers are not well equipped with pronunciation instructional knowledge (Derwing & Rossiter, 2003). However, teachers need to have sufficient knowledge to implement pronunciation instruction, because implementation of good pronunciation instruction requires professional knowledge (Ball, Thames, and Phelps, 2008). Yet, these studies do not indicate what level of pronunciation knowledge ESL teachers need to possess in order to achieve good pronunciation teaching practices , even though possessing such knowledge benefits teaching practices in the classroom (Burgess & Spencer, 2000). In addition, studies have mentioned that there are gaps between what level of knowledge teachers have and what level of knowledge they need to know (Burns, 2006; Couper, 2016, 2017; Foote et al., 2016; Henderson et al., 2012; Murphy, 2014a). However, it is not clear how much of a gap exists between current levels and desired levels of pronunciation knowledge of ESL teachers.

1.2 Thesis Organization

The organization of this thesis is as follows. Chapter 1 provides an introduction to the background of pronunciation instruction, the purpose of the study and research questions, and the definitions of terms.

Chapter 2 discusses the theoretical framework of this study. It also provides an overview of the existing literature concerning pronunciation instruction and teacher efficacy scales, as well as the gap in the literature. In this chapter, literature is reviewed with regard to teacher efficacy,

self-beliefs in pronunciation instruction, teachers' language proficiency, important features of pronunciation teaching, and knowledge of pronunciation instruction.

Chapter 3 outlines research design and methods, including descriptions of online survey and follow-up interviews, participant recruitment, and validation of the survey. In addition, the methods of data collection and analysis are also highlighted.

Chapter 4 discusses the findings of this study. Each finding is discussed according to the research questions, including ESL teachers' self-efficacy beliefs in pronunciation instruction, language and pronunciation proficiency, knowledge of pronunciation instruction, as well as teaching practices and issues about pronunciation teaching.

In Chapter 5, discussion and implications, limitations of the research, future research, and conclusion are highlighted. In this chapter, the meaning and importance of the findings are discussed. In addition, the chapter also outlines the implications of this study for professional associations, program developers, teacher educators and teachers themselves. Furthermore, this chapter briefly describes the limitations, and discusses the potential directions for future work.

1.3 Purposes of the Study and Research Questions

The current study addressed what the levels of ESL teachers' self-efficacy in pronunciation instruction were in Canadian classrooms, using the Scale of Teachers' Self-Efficacy in Pronunciation Instruction designed based on studies on teachers' self-efficacy in English language education (Chacon, 2005) and inclusive education (Sharma, Loreman, & Forlin, 2012). As part of teachers' self-efficacy, studies regarding pronunciation instruction, and studies that have looked at issues relating to pronunciation instruction were reviewed (e.g. Buss, 2015; MacDonald, 2002) to provide an overview of teachers' confidence in teaching pronunciation in

different settings. Furthermore, the levels of native English-speaking teachers (NESTs)[1]' and non-native English-speaking teachers' (NNESTs) self-efficacy were also compared in the current study to gain deeper insight.

The levels of ESL teachers' language and pronunciation proficiency in Canada were also investigated. Language proficiency and self-beliefs about language learning are considered to be two factors that affect classroom teaching practices and the use of the instructional language (Kamhi-Stein & Mahboob, 2005). Two scales were adapted from the Common European Frame of Reference (CEFR) to explore ESL teachers' levels of language and pronunciation proficiency. In addition, the differences between the levels of NESTs and NNESTs were also examined. In a study by Llurda and Huguet (2003), teachers who speak English as a second language rate their pronunciation proficiency lower than other skills. Golombek and Jordan (2005) argue that teachers whose first language is not English usually display their uncertainty about pronunciation teaching in class due to their self-perception as "inadequate models for pronunciation" (as cited in Levis, Sonsaat, Link, & Barriuso, 2016, p. 894). Furthermore, the current study looked at the gap between ESL teachers' self-reported language and pronunciation proficiency and the level they believed was required to teach pronunciation.

In addition, this study looked at the relationship between ESL teachers' overall language proficiency/pronunciation proficiency and their self-efficacy in pronunciation instruction in an ESL context. Previous research has investigated teachers' language proficiency (Butler, 2004; Choi & Lee, 2016), and the relationship between language proficiency and their self-efficacy in language teaching in an EFL context (Chacon, 2005; Eslami & Fatahi, 2008; Ghasemboland &

[1] I am aware of the problems associated with the terms native and non-native (see Faez, 2011a and 2011b) but because of their extensive use in the literature and due to a lack of a better term, I use them for purposes of this study.

Hashim, 2013). Murdoch (1994) and Richards (2010) indicate that teachers' language proficiency has an impact on their confidence in teaching. Chacon (2005), and Eslami and Fatahi (2008) stated that teachers' self-efficacy was linked to their language proficiency. However, little research has investigated the relationship between the level of pronunciation proficiency and self-efficacy of ESL teachers.

This study also investigated the level of pronunciation knowledge ESL teachers reported and the level they believed was required for effective pronunciation teaching, as well as the gap between these two levels. Ball, Thames, and Phelps (2008) state that sophisticated and professional knowledge is required to implement high-quality instruction. Many English language teachers are unable to confidently deal with pronunciation difficulties because of a lack of pedagogical knowledge (Thomson, 2013). However, little research has statistically explored what level of pronunciation knowledge ESL teachers have and what levels they need to know. In addition to the level of ESL teachers' knowledge, this study also explored the relationship between ESL teachers' self-reported knowledge of pronunciation and their self-efficacy in teaching it. To my knowledge, limited research has investigated the relationship between teachers' knowledge and their self-efficacy in pronunciation teaching statistically, especially in pronunciation teaching. However, research has shown that content and pedagogical knowledge are correlated with self-efficacy beliefs (e.g. Abbitt, 2011; Leader-Janssen & Rankin-Erickson, 2013), and teachers with professional training have higher levels of teacher self-efficacy (Swan, Wolf, & Cano, 2015). Thus, the current study addressed this gap and explored whether there was a potential relationship between teachers' knowledge and their self-efficacy in teaching pronunciation.

Teaching practices and issues involved in pronunciation teaching were explored in the present research. This provided an overview of the current situation of pronunciation teaching in Canada and common teaching issues ESL teachers encounter.

Through the current study, 169 participants were recruited, and a mixed-methods design was conducted to investigate the following questions:

1. What are the levels of self-efficacy among ESL teachers for pronunciation instruction?

   1a. How do native English-speaking teachers and non-native English-speaking teachers compare?

2. What are the self-reported levels and self-rated required levels of language proficiency and pronunciation proficiency among ESL teachers?

   2a. What is the gap between self-ratings of teachers on language proficiency/ pronunciation proficiency and the level they think is required to teach it effectively?

   2b. How do native English-speaking teachers and non-native English-speaking teachers compare?

3. Is there a relationship between ESL teachers' self-ratings on language proficiency/pronunciation proficiency and their level of self-efficacy on pronunciation teaching?

4. What level of knowledge do ESL teachers report they have, and what level they need for effective pronunciation instruction?

   4a. What is the gap between the self-reported level of knowledge and the level ESL teachers think is required to teach pronunciation?

   4b. How do native English-speaking teachers and non-native English-speaking teachers compare?

4c. Is there a relationship between ESL teachers' self-reported knowledge of pronunciation instruction and their confidence in teaching pronunciation?

5. What are the self-reported practices of ESL teachers regarding pronunciation instruction?

1.4 Definition of Terms

The following terms are frequently used in this study:

1. Self-efficacy

   This refers to "beliefs in one's capabilities to organize and execute the courses of action required to produce given attainments" (Bandura, 1997, p.3). It reflects self-confidence in the ability to implement skills in different sets of conditions (Bandura, 1997).

2. Teacher Self-efficacy

   "The teacher's belief in his or her capability to organize and execute courses of action required to successfully accomplish a specific teaching task in a particular context" (Tschannen-Moran, Hoy, & Hoy, 1998, p.233). It is also referred to as teachers' sense of efficacy.

3. Suprasegmentals and Segmentals

   Suprasegmental levels of language refer to "rhythm, stress, intonation, tempo, and voice quality", while segmental features include speech sounds, such as vowels and consonants (Derwing, 2013, p. 2).

4. Word Stress and Sentence Stress

   "Stress in the isolated word is termed word stress, while stress in connected speech, termed sentence stress." (Collins & Mees, 2013, p. 20). "Word stress refers to the pattern of stressed and unstressed syllables in a word", while "sentence stress refers to the

pattern of stressed and unstressed words in a sentence or utterance" (Richards & Schmidt, 2010, p. 560).

5. Suffixes

This refers to "a letter or sound or group of letters or sounds which are added to the end of a word, and which change the meaning or function of the word" (Richards & Schmidt, 2010, p. 572).

Chapter 2 Literature Review

This chapter reviews existing research that has investigated teachers' self-efficacy in general education, research that has looked at issues pertaining to pronunciation instruction, and

research that has explored the relationship between teachers' language proficiency and their self-efficacy, as well as research that has investigated the relationship between teachers' self-efficacy and their knowledge of pronunciation. Based on the gap identified in these studies, the relationship between pronunciation proficiency and self-efficacy in teaching pronunciation was examined.

The first part discusses the theoretical framework the current study drew on: teachers' self-efficacy and required knowledge base for pronunciation teaching. The second part reviews three studies regarding teachers' self-efficacy scales in different settings. This part serves as a reference to develop a model for the scale developed in this study. The third section reviews two studies focused on self-beliefs in pronunciation instruction. This section provides an overall sense of teachers' confidence in teaching pronunciation in different contexts. The fourth part looks at studies regarding language proficiency and teachers' self-efficacy. This part serves as a reference to help the current study explore the potential relationship between language and pronunciation proficiency and teachers' self-efficacy in pronunciation teaching in an ESL context. The fifth section reviews pronunciation instruction, pronunciation features, and issues involved in pronunciation teaching to support the current study with the generation of scale items, followed by the review of a gap between self-perceived knowledge of pronunciation and desired knowledge of it. The last part ends with an analysis of gaps in the literature.

2.1 Theoretical Framework

The current study drew on self-efficacy theory (Bandura, 1997), and teachers' self-efficacy (Tschannen-Moran et al., 1998). Self-efficacy is concerned with an individual's belief in his/her capacity to operate behaviours necessary to produce specific performance accomplishments (Bandura, 1997). It is concerned with personal judgements regarding one's

capabilities to achieve performance at designated levels. It is not only concerned with how many skills people have, but also with what people believe they can do with what they have in different contexts (Bandura, 1997). Bandura (1997) states that "the level of motivation, affective states and actions are based more on what they believe than on what is objectively true" (p. 2).

Teachers' self-efficacy refers to "teachers' beliefs in his or her capability to organize and execute courses of action required to successfully accomplish a specific teaching task in a particular context." (Tschannen-Moran et al., 1998, p. 233). Bandura (1997) indicates that "teachers' beliefs in their instructional efficacy partly determine how they structure academic activities in their classrooms and shape students' evaluations of their intellectual capabilities" (p. 240). Teachers' beliefs have potential influence on both the environment created by the teachers and various instructional practices introduced in the classroom (Bandura, 1997). That is, teachers with high sense of instructional efficacy tend to achieve good teaching performance in class while ones with low sense of efficacy in their instruction have problems in the classroom (Gibson & Dembo, 1984; Melby, 1995; Yilmaz, 2011). In addition, self-efficacy not only influences teachers themselves, but also has an impact on students' academic achievements, such as motivation, and their own sense of efficacy (Anderson, Greene, & Loewen. 1988; Ashton & Webb, 1986; Midgley, Feldlaufer, & Eccles, 1989; Kember & Wong, 2000; Swanson, 2014). Furthermore, teachers with a high level of self-efficacy are willing to accept new concepts and new methods to ensure the different needs of their students are being met (Guskey, 1988; Stein & Wang, 1988). Gibson and Dembo (1984) indicate that teachers with a high sense of instructional efficacy spend more classroom time on academic activities, help students achieve academic success and recognize their academic accomplishments, while teachers with a low

sense of instructional efficacy create an opposite situation. Thus, increasing self-efficacy beliefs will help to improve students' academic achievement.

Teachers' self-efficacy was explored in the present study based on the theories listed above. These theories provided a focus on conception and measurement for the current study to identify what teachers believed they could do in the classroom, which helped to investigate areas of strengths and weaknesses concerning teaching practices in class. In the current study, teachers' self-efficacy was explored in relation to pronunciation instruction in an ESL setting.

Celce-Murcia, Brinto, Goodwin and Griner (2010) outlined a required knowledge base for teaching pronunciation that was used in this study. This knowledge base includes both segmental and suprasegmental aspects, which covers consonants, vowels, connected speech, stress, rhythm, and intonation. The authors indicate that, to teach pronunciation effectively, teachers must have "knowledge of the pronunciation features", "awareness of potential student problems", and "pedagogical priorities" (Celce-Murcia et al., 2010, p. 44). For example, teachers need to know the "phonemic alphabet" in order to "capture the sounds of the language more accurately" (p. 51). Celce-Murcia et al. also pointed out the importance of having such a knowledge base. Firstly, having pronunciation knowledge helps teachers understand how the sounds are pronounced in different contexts. Secondly, pronunciation knowledge provides support to teachers with their lesson planning. Thirdly, such knowledge helps to determine teaching priorities. Moreover, the study also discusses issues of implementation, including the assessment of pronunciation, additional teaching resources, etc.

Based on this framework, more detailed aspects at segmental and suprasegmental levels, and the instructional levels were added to the present research to explore ESL teachers' level of knowledge for effective pronunciation instruction. Understanding the level of teachers'

knowledge and the level they believed was required to teach pronunciation may prepare them for better teaching practices in pronunciation instruction. When teachers are equipped with professional and pedagogical knowledge, they may feel more confident to implement pronunciation instruction in class. Once they feel confident that they are able to achieve teaching goals, they may be inclined to invest more time on academic instruction.

2.2 Teachers' Self-Efficacy Scales

This section highlights what teachers' self-efficacy scales measured in different contexts, and how teachers' self-efficacy scales for task-specific purposes were developed, which serves as a model to develop the scale for pronunciation instruction in this study.

Tschannen-Moran, Woolfolk Hoy and K. Hoy (2001) developed the Teacher Sense of Efficacy Scale (TSES) based on Bandura' teacher self-efficacy scale. The TSES consists of three subscales: 1) Efficacy for Instructional Practices, 2) Efficacy for Student Engagement, and 3) Efficacy for Classroom Management. Tschannen-Moran et al. (2001) state that finding the ideal level of specificity for measurement is most challenging. This is because scales lose the prediction for "anything beyond the specific skills and contexts being measured" when the measures are too specific (p. 795). To make scales useful and generalizable, Tschannen-Moran et al. (2001) suggest that measures should embrace "teachers' assessments of their competence across the wide range of activities and tasks they are asked to perform" (p. 795). The TSES has been frequently used across different subjects, including studies that explore English language teachers' self-efficacy.

Chacon (2005) developed the English Teachers' Sense of Efficacy Scale (ETSES) based on the TSES (Tschannen-Moran & Woolfolk Hoy, 2001) to investigate EFL teachers' self-efficacy beliefs in Venezuela. The ETSES consists of five subscales, including 1) "teachers'

perceived efficacy for engaging students in learning EFL", 2) "teachers' perceived efficacy for managing EFL classes", 3) "teachers' perceived efficacy for implementing instructional strategies to teach EFL", 4) "teachers' self-reported English proficiency, and 5) teachers' self-reported pedagogical strategies to teach English" (p. 262). In order to make the ETSES specifically related to the language teaching, Chacon included "English" into this scale instead of using general scale statements.

Sharma, Loreman and Forlin (2012) developed the Teacher Efficacy for Inclusive Practice scale to measure teachers' perceived efficacy to teach in a setting of inclusive classrooms. Scale items were generated based on relevant literature on inclusive education and current scales on teacher efficacy (Gibson & Dembo, 1984; Tschannen-Moran et al., 1998; Woolfolk Hoy & Spero, 2005). The content of the scale items was validated by six university faculty in relevant fields. Furthermore, an exploratory factor analysis was used to determine the factor structure of the scale. The final scale for the Teacher Efficacy for Inclusive Practices included 18 items among their efficacy in instruction, collaboration, and managing behaviours with the statement "I can" in a 6-point Likert Scale, ranging from strongly disagree (1) to strongly agree (6). Sharma et al.'s study served as a methodology reference to assist in the development of the scale in the current study. The method of content validation their research was adapted to the current study. Similar to Sharma et.al, items in this study were generated based on relevant literature on pronunciation instruction.

2.3 Self-beliefs in Pronunciation Instruction

MacDonald's (2002) and Buss's (2016) studies were reviewed to identify teachers' self-beliefs in pronunciation instruction in different contexts (ESL and EFL). Although MacDonald' study (2002) did not specifically investigate teachers' self-efficacy in pronunciation teaching, it

indicated that they were not confident teaching pronunciation. By contrast, Buss' s study (2016) showed that EFL teachers in Brazil were confident teaching pronunciation. Both studies provide an overview of teachers' self-beliefs in pronunciation instruction in different contexts.

MacDonald (2002) explored the reasons for teachers' reluctance to teach pronunciation. Eight teachers were selected via a questionnaire in the first phase of this study. The participants recruited from English Language Intensive Courses for Overseas Students and migrant programs around Australia were asked to rate their pronunciation teaching practices. Five out of eight answered that they were not good at teaching pronunciation. Two of them indicated "OK", while only one of them said "good at". The result suggests that teachers who have low confidence in pronunciation instruction lack confidence to teach pronunciation affects teaching performance. MacDonald (2002), however, did not specifically demonstrate which aspect of pronunciation teaching was problematic and what ESL teachers' specific levels of confidence were. The finding of teachers' low confidence in pronunciation teaching was simply identified by asking how good ESL teachers were at teaching pronunciation. Even though it is not directly related to the current study, it has provided an overall sense of teachers' confidence in teaching pronunciation in an ESL context.

Buss's (2016) study investigated Brazilian EFL teachers' beliefs and practices regarding pronunciation and this study was more specific, compared to MacDonald's study. Buss' study discussed self-beliefs in teaching segmental and suprasegmental aspects. Data were collected through three measures: 1) participants' background information, 2) teaching practices, and 3) beliefs and opinions. The results showed that most participants taught pronunciation in class. In addition, the results indicated that pronunciation instruction was percieved to be highly important. Furthermore, the participants had positive attitudes toward pronunciation instruction. The results

relating to teaching practices showed that suprasegmental instruction was less of a focus in class with participants preferring to teach segmentals. Although the segmental instruction was the preference of the participants, difficulties teaching segmentals were in fact reported most often. At the end, the findings indicate that Brazilian EFL teachers were confident teaching pronunciation.

Buss (2016) suggests that teachers may be confident teaching pronunciation due to the fact that teachers and students do not encounter some pronunciation teaching problems when they share the same first language (L1). Another reason that teachers felt confident to teach pronunciation may be, as indicated by Buss, that the participants received training in pronunciation. Darling-Hammond, Chung, and Frelow (2002) suggest that teachers' feelings about preparedness are related to their self-efficacy and confidence regarding whether they can achieve teaching goals. This implies that English language teachers may feel more confident to teach specific pronunciation features when they are equipped with the corresponding knowledge and preparation.

The limitations of Buss's study are generalization and inferential statistic support . Buss's study was conducted in an EFL context where both teachers and students shared the same L1 background. Dealing with the different needs of ESL learners from different L1 backgrounds is a challenge (Burgess & Spencer, 2000). This challenge is less of a problem in an EFL context but might be more challenging in an ESL context. Secondly, questionnaire statements regarding teachers' level of confidence in pronunciation teaching are general, and do not specify what segmental and suprasegmental features teachers are confident to teach. For example, "I'm completely confident and comfortable teaching segmentals" and "I'm completely confident and comfortable teaching suprasegmentals". Scale items may generate different results if the

statements are specific to each feature at segmental and suprasegmental levels. The second limitation refers to the generation and analysis of the survey. The survey used in this study were directly adapted from Burgess and Spencer (2000), and Foote, Holtby, and Derwing. (2011). The quantitative analysis was simply based on frequencies of participants' responses. That is, the online survey tool used in the study generated tables and charts that showed the number of participants who chose each Likert scale option, but there was a lack of inferential statistics to support the analysis. The current study addressed this gap.

2.4 Teacher Language Proficiency

Teachers' language proficiency has been considered a vital qualification for successful English teaching (Butler, 2004), as "it is largely assumed that teachers' lack of English proficiency has a causal relationship with their low confidence in teaching English" (Sabokrouh, 2014). As Murdoch (1994) and Richards (2010) indicate that teachers' language proficiency is also important for teachers' confidence. Several studies have shown that language proficiency has an impact on teachers' self-efficacy (e.g. Chacon, 2005; Choi & Lee, 2016; Eslami & Fatahi, 2008; Ghasemboland & Hashim, 2013; Sabokrouh, 2014). All of these studies have looked at English language proficiency in the four skills (listening, speaking, reading, and writing) in an EFL context. The results from these studies all showed that there was a positive relationship between language proficiency and teachers' self-efficacy in an EFL context. These results inspired the current study to examine a potential relationship between English and (pronunciation) proficiency and teachers' self-efficacy in an ESL context.

Chacon (2005) investigated self-perceived efficacy of EFL middle school teachers in Venezuela, and the relationship between their self-perceived efficacy and self-reported language proficiency. The short version of the Teacher Sense of Efficacy Scale was adapted from

Tschannen-Moran and Woolfolk Hoy (2001) to explore teachers' self-efficacy in English teaching. The measure for English proficiency was generated based on the literature and the experience of the researchers to investigate self-reported level of English proficiency. The finding showed that there was a positive correlation between teachers' perceived efficacy and self-reported English proficiency.

Choi and Lee (2014) conducted a survey to test two hypotheses concerning minimum threshold levels of language proficiency, pedagogical capabilities, and a relationship between teachers' language proficiency and pedagogical capabilities. A perceived English proficiency scale was adapted from Butler's (2014) study to explore teachers' level of proficiency. A self-efficacy beliefs scale was developed based on Korean Institute for Curriculum and Evaluation (2008) and Tschanner-Moran & Woolfolk Hoy (2001). The results showed that teachers' language proficiency and their self-efficacy were interdependent above the minimum levels.

Eslami and Fatahi (2008) explored the EFL teachers' efficacy beliefs of personal ability to teach English, and their perceived English language proficiency levels. The TSES (Tschannen-Moran et al., 2001) was adapted, and a 5-point Likert scale of teachers' self-reported English proficiency was developed based on Butler (2004) and Chacon (2005). The findings show that there is a positive relationship between perceived level of language proficiency and sense of self-efficacy. In other words, teachers with higher perceived proficiency in language skills feel more efficacious.

Ghasemboland and Hashim (2013) examined NNESTs' efficacy beliefs in teaching EFL and their perceived English language proficiency in an EFL context. The TSES (Tschannen-Moran et al., 2001) was adapted to assess the efficacy in "classroom management", "student engagement", and "instructional strategies" (p. 890). A 6-point Likert scale of teachers' self-

reported level of English proficiency was developed based on Chacon (2002, 2005) and Shim (2001), ranging from "strongly disagree" to "strongly agree" to measure teachers' English proficiency in the four skills. The findings show that self-reported English proficiency has a positive relationship with English teaching efficacy. In other words, the participants with high-rated English proficiency tended to be more confident teaching English.

Saborouh (2014) conducted a survey in Iran to investigate ESL teachers' attitude toward the English language and their self-efficacy, a relationship between EFL teachers' level of proficiency in the English language and their self-efficacy, and a relationship between self-efficacy and EFL teachers' attitude. The survey included a proficiency test, a revision of a TOEFL test, a self-efficacy questionnaire, adapted from TSES (Tschanner-Moran et al., 2001), and a teacher's attitudes toward English language questionnaire. The results showed that there was no relationship between English language teachers' attitude and self-efficacy, but showed a positive relationship between their proficiency level and efficacy.

All three studies reviewed above have shown that there is a positive relationship between language proficiency and self-efficacy. However, such a finding was generated based on using general scales of teachers' self-efficacy in language teaching but not pronunciation teaching. Results might be different when the language proficiency relates to a specific aspect: pronunciation teaching in an ESL context.

Butler (2004) looked at the gap between EFL teachers' perceived language proficiency and their perceived minimum level of proficiency required to teach English effectively in the elementary schools in Korea, Taiwan, and Japan. The participants were asked to rate their "listening comprehension, oral fluency, vocabulary in speech, grammar in speech, pronunciation, reading comprehension, and writing ability" (p. 256). The Stanford Foreign Language Oral Skills

Evaluation Matrix (FLOSEM) was adapted to generate the proficiency scale items regarding speaking language. The participants rated their proficiency from one to six. They could also rate their proficiency between levels, such as the level between one and two. The findings showed that there were gaps between their self-perceived English proficiency and the minimum level needed to teach. This finding guides the current study to explore the gap between perceived language and pronunciation proficiency and the level of the language proficiency required to teach pronunciation effectively in an ESL context.

With regard to self-assessed teachers' pronunciation, Henderson et al. (2012) conducted a survey in European countries to investigate teachers' English pronunciation teaching practices. Participants were asked to rate their own pronunciation skills from one to five. The results showed that participants had a high level of pronunciation skills, which provided an overall sense of the self-assessed level of teachers' pronunciation in an EFL context. However, this study did not specify what pronunciation skills were. As Henderson et al. (2012) stated, the question regarding self-assessing pronunciation skills might be misinterpreted as "one's knowledge of phonology/phonetics or one's ability to pronounce English" (p. 12).

2.5 What Pronunciation Features are Important to Teach and What are the Difficulties Involved in Pronunciation Teaching?

In terms of pronunciation teaching, segmental and suprasegmental features are most frequently taught by ESL teachers. Burgess and Spencer (2000) reported that the phonetic alphabet, schwa, word stress, weak forms, and the distinction between voiced and voiceless phonemes were taught by most teachers. Intonation, utterance stress, and consonant clusters were also priorities, while linkage effects in connected speech, assimilation, and allophonic variation received less emphasis. Derwing, Diepenbroek, and Foote (2012) indicated that the most

frequent suprasegmental features addressed were intonation and sentences stress, followed by word stress, rhythm, and reductions. Vowels were the segmental features most frequently addressed.

However, there are several difficult aspects involved in teaching pronunciation. Studies have reported that stress, rhythm, and intonation are identified as major areas of difficulty, along with problem areas including utterance-stress, word-stress, unstressed syllables, weak forms, and rhythm of connected speech (Burgess & Spencer, 2000; Derwing et al., 2012).

Another difficulty is that ESL teachers lack education regarding instructional strategies. Murphy (1997) conducted a survey regarding phonology courses offered by MATESOL programs in the U.S. This study indicated that the emphasis of most courses was on phonological dimensions while they were less focused on strategies for teaching pronunciation. In addition, Couper (2017) indicated that teachers received less education regarding instructional strategies than phonological knowledge. Therefore, there is a need to explore whether teachers are confident to implement instructional strategies, and what they need to know to improve their teaching practices. The following aspects of instructional strategies also should be taken into consideration.

Firstly, understanding challenges of students' L1 backgrounds, and being capable of correcting them properly are important elements in pronunciation teaching. Buss (2013) indicates that the lack of certain knowledge of pronunciation instruction hinders teachers noticing common errors that students make due to their L1 background, and correcting those errors effectively.

Secondly, understanding foreign accents or accents different from the ones instructors have is also vital to ESL teachers. Identifying differences in accents signals instructors that L2 learners may need modified input (Gass & Varonis, 1984). In addition, instructors may be

required to distinguish whether accents affect intelligibility in interactions (Derwing & Munro, 2005; Lippi-Green, 1997), and then to make decisions whether L2 learners need to be corrected or not. This skill requires ESL instructors to be able to make their own judgments and then implement appropriate instruction in class.

As well, a lack of various pronunciation activities in existing resources causes difficulties and increases the burden for teachers when teaching pronunciation. Derwing et al. (2012) indicated that students' needs would be better met when language instructors were provided with a wide range of activities to select from. However, Burgess and Spencer (2000) showed that there was a limited range of activities for teachers to choose. In addition, pronunciation activities are not evenly spread out to different foci of pronunciation, such as heavily focusing on segmental features or suprasegmental features. Therefore, teachers would have to evaluate students' needs and explore how to balance the foci of pronunciation teaching in class to ensure that students can learn suprasegmentals while solving segmental issues. Furthermore, pronunciation activities may help with pronunciation learning (Derwing et al., 2012). Nevertheless, the lack of varieties of high-quality activities on different aspects of pronunciation requires teachers' abilities to develop their own high-quality pronunciation activities. This responsibility of designing activities falls on ESL teachers. In this role, teachers' knowledge of pronunciation teaching is key.

Furthermore, a lack of clear and explicit explanations of pronunciation tasks causes learning difficulties (Derwing et al., 2012). In other words, learners have little understanding about the objectives of particular activities that disable them to complete tasks. Therefore, providing clear and explicit instruction plays an important role in pronunciation teaching. Even though teachers' manuals provided a range of supplementary activities, such as "listening tasks

with marked sentence stress, intonation patterns" (Derwing et al., 2012, p. 32), lexical reduction in speaking tasks, etc., these teacher manuals only had general and informal instruction for pronunciation activities (p. 33). As Burgess and Spencer (2000) indicated, lacking clear and explicit explanations of tasks was a serious issue. However, teachers were given little explicit information about the pronunciation foci and guide of activities to help them provide explanations to their students. It would be helpful if teachers could be provided such information (Derwing, et al., 2012). Yet, implementing such instruction is difficult because it requires detailed knowledge of the pronunciation learning process (Munro et al., 2015). Most teachers are not prepared to teach pronunciation, and students do not fully benefit from pronunciation instruction (Derwing & Rossiter, 2003).

Also, teachers encounter many difficulties setting pedagogical priorities. Since ESL learners have limited time to spend on pronunciation, teachers are required to prioritize problem areas to increase the efficiency of instruction (Munro et al., 2015). Thus, teachers play an important role in selecting what to teach in order to meet students' needs, whereas some teachers report that they lack knowledge of phonological features to make a proper judgment (Burgess & Spencer, 2000). Additionally, to determine pedagogical priorities, it is necessary to "have an accurate understanding of the target language's phonological system" (Derwing & Munro, 2005, p. 385).

Providing appropriate feedback, such as correcting or monitoring students' speech, is also a vital skill in pronunciation instruction. MacDonald (2002) mentioned that one of the teachers was not comfortable monitoring students. This teacher was not sure whether it was because the teaching approach was incorrect, or appropriate knowledge was lacking. This research indicates

that providing feedback on learners' pronunciation is an important aspect of pronunciation instruction.

Another important aspect of pronunciation instruction is assessment. Assessment procedures are important for ESL teachers to know whether their students have achieved their goals (Thomson and Derwing, 2015). Thomson and Derwing (2015) show that the most common assessment of pronunciation is mainly used to assess segmental features, and only a few assessment methods are used to assess both segmental and suprasegmental features.

In traditional language teaching methods, reducing foreign accents had been prevalent in pronunciation teaching in class (Kopperoinen, 2005; Wach, 2015). However, with the move towards communicative language teaching methods, explicit pronunciation teaching was avoided in class over the past 20 years (Derwing, 2013). Nowadays, there has been an increase in pronunciation teaching, as well as studies devoted to pronunciation (Derwing, 2013). Pronunciation instruction has started prioritizing intelligibility and comprehensibility as the objectives for pronunciation teaching, which balances the importance of segmental and suprasegmental features to achieve communicative competency (Ketabi & Saeed, 2015). This shift implies that ESL teachers may now need to know what to teach in class about pronunciation (knowledge of content), how to set teaching and learning goals (emphasis on intelligibility, comprehensibility, or accentedness), and how to teach pronunciation (instructional strategies).

2.6 Gap between Self-Perceived Pronunciation Knowledge and Desired Pronunciation Knowledge

Studies have shown that teachers' pronunciation knowledge is limited, and teachers require better training and professional development (e.g. Burns, 2006; Foote, Trofimovich, Collins, & Soler Urzua, 2016; Henderson et al., 2012).

Burns (2006) conducted a survey concerning integrating research and professional development on pronunciation teaching in an ESL context. The results were measured on a five-point Likert scale. The results showed that some participants considered teaching pronunciation as an issue and had lower confidence in teaching suprasegmentals but higher confidence in teaching sounds. The majority of participants desired more access to professional education, especially education about teaching suprasegmentals. In addition, Burns's study suggested that workshops on the sound systems of Australian English and on specific methods that would help students from certain areas were requested, as well as materials for teaching and professional development.

Foote et al. (2016) investigated pronunciation teaching practices in communicative second language classes in Canada by analyzing videotaped lessons. The study showed that pronunciation was not often addressed throughout all language-related episodes in classes and teachers were not directing as much attention to pronunciation teaching as they thought they were. In addition, concerning aspects of pronunciation, suprasegmentals were the least prioritized among the language episodes and teaching performance, which reflected the difficulty teaching suprasegmentals without reference to specialized terminology. However, this study did not specifically indicate whether there was a gap between what knowledge teachers had in regard to teaching pronunciation and what they needed to improve their teaching performance.

These two studies have shown that teachers taught segmental features more than suprasegmental features. These teachers had lower confidence in teaching suprasegmentals and required more education in suprasegmentals due to a lack of relevant education. In Burns' study (2006), the participants were asked "confidence levels in teaching specific segmental and suprasegmental features" (p. 35). In Foote et al. (2016), observations were a main tool to

investigate the focus of teaching pronunciation in class. Both studies lacked support of inferential statistics sufficient to explore whether the difference between segmental knowledge and suprasegmental knowledge was statistically different. In the current study, this gap was addressed.

Henderson et al. (2012) conducted a survey in EFL contexts in Europe regarding pronunciation teaching. Participants were asked to rate the teacher training they and the amount of training with regard to teaching pronunciation they received from one to five. The findings showed that teachers reported low ratings of their training related to pronunciation teaching. The participants reported that the training of pronunciation teaching did not meet their needs. This research provided the current study a sense of what levels of pronunciation knowledge English language teachers had in an EFL context and the results reflected that more training was desired by teachers. Based on such research, the current study investigated not only self-perceived levels of teachers' pronunciation knowledge, but also the levels they needed to teach it to explore the gap.

2.7 Gap in the Literature

Given the above, insufficient research has been done in the domain of teachers' self-efficacy to teach pronunciation. There is no current teacher self-efficacy measurement tailored for pronunciation instruction in an ESL context. The measurement used in the current study was designed to fit the specific teaching tasks and context in question: pronunciation teaching in an ESL context in Canada. In addition, the current study explored the potential relationship between language proficiency/pronunciation proficiency and teachers' self-efficacy in pronunciation teaching. Although there are studies exploring the relationship between language proficiency and teachers' self-efficacy, language proficiency is not necessarily related to pronunciation teaching.

In addition, little research has been done investigating such relationships regarding pronunciation instruction. Furthermore, insufficient studies have been conducted to specifically investigate the level of pronunciation knowledge required for ESL teachers to teach pronunciation effectively and the level ESL teachers desire for effective pronunciation instruction. Moreover, studies have shown that teachers' self-confidence in teaching pronunciation is affected by their knowledge of pronunciation. Yet, little research has been done to examine the relationship between their self-efficacy and knowledge of pronunciation instruction. Therefore, the current study addressed this gap among the literature and investigated levels of ESL teachers' self-efficacy in teaching pronunciation, levels of language and pronunciation proficiency, levels of pronunciation knowledge, relationships between their language proficiency/pronunciation proficiency and self-efficacy, and between pronunciation knowledge and self-efficacy.

Chapter 3: Methodology

A mixed-methods design was used to collect both quantitative and qualitative data, including an online survey and follow-up interviews in Canada. This study put greater emphasis on quantitative data, followed by qualitative data to fill in gaps and obtain opinions and views to provide deeper insights into language proficiency, self-efficacy in pronunciation teaching, and required knowledge for effective pronunciation instruction. The mixed-methods design allowed the researcher to use results from one method to support the other method (Crewell, 2009). The interpretation of the data was based on quantitative and qualitative results.

3.1 Participants and Recruitment

An online survey was sent out to ESL teachers in Canada through TESL Canada, TESL Ontario, social media and professional networking. Participants for this study were practicing ESL teachers in Canada

382 participants started the survey, and there were 197 participants who completed most sections of the survey, but only 169 participants completed the entire survey. In addition, the number of participants answering different questions varied as participants had the option to leave questions unanswered if they desired. The participants' profile is based on the 169 who completed the survey. A large majority of participants were female (N = 130, n=76.9%), while male participants accounted for 22.5% (N= 38). Their ages ranged from 21 to 79 years old. 3% of the participants (N = 5) fell in a range of 20 to 29. 15.8% (N = 26) were in the range of 30 to 39. 28.5% of them (N = 47) were at the age of 40 to 49. 37. 6% (N = 62) were at the age of 50 to 59. 13.9% of the participants (N = 23) were at the age from 60 to 69. Only 2 participants (n = 1.2%) were at the age of 70 to 79. Of the 169 participants, 62 had bachelor's degrees (n= 36.7%), 94 held master's degrees (n= 55.6%), and 10 held PhD's (n = 5.9%). Only 3 participants selected "diploma" and "certificate" as their highest level of education (n = 1.2%). The participants' teaching experience varied from two years or less to more than 20 years. 6.7% of the participants (N = 9) had two years or less experience. 6% of them (N = 8) had three to five years of experience. 23.9% of them (N = 32) had six to 10 years of experience. Participants with 11 to 15 years of experience accounted for 17.9% (N = 24). 16.4% of the participants had 16-20 years teaching experience (N = 22). 21.9% of the participants (N = 39) had more than 20 years of experience. Most participants worked at colleges/universities (N=50, n=37.6%) or LINC/community (N=58, n=34.5%) programs while 12.5% worked at private language schools

(N = 21). 12.55% tutored in person and/or online (N =21), and 13.5% worked at public schools, semi-private high schools, international high schools, or school boards (N = 18). The descriptive data are shown in Table 1.

Table 1 Profiles of Participating Teachers (N = 169)

	Participants
Number of respondents	382 participants started the survey.197 of them completed most sections. Only 169 participants completed the entire survey
Gender	Female: N = 130, n = 76.9% Male: N = 38, n = 22.5%
Age	20-29: N = 5, n = 3% 30-39: N = 26 n = 15.8% 40-49: N = 47, n = 28.5% 50-59: N = 62, n = 37.6% 60-69: N = 23, n = 13.9% 70-79: N = 2, n = 1.2%
Years of Teaching Experience	2 years or less: N = 9, n = 6.7% 3-5 years: N = 8, n = 6% 6-10 years: N = 32, n = 23.9% 11-15 years: N = 24, n = 17.9% 16-20 years: N = 22, n = 16.4% More than 20 years: N = 39, n = 29.1%
Educational Level	Bachelor's Degree: N = 62, n = 36.7% Master's Degree: N = 94, n = 55.6% PhD or Doctoral Degree: N = 10, n = 5.9% Certificate and Diploma: N = 3, n = 1.2%
Teaching Context	Colleges/Universities: N = 50, n = 37.6% LINC/Community: N = 58, n = 34.5% Private Schools: N = 21, n = 12.5% Tutoring: N = 21, n = 12.5% Other (public school, semi-private high school, international high school, school boards): N = 18, n = 13.5%

Note: The number of participants varied as participants had the option to leave questions unanswered if they desired to.

3.2 Instrumentation

3.2.1 Online Survey

The online survey was carried on at the first stage. Qualtrics (an online survey tool) was the main tool to collect quantitative data from the survey. Five scales were developed to collect data: 1) the Participants' Demographic Information Scale, 2) Teaching Practices and Self-Reported Teaching Issues Scale, 3) Teacher's Self-Efficacy for Pronunciation Instruction Scale, 4) English Language and pronunciation Proficiency Scale, and 5) Required Knowledge for Effective Pronunciation Instruction Scale.

The Participants' Demographic Information Scale collected participants' age, gender, teaching experience, first languages, education /training background, teaching status at the time of the study, teaching experience, and overall confidence in teaching pronunciation (see Appendix A).

The Teaching Practices and Self-Reported Teaching Issues Scale was adapted from Buss (2016), and Burgess and Spencer (2000) to collect general information regarding ESL teachers' teaching practices and issues involved in their teaching. It provided an overview of what strategies or content teachers used and what difficulties they encountered when teaching pronunciation (see Appendix B).

The Teacher's Self-efficacy on Pronunciation Instruction Scale was developed based on Chacon (2005) and Sharma et al. (2012) to fit the specific teaching tasks and context in question: pronunciation teaching in an ESL context in Canada. Items regarding pronunciation knowledge and instructional strategies were generated based on existing literature in pronunciation and relevant studies. How the items were generated is explained later in this chapter. A 6-point Likert

scale was used, ranging from "Strongly disagree (1)" to "Strongly agree (6)". Participants were asked to rate their confidence using a 6-point scale teaching each aspect of pronunciation. This section collected teachers self-reported levels of efficacy regarding pronunciation teaching and provided an overall sense of Canadian ESL teachers' level of confidence in teaching pronunciation in class (see Appendix C).

The English language proficiency Scales consists of two scales: Overall Language Proficiency and Pronunciation Proficiency. These two scales were drawn from the Common European Framework of Reference (CEFR) (Council of Europe, 2001). The CEFR has numerous scales. Only the scales of "Overall Proficiency and Pronunciation" were adapted in the current study. These two scales used six levels, ranging from Level 1 to 6 adapted from. CEFR levels: A1 and A2 (basic user), B1 and B2 (independent user), and C1 and C2 (proficient user). Additionally, teachers could rate themselves between levels. For example, participants were able to choose the level between A1 and A2, A2 and B1, etc. Participants were asked to rate the levels of their own language proficiency and the level they believed was required to teach pronunciation effectively in class. In analyzing the data, the responses of participants who selected A1 to B2 as their overall proficiency were removed from the dataset as these levels are too low for a language teacher. It is possible that these teachers misinterpreted the descriptions of the scale. Different organizations have different minimum proficiency requirements, but their requirements certainly exceed levels A1-B2. For example, to qualify as an ESL teacher, the minimum language proficiency score should be overall 6.5 with a minimum of 7 on the speaking and writing bands of International English Language Test System (IELTS, British Columbia Ministry of Education, n.d.). According to the Ontario College of Teachers (n.d.), teachers should have at least 7 on the IELTS, with 7 in writing and speaking. Comparing IELTS and the

CEFR, the level from A1 to A2 has no equivalence to CEFR; B1 is equal to IELTS 4 to 5; B2 is equal to 5.5 to 6.5; the level from C1 to C2 is equal to 7 to 9 (Comparing IELTS and the Common European Framework, n.d.). Therefore, teachers with ratings ranging from A1 to B1 (Under IELTS 5) were removed from the dataset due to the language requirements to be an ESL teacher. These participants had perhaps erroneously reported an incorrect level or assumed that A1 is the highest level, but their responses were removed from the data set regardless (see Appendix D).

The Required Knowledge for Effective Pronunciation Instruction Scale was developed based on the scale of Teachers' Self-Efficacy in Pronunciation Instruction. Items were correspondingly matched with the Teacher's Self-Efficacy in Pronunciation Instruction scale. Six levels were used in this scale from one to six. Each level had a descriptor so that participants could understand the definition of it. Participants were asked to rate their level of knowledge regarding pronunciation, and the level they thought was needed to teach pronunciation effectively in class (see Appendix E).

3.2.1.1 Item Generation

This phase of the study outlines the fields that maximally represent teachers' self-efficacy for pronunciation instruction. Relevant literature on pronunciation instruction (Burgess & Spencer, 2000; Buss, 2013; Derwing & Rossiter, 2003; Derwing et al., 2012; Gass & Varonis, 1984; Lipp-Green, 1997; MacDonald, 2002; Derwing & Munro, 2005; Munro, Derwing, & Thomson 2015; Murphy, 1997; Thomson & Derwing, 2015) and existing scales on teacher efficacy (Buss, 2015; Burgess & Spencer, 2000; Foote, Holtby & Derwing, 2011; Graus & Coppen, 2015; Tschannen- Moran & Woolfolk Hoy, 2001) were reviewed to identify statements that support the measurement of participants' self-efficacy in the implementation of

pronunciation instruction. The literature review suggests that possessing knowledge of segmentals and suprasegmentals as well as instructional strategies helps teachers effectively teach pronunciation in class. This knowledge consists of understanding the phonetic alphabet, individual sounds, and problematic sounds (Burgess & Spencer, 2000; Munro et al., 2015, Derwing & Munro, 2005), word stress, connected speech, silent letters, pronunciation suffixes, sentence stress, and intonation (Buss, 2016; Burgess & Spencer, 2000; Derwing et al., 2012), accents (Gass & Varonis, 1984; Lipp-Green, 1997), along with instructional strategies including providing feedback (MacDonald, 2002), setting up pedagogical priorities (Munro et al., 2015), identifying the potential challenges (Buss, 2013), developing activities (Burgess & Spencer, 2000; Derwing et al., 2012;), presenting pronunciation instruction (Derwing et al., 2012; Derwing & Thomson, 2015; Derwing & Rossiter, 2002), and assessing students' learning outcomes (Thomson & Derwing, 2015). A total of 24 statements of teachers' self-efficacy were generated, starting with "I can …", and a total of 24 statements of required knowledge for effective pronunciation instruction were generated based on the scale of teachers' self-efficacy for pronunciation instruction. A 6-point Likert scale was used to evaluate teachers' self-efficacy, ranging from Strongly Disagree (1) to Strongly Agree (6). A self-rating was used to evaluate the required knowledge for effective pronunciation instruction.

3.2.1.2 Content Validation

Five experts whose research and scholarship were in the area of pronunciation were invited to review the Teachers' Self-Efficacy in Pronunciation Instruction Scale for content validation. Clayton (1997) defines an expert as "someone who possesses the knowledge and experience necessary" to participate in a decision-making process (p. 377). These experts were prominent scholars in the area of pronunciation instruction. They were asked to rate each item

using a five-point scale including the following statements: 1) Does not measure teachers' self-efficacy to teach pronunciation/required knowledge for effective pronunciation instruction; 2) Hardly measures teachers' self-efficacy to teach pronunciation/required knowledge for effective pronunciation instruction; 3) Somewhat measures teachers' self-efficacy to teach pronunciation/required knowledge for effective pronunciation instruction; 4) Most likely measures teachers' self-efficacy to teach pronunciation/required knowledge for effective pronunciation instruction; and 5) Definitely measures teachers' self-efficacy to teach pronunciation/required knowledge for effective pronunciation instruction. Each expert was asked to evaluate to what extent they thought each of the items measured an aspect of teaching pronunciation. Opinions on each item were collected to determine the content validity. Revisions were made to some items based on their opinions and recommendations. The revisions are as follow:

Seventeen items were originally sent to the six experts. Seven items were added based on the comments and research related to the items (e.g. Burgess & Spencer, 2000; Firth, 1992; Foote, Holtby & Derwing, 2011; Munro, Derwing, & Thomson, 2015; Murphy, 1997). The added items were: "I can provide instruction on voiced/voiceless consonants"; "I can identify errors that impede intelligibility"; "I can teach English rhythm"; I can diagnose pronunciation difficulties that learners have"; "I can encourage students to self-evaluate/self-monitor their pronunciation process"; "I can assess general speaking habits"; and "Overall, I am confident teaching pronunciation in class".

Four items were rephrased according to suggestions of the six experts in order to reduce ambiguity. The rephrased items were: "I can teach pronunciation of suffixes and inflectional endings" changed from "I can teach pronunciation of suffixes", "I can understand students'

foreign accented speech" changed from "I can understand students whose English is influenced by their L1", "I can use strategies and research-based guidelines to develop appropriate pronunciation activities" changed from "I can develop appropriate activities and strategies", and "I can teach the different dialects of English" changed from "I can teach the differences between English accents".

Exploratory factor analysis (EFA). An exploratory factor analysis was conducted to assess the underlying structure for the 24 items of the scale of Self-Efficacy in Teaching Pronunciation in Canadian Classrooms. The sample size of 169 was sufficient to undertake factor analysis. MacCallum, Widaman, Zhang and Hong (1999) suggest that the sample size should not be less than 100 in order to conduct factor analysis. The suitability of EFA was assessed prior to analysis. The correlation matrix showed that all variables had at least one correlation coefficient greater than 0.3. The overall Kaiser-Meyer-Olkin value for sampling adequacy was .942, over the recommended value of 0.60 (Pallant, 2007). Barlett's test of sphericity (Barlett, 1954) was statistically significant ($p < .005$), indicating that that data can be factor analyzed.

EFA using principle axis factoring revealed that there were latent constructs: three factors had eigenvalues above 1, which explained 51.75%, 6.173% and 4.543% of total variance, respectively. A varimax orthogonal rotation was used to help interpretability. The rotated solution showed "simple structure" (Thurstone, 1947). The interpretation of the data was consistent with the feature attributes the scale was designed to measure with strong loadings of instructional strategies on Factor 1, suprasegmental features on Factor 2, and segmental features on Factor 3. Items were included in a factor if their factor coefficient loading exceeded 0.40. Factor loadings for the rotated factors are presented in Table 2.

Two items (factor loading = 0) that did not play any role in explaining the construct were deleted: item 9 "I can teach the different dialects of English" and item 10 "I can understand students' foreign accented speech". Loadings of |.40| or greater are typically considered high (Morgan, Leech, Gloeckner, & Barrett, 2013). The final scale consisted of 22 items after two items were deleted (see Appendix A).

Table 2. Varimax-Rotated Factor Matrix and Summary Statistics for 24 Items Retained in the Self-Efficacy in Pronunciation Instruction Scale (N = 197).

	Factor Loadings		
Items	1	2	3
1. I can assess students' pronunciation learning outcomes. e.g. evaluating and monitoring students' acquisition of the target pronunciation features through multiple tasks, such as reading tasks, spontaneous interaction, presentations, etc.	.775		
2. I can encourage students to self-evaluate/self-monitor their pronunciation progress. e.g. help students set learning goals, use rubrics to achieve goals, etc.	.720		
3. I can assess general speaking habits. e.g. clarity, speed, volume, fluency, etc.	.710		
4. I can provide appropriate feedback to students on their pronunciation.	.604		.484
5. I can diagnose pronunciation difficulties that learners have.	.602		.505
6. I can set pedagogical priorities for teaching pronunciation. e.g. Intelligibility and comprehensibility deserve more attention than accent reduction.	.574		
7. Overall, I am confident to teach pronunciation in class.	.564	.477	.433
8. I can use strategies and research-based guidelines to develop appropriate pronunciation activities. e.g. minimal pairs, shadowing pronunciation from audio and/or video recordings, modeling, etc.	.551		
11. I can teach sentence stress. Only certain words within a sentence are stressed. Also, the meaning of a sentence can change depending on which word is stressed. e.g. Can you OPEN the WINDOW, please? Can YOU open the window, please?		.753	
12. I can teach word stress.		.583	

e.g. CON-duct (noun) con-DUCT (verb)			
13. I can provide instruction on voiced/voiceless consonants. e.g. b – p d – t g – k		.581	.475
14. I can teach English rhythm. e.g. English is stress- timed, as opposed to syllable-timed	.452	.579	
15. I can teach intonation. e.g. Certainty: You don't like vegetables. (Falling tone) Question: You don't like vegetables? (Rising tone)		.577	
16. I can teach connected speech. e.g. Linking: 'turn off' sounds like 'tur noff'; Reduction: 'want to' sounds like wanna		.531	
17. I can use the phonetic alphabet to teach pronunciation. e.g. /θ/, /k/, etc.		.410	
18. I can teach individual sounds. e.g. vowels and consonants, etc.		.421	.649
19. I can identify and address the potential interference and variability in errors from students' L1. Japanese students or students from Arabic-speaking background face challenges with pronunciation of /r/ vs /l/, /b/ vs /p/			.602
20. I can teach pronunciation of suffixes and inflectional endings. e.g -ed: /t/: cook /kʊk/-cooked /kʊkt/, /d/: stay /stei/- stayed /steid/, /ɪd:/want /wɑnt/-wanted / wɑntɪd / -s: /s/: drink /drɪnk/- drinks / drɪŋks/, /z/: play /plei/ - plays /pleiz/		.563	.594
21. I can teach problematic sounds. e.g. th - /θ/; /ð/ w - /w/			.590
22. I can use simple language clearly to present pronunciation instruction to students.	.460		.587
23. I can identify errors that impede intelligibility. e.g. /l/-/n/ (light-night), /s/-/ʃ/(sell-shell), /d/-/z/ (ride-rise)			.556
24. I can teach silent letters. e.g. debt, eight		.466	.467
% of variance	51.75	6.173	4.543

Extraction Method: Principal Axis Factoring.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 11 iterations.
Note: Loadings < 0.4 are omitted.

Cronbach's Alpha. Based on the factor analysis of the 22 items, three factors were derived. To assess whether the data from the variables in each factor form a reliable scale,

Cronbach' alphas were computed. The alpha for Factor 1 was .923, which indicates that the items would form a scale that has good internal consistency reliability. The alpha for Factor 2 was .898, and Factor 3 was .887, which also indicated good internal consistency. Overall the alpha (.955) reveals good internal consistency of the scale.

3.2.2 Follow-up Interviews

The semi-structured follow-up interviews took place after the survey to collect further information. Interview questions were designed as a guide for interviewees and the researcher, regarding self-efficacy in teaching pronunciation, language proficiency/pronunciation proficiency, knowledge of teaching pronunciation, as well as the participants' teaching practices in class.

3.3 Data Analysis

Quantitative Data Analysis. The data were transferred from Qualtrics to SPSS (Statistical Analysis Software) to conduct further analysis. The first step of the data analysis was to examine the report, and then responses were exported into SPSS to analyze the data. Before running any analysis, the data from the participants who did not respond and/or did not properly answer the survey was removed and marked as missing.

Qualitative Data Analysis. This analysis consists of two sections: data collected via comments in the questionnaire and data collected from semi-structured interviews. This study primarily investigated five main questions by using quantitative data, qualitative data, or a combination of the two types.

3.3.1 Online Survey

1. What are the levels of self-efficacy among ESL teachers for pronunciation instruction?

Both quantitative and qualitative data were analyzed to investigate the level of self-efficacy among participants.

The Teacher's Self-Efficacy in Pronunciation Instruction scale (Appendix C) provided 22 statements about pronunciation teaching in Canadian classrooms and asked participants to rate their level of agreement on a scale from "1" (strongly disagree) to "6" (strongly agree). Those responses were condensed into three categories: disagree, neutral, and agree.

The quantitative data mainly compared the percentage of participants who agreed, were neutral or disagreed on each statement. To obtain statistical data in general, ratings on each item was transformed to mean scores in SPSS so that all the data could be compared in one table. Descriptive statistics were calculated by SPSS.

Along with quantitative data analysis, qualitative data from the semi-structured interviews were analyzed to obtain an explanation to the quantitative results.

1a. How do native English-speaking teachers (NESTs) and non-native English-speaking teachers (NNESTs) compare?

SPSS allowed the researcher to split the participants into two groups and compare the mean of NESTs' ratings on each statement with the mean of NNESTs' ratings, with a qualitative analysis as an extension of this investigation. In addition, a one-way MANOVA test was employed to compare the mean of ratings on segmentals, suprasegmentals and instructional strategies between the two groups of teachers.

2. What are the self-reported levels of language proficiency and pronunciation proficiency among ESL teachers?

The English Language Proficiency and Proficiency Scale (Appendix D) was used to gather the data for this question. Descriptive data of the perceived level and the required level were calculated, respectively. Only quantitative data were analyzed to answer this question.

2a. What is the gap between self-ratings of teachers on language and pronunciation proficiency and the level they think is required to teach it effectively?

Only quantitative data analysis was used to examine this question. Paired t-tests were conducted to identify whether there was a gap between self-ratings of teachers on language and pronunciation proficiency and the level they think is required to teach it effectively. Prior to conducting the analysis, the assumption of normally distributed difference scores was examined. The assumption was considered satisfied, as the skew and kurtosis level of language proficiency were estimated at -.14 and -.69, respectively, which is less than the maximum allowable values for a t-test, i.e. skew < |2.0| and kurtosis < |9.0|. The skew and kurtosis levels of pronunciation proficiency were estimated at -.19 and -.77, respectively, which is less than the maximum allowable values for a t-test, i.e. skew < |2.0| and kurtosis < |9.0| (Posten, 1984).

2b. How do native English-speaking teachers and non-native English teachers compare?

Quantitative data were analyzed first. Independent *t* tests were employed to identify whether there were statistically significant differences in ratings on the self-reported levels and required levels of language and pronunciation proficiency between NESTs and NNESTs. Then, qualitative data were analyzed to gain a deeper insight into the gap between those two levels within the two groups of teachers.

3. Is there a relationship between self-ratings of teachers on language proficiency/pronunciation proficiency and their level of self-efficacy on pronunciation teaching?

The English Language Proficiency and Pronunciation Proficiency Scale (Appendix D) and the Teacher's Self-Efficacy in Pronunciation Instruction Scale (Appendix C) were used to gather the data. Spearman's *rho* correlation was computed to investigate whether there was a relationship between overall language and pronunciation proficiency of teachers and their self-efficacy to teach pronunciation. Spearman's *rho* is a nonparametric measure of association between two variables based on ranks of scores when the data is not normally distributed and when the two variables are either both direct rankings or only ordinal (Lovie, 1995; Morgan, et al., 2013). The follow-up interviews also provided a deeper insight on such results.

4. What level of knowledge do ESL teachers report they have, and what level they need for effective pronunciation instruction?

The Required Knowledge for Effective Pronunciation Instruction Scale (Appendix E) was used for this question. Teachers were asked to rate their level of knowledge and the level they believed was required to teach pronunciation from "1" (basic knowledge) to "6" (high advanced). The six levels include basic knowledge, limited experience, intermediate, high intermediate, advanced, and high advanced. Quantitative data were analyzed, and descriptive statistics were generated by SPSS to show participants' ratings.

4a. What is the gap between the perceived level of knowledge and the level ESL teachers think is required to teach pronunciation?

A paired *t*-test was employed to investigate whether there was a significant difference between the perceived level and the level teachers think is required to teach pronunciation based on the sum scores of self-rated levels of knowledge regarding pronunciation instruction. Only quantitative data were analyzed in this section.

4b. How do native English-speaking teachers and non-native English-speaking teachers compare?

Independent *t* tests were computed to compare the ratings between NESTs and NNESTs alongside qualitative data analysis to gain an explanation of two groups of teachers' opinions on their ratings.

In addition, twenty-two items were condensed into three categories: segmentals, suprasegmentals and instructional strategies to be compared between two groups of teachers. One-way MANOVA and independent *t* tests were employed.

4c. Is there a relationship between ESL teachers' self-reported knowledge of pronunciation and their confidence in teaching pronunciation?

Spearman's rho correlation was computed to determine whether the participants' self-beliefs were related to their self-rated knowledge of pronunciation instruction. The data from the two Likert scales were transformed to mean scores in SPSS to compare the data, along with the follow-up interviews provided more details regarding relationship of their ratings on those two scales.

5. What are the self-reported practices of ESL teachers regarding pronunciation instruction?

The Teaching Practices and Self-Reported Teaching Issues Scale (Appendix A) was used to collect the qualitative data (participants' comments from the online survey). The frequency of participants' responses to each question was collected and analyzed.

Written comments were transcribed and grouped into general categories to provide information and background regarding participants' pronunciation teaching practices.

3.3.2 Follow-up Interviews

Upon completion of the survey, participants were given the option to indicate their willingness to participate in the follow-up interviews at the end of the survey. Semi-structured interviews were held via Skype and/or phone, which allowed interviewees the freedom to deliver their views in their own terms so as to provide more information. Ten interviewees were selected based on survey results. Four of them were NESTs, four NNESTs teachers and two NESTs who also spoke other languages. All of them had different teaching and learning experiences, as well as educational backgrounds. Thirteen questions were asked as a guide the interviews to seek more in-depth information regarding their survey responses, including self-confidence in teaching pronunciation, language and pronunciation proficiency, the level of their knowledge regarding pronunciation, the level of education/training completed, teaching practices, preference of aspects of pronunciation, etc. Interviewees' profiles are as shown in Table 3.

Table 3. Interviewees' Profile

Interviewee Pseudonym	Teacher Group	Education Level	Major	Pronunciation teaching received	Length of Teaching Experience	Frequency of Pronunciation teaching in class	Preference of aspects of pronunciation to teach
Aadila	NNEST	Master's degree	Linguistics	A course/section as part of in-service training/education at the workplace	11-15 years	Sometimes	Segmental features
Helen	NEST	Bachelor's Degree	Linguistics	A course/section as part of pre-service training/education	More than 20 years	Often	Both
Jenn	NEST	Master's Degree	TESOL/ Curriculum	A course/section as part of in-service training/education at the workplace MA level phonology courses	11-15 years	Often	Suprasegmentals
Paolo	NNEST	Bachelor's Degree	French	None	3-5 years	Rarely	Suprasegmentals
Marie	NNEST	Master's Degree	English and Spanish	Sporadic workshops at conferences A course/section as part of in-service training/education at the workplace	16-20 years	Often	Suprasegmentals
Milica	NNEST	Bachelor's Degree	Fine Arts	Sporadic workshops at conferences A course/section as	6-10 years	Often	Suprasegmentals

				part of pre-service training/education			
Sophie	NEST	Bachelor's Degree	Education	Self-study Sporadic workshops at conferences	11-15 years	Rarely	Segmentals
Wendy	NEST	Diploma	Teaching and learning	A course/section as part of in-service training/education at the workplace	6-10 year	Sometimes	Both
Gordon	NEST	Master's Degree	Education	A course/section as part of pre-service training/education	More than 20 years	Often	Both
Zaina	NNEST	Bachelor's Degree	English literature	Self-study Sporadic workshops at conferences	16-20 years	Often	Suprasegmentals

Chapter 4: Findings

In this chapter, the findings of the study are discussed in relation to the research questions that guided the study.

1. *What are the levels of self-efficacy among ESL teachers for pronunciation instruction?*

Findings from the self-efficacy section of the survey indicated that ESL teachers in Canadian classrooms were mostly confident about their pronunciation teaching abilities.

Based on 22 items, as shown in Table 4, the participants were confident teaching pronunciation overall. One hundred and sixty-one participants (81.7%) either agreed or strongly agreed that they were confident teaching pronunciation in class. The average rating of the entire scale was 5.24 (SD = .748). Over 80% of participants either agreed or strongly agreed on their ability to teach individual sounds (N = 176, n = 89.3%), word stress (N = 171, n = 86.8%), connected speech (N = 162, n = 82.2%), silent letters (N = 165, n = 83.8%), pronunciation suffixes and inflectional endings (N = 181, n = 91.9%), voiced/voiceless consonants (N = 164, n = 83.2%), sentence stress (N = 167, n = 84.8%), intonation (N = 174, n = 88.3%), problematic sounds (N = 158, n = 80.6%), identifying errors that impede intelligibility (N = 171, n = 86.8%), addressing the potential interference and variability in errors from students' L1 (N = 161, n = 81.7%), using simple language clearly to present pronunciation instruction to students (N = 176, n = 89.3%), providing appropriate feedback (N = 159, n = 80.7%), and assessing general speaking habits (N = 165, n = 83.8%).

Over half of the teachers felt confident about using the phonetic alphabet to teach pronunciation (N = 109, n = 55.3%), setting pedagogical priorities for teaching pronunciation (N =153 , n = 77.7%), teaching English rhythm (N = 144, n = 73.1%), using strategies and research-based guidelines to develop appropriate pronunciation activities (N = 157, n =

79.7%), diagnosing pronunciation difficulties that learners have (N = 149, n = 75.6%), encouraging students to self-evaluate/self-monitor their pronunciation progress (N = 133, n = 67.5%), and assessing students' pronunciation learning outcomes (N = 143, n = 72.6%). The results are shown in Table 4.

The data collected from the follow-up interviews supported the quantitative findings. Ten ESL teachers were asked about their overall confidence in teaching pronunciation on a scale of one to six from the least confident to the most confident in teaching pronunciation. They explained how confident they were in teaching pronunciation and what their reasons were. Four interviewees had reported strong confidence in teaching pronunciation in class and explained that their confidence came from their teaching, learning experience, as well as education/training regarding pronunciation.

Helen (NEST) indicated strong confidence (6 out of 6) in pronunciation teaching due to her education and teaching experience related to pronunciation. She said: "I have taught pronunciation in a university, which gave me a lot of experience. And this experience enabled me to apply what I learned from the work to the practice." Furthermore, her major (Linguistics) had prepared her with knowledge of phonology, phonemes, etc. Moreover, her professional training in pronunciation due to her job helped her teach learners pronounce words systematically. In addition, her experience learning another language helped her better understand her students' learning processes so that she could serve learners in a better way.

Jenn (NEST) worked at a private language school as an ESL teacher and TESOL trainer. She was very confident teaching pronunciation (6 out of 6). She explained that her teaching experience and education regarding pronunciation built her confidence. She expressed:

> I think because of my background, because I've taught so much in regular ESL classes and TESOL classes, this helped me a lot. Besides, I'm just starting to get into the phonology components of diploma and having signed in my master's program, which has enhanced my knowledge of pronunciation.

Gordon (NEST) expressed strong confidence (6 out of 6) in teaching pronunciation. He explained that his confidence related to pronunciation came from his extensive background, including living environment (surrounded by multi-cultural neighbourhood), learning (learning different languages), traveling, and teaching experience, as well as professional education. All of those helped him build his interest and confidence in teaching pronunciation. In addition, he developed his own pronunciation learning program. During the development of the program, he researched and obtained knowledge regarding pronunciation.

Zaina (NNEST) firmly indicated that she was confident teaching pronunciation (5.5 to 6 out of 6) in class. She explained that her education, learning and teaching experience about pronunciation teaching, helped to build her confidence. She did research on how to teach pronunciation to ESL students. She said that education definitely prepared her to teach pronunciation.

Table 4. Frequency of ESL Teachers' Self-Efficacy in Pronunciation Instruction.

	Disagree		Neutral		Agree	
	N	%	N	%	N	%
1. I can teach individual sounds. e.g. vowels and consonants, etc.	2	1.0%	19	9.6%	176	89.3%
2. I can use the phonetic alphabets to teach pronunciation. e.g. /θ/, /k/, etc.	34	17.3%	54	27.4%	109	55.3%
3. I can teach word stress. e.g. CON-duct (noun) con-DUCT (verb)	5	2.5%	21	10.7%	171	86.8%
4. I can teach connected speech. e.g. Linking: 'turn off' sounds like 'tur noff'; Reduction: 'want to' sounds like wanna	5	2.5%	30	15.2%	162	82.2%
5. I can teach silent letters. e.g. debt, eight	5	2.5%	27	13.7%	165	83.8%
6. I can teach pronunciation of suffixes and inflectional endings. e.g -ed: /t/: cook /kʊk/-cooked /kʊkt/, /d/: stay /stei/-stayed /steid/, /ɪd:/want /wɑnt/-wanted / wɑntɪd / -s: /s/: drink /drɪnk/- drinks / drɪŋks/, /z/: play /plei/ - plays /pleiz/	2	1.0%	14	7.1%	181	91.9%
7. I can provide instruction on voiced/voiceless consonants. e.g. b – p d – t g – k	1	0.5%	32	16.2%	164	83.3%
8. I can teach sentence stress. Only certain words within a sentence are stressed. Also, the meaning of a sentence can change depending on which word is stressed.	6	3.0%	24	12.2%	167	84.8%

e.g. Can you OPEN the WINDOW, please? Can YOU open the window, please?						
9. I can teach intonation.	3	1.5%	20	10.2%	174	88.3%
e.g. Certainty: You don't like vegetables. (Falling tone)						
Question: You don't like vegetables? (Rising tone)						
10. I can teach problematic sounds.	4	2.0%	34	17.3%	158	80.6%
e.g. th - /θ/; /ð/ w - /w/						
11. I can set pedagogical priorities for teaching pronunciation.	9	4.6%	35	17.8%	153	77.7%
e.g. Intelligibility and comprehensibility deserve more attention than accent reduction.						
12. I can identify errors that impede intelligibility.	2	1.0%	24	12.2%	171	86.8%
e.g. /l/-/n/ (light-night), /s/-/ʃ/(sell-shell), /d/-/z/ (ride-rise)						
13. I can identify and address the potential interference and variability in errors from students' L1.	4	2.0%	32	16.2%	161	81.7%
Japanese students or students from Arabic-speaking background face challenges with pronunciation of /r/ vs /l/, /b/ vs /p/						
14. I can teach English rhythm.	5	2.5%	48	24.4%	144	73.1%
e.g. English is stress- timed, as opposed to syllable-timed						
15. I can use strategies and research-based guidelines to develop appropriate pronunciation activities.	6	3.0%	34	17.3%	157	79.7%
e.g. minimal pairs, shadowing pronunciation from audio and/or video recordings, modeling, etc.						

16. I can use simple language clearly to present pronunciation instruction to students.	1	0.5%	20	10.2%	176	89.3%
17. I can diagnose pronunciation difficulties that learners have.	4	2.0%	44	22.3%	149	75.6%
18. I can provide appropriate feedback to students on their pronunciation.	4	2.0%	34	17.3%	159	80.7%
19. I can encourage students to self-evaluate/self-monitor their pronunciation progress. e.g. help students set learning goals, use rubrics to achieve goals, etc.	3	1.5%	61	31.0%	133	67.5%
20. I can assess general speaking habits. e.g. clarity, speed, volume, fluency, etc.	3	1.5%	29	14.7%	165	83.8%
21. I can assess students' pronunciation learning outcomes. e.g. evaluating and monitoring students' acquisition of the target pronunciation features through multiple tasks, such as reading tasks, spontaneous interaction, presentations, etc.	9	4.6%	45	22.8%	143	72.6%
22. Overall, I am confident to teach pronunciation in class.	4	2.0%	32	16.2%	161	81.7%

Milica (NNEST) expressed a high level of confidence in teaching pronunciation (6 out of 6). She stated that her learning and teaching experience helped her build confidence. Learning experiences, such as learning the International Phonetic Alphabet in her school helped her decode pronunciation. Her years of teaching experience had prepared her to solve pronunciation related issues relatively easily. She said: "You know, this is how I teach based on my learning experience, and students understand and tell me that they have got benefits from me." She was also asked whether her education helped her teach pronunciation. She said that her education did not really include comprehensive information about pronunciation. Therefore, she did not think her education was a main factor that made her feel confident.

Three interviewees expressed their confidence in teaching pronunciation was at four out six. They were asked where their confidence came from and what caused their insecurity. Their confidence mainly came from their pronunciation learning and teaching experience. Their insecurity came from their first languages, accents, a lack of professional knowledge, as well as a lack of training and guidelines.

Aadila (NNEST) expressed her confidence at 4.5 or 5 out of 6. She stated that learning English as a second language helped her understand how her students learn a second language and the way her students could learn effectively from her. Secondly, she had taught English more than 10 years, which gave her experience to deal with pronunciation issues arising in her classes. However, she still did not feel very confident teaching it. She explained that her first language and accent lead to her insecurity in teaching pronunciation in class. In addition, she did not get a lot of training regarding pronunciation. She said: "Therefore, I don't feel that I'm' 100% prepared to teach pronunciation."

Marie (NNEST) indicated her level of confidence in teaching pronunciation was four out of six. She expressed that her confidence came from learning English as a second language and applying what she learned to her teaching practices. She said: "My teaching just, you know, provides me with the actual experience and I can see what impact my teaching has." However, she still did not feel very confident teaching it. Firstly, her first language was not English and being a "non-native speaker" was described by her as her shortcoming. She said: "I always feel like I'm not entitled. I don't have the right to teach pronunciation." In addition, her accent impeded her teaching. She stated: "With some sounds I cannot produce. I'm just not comfortable teaching them. So, I have to rely on recordings. I have to rely on finding materials that are spoken by native speakers." Secondly, she felt there was always a lot to learn, and she believed that training and teaching experience would help her with pronunciation teaching.

> I think my training has helped, has helped me …has helped me go in the right direction, but not enough. If I have questions I know where to look up answers, but I'm not sure whether the answers are right or wrong.

Sophie, a native English-speaking ESL teacher with over 10 years of teaching experience, reported low confidence in teaching pronunciation. She rated her confidence between two or three out of six. She provided two reasons for her level of confidence. Firstly, she did not have a substantial background in teaching pronunciation. Secondly, the curriculum she was using did not include any information or directions about teaching pronunciation.

Two interviewees did not explicitly state their level of confidence. They said that, firstly, their confidence in teaching pronunciation was based on what level of students they

taught. They also said that their confidence came from learning other languages, but they felt insecure teaching pronunciation due to a lack of professional training.

Paolo (NNEST) stated he rarely taught pronunciation in advanced-level classes, but sometimes taught in lower-level classes. He indicated that his level of confidence was based on his students' level of proficiency. Firstly, his confidence came from his experience learning other languages. He said that the way he learned the language was the same way that students learned the language so that he could deliver his learning methods to his students.

> What I know about pronunciation is basically from when I studied English as a second language. The techniques that I used to study, and I used to be able to pronounce the way I pronounce the words…I can see things that work and things that don't work and I tend to talk to students a lot about those techniques that worked for me.

However, he felt insecure teaching pronunciation in advanced-level classes due to a lack of professional training regarding pronunciation instruction. He indicated that he did not have much professional training.

> If you're just looking at lower levels (classes), I'm confident, but not to the point to discuss complex pronunciation rules…I did my own research and used to be able to pronounce the way I pronounce words, but the technique that in the part of the pronunciation knowledge is just something that I haven't been trained. How can I bring the systematic knowledge regarding my pronunciation to my students? I'm not sure and not confident doing that because I don't get trained in this area.

Wendy (NEST) stated that she sometimes felt confident in certain areas about pronunciation teaching. She said that using the phonetic alphabet was her biggest weakness and she did not know of its existence until she started her teacher training course. She said:

"Pronunciation is not something that you learn before you take the certificate course." She explicitly suggested that professional training and education regarding pronunciation instruction would definitely improve her confidence.

1a. How do Native English-speaking teachers (NESTs) and non-native English-speaking teachers (NNESTs) compare?

The current research compared NESTs (N = 153) and NNESTs' (N = 44) self-efficacy in pronunciation instruction. Overall, 79.7% of the NESTs (N = 122) either agreed or strongly agreed that they were confident to teach pronunciation in class, while 88.7% of the NNESTs (N = 39) either agreed or strongly agreed that they were confident to teach pronunciation in class. An independent *t* test was computed to examine whether there was a statistically significant difference between NESTs and NNESTs' rating on their self-efficacy. The results showed that that there was no statistically significant difference, $t(94.29) = -1.51$, $p = .134$.

NESTs' Self-Efficacy. The average rating was 5.20 (SD = .789). As shown in Table 5, over 80% of the NESTs rated "strongly agree" or "agree" on the following items: item 1 " I can teach individual sounds" (N = 133, n = 86.9%), item 3 "I can teach word stress" (N = 138, n = 90.2%), item 4 "I can teach connected speech" (N = 130, n = 85%), item 5 "I can teach silent letters" (N = 128, n = 83.7%), item 6 "I can teach pronunciation of suffixes and inflectional endings" (N = 143, n = 93.5%), item 7 "I can teach voiced/voiceless consonants" (N = 130, n = 85%), item 8 "I can teach sentence stress" (N = 130, n = 85%), item 9 "I can teach intonation" (N = 135, n = 88.2%), item 12 "I can identify errors that impede intelligibility" (N = 135, n = 88.2%), item 13 "I can identify and address the potential interference and variability in errors from students' L1" (N = 128, n = 83.7%),

item 16 “I can use simple language clearly to present pronunciation instruction” (N = 138, n = 90.2%), item 18 “I can provide appropriate feedback” (N = 124, n = 81.1%), and item 20 “I can assess general speaking habits” (N = 125, n = 81.7%).

Over half of the NESTs rated “agree” or “strongly agree” on the following items: item 10 “I can teach problematic sounds” (N = 120, n = 78.9%), item 11 “I can set pedagogical priorities for teaching pronunciation” (N = 121, n = 79.1%), item 14 “I can teach English rhythm” (N = 117, n = 71.9%), item 15 “I can use strategies and research-based guidelines to develop appropriate pronunciation activities” (N = 138, n = 76.5%), item 17 “I can diagnose pronunciation difficulties that leaners have” (N = 116, n = 75.9%), item 19 “I can encourage students to self-evaluate/self-monitor their pronunciation progress” (N = 101, n = 66%), and item 21 “I can assess students’ pronunciation learning outcomes” (N = 106, n = 69.2%).

Three NESTs explained why they felt confident teaching pronunciation. Helen and Jenn expressed that their confidence came from teaching experience and education/training. Helen’s major was linguistics, which covered comprehensive knowledge regarding pronunciation. In addition, she had professional training regarding pronunciation due to her job requirements. Jenn was enrolled in a master’s program, which provided her systematic knowledge regarding phonology. Jenn said: “I have obtained the knowledge, plus my teaching experience. I’m quite confident and comfortable teaching pronunciation in class.” Gordon also indicated that his confidence derived from pronunciation teaching and learning experience, which made him comfortable and confident teaching pronunciation.

Less than 50% of the NESTs rated “agree” or “strongly agree” on item 2 “I can use the phonetic alphabet to teach pronunciation” (N = 75, n = 49%). One of the NESTs

(Wendy) stated that she did not know the phonetic alphabet existed until she took a TESOL course. She said: "I'm still not confident using the phonetic alphabet because I'm not familiar with that and I don't have solid knowledge about, even though I had learned it from a course, but that's not enough."

In addition, Wendy expressed that she was confident teaching pronunciation only in certain areas, and when pronunciation was taught as small segments of the whole class. The reasons were that she did not receive enough professional training in the area of pronunciation and there were not enough materials and curriculum resources about pronunciation. Similar reasons were given by Sophie. She said, "I don't have a lot of teaching and learning background in teaching pronunciation, and in my class, there is not much about pronunciation in the curriculum. I don't feel comfortable teaching it without resources and support."

The interviewees were asked whether their first language had an impact on their confidence in teaching pronunciation. The responses indicated that their first language helped with their teaching pronunciation, but it was not the main factor. Education and training played a more important role in their confidence in their pronunciation instruction.

Jenn stated that her first language had little impact and the knowledge the teacher had regarding pronunciation instruction was more important. She stated:

I think it's true but at the same time, at the same time when you're teaching something really technical, whether you're teaching native-speakers or non-native speakers, word choice and the description are a big deal. Right? So, just because I'm a native-speaker, it doesn't mean what I'm saying to my trainees automatically makes sense.

A similar response was given by Helen. She believed that her first language helped but it was not the only help. She also cited her education in the area of linguistics, which helped her with pronunciation teaching. She described her thoughts as below:

> Well, I think it's a combination (of the first language and education). I think, first of all, my first language is English, but again, I think it has to go back to the fact that my undergraduate degree is in linguistics…In my linguistics department, we were required to do a course on first language acquisition, but we were also required to do a course on second language acquisition as well as a course in sociolinguistics, and a course in psycholinguistics, and a course in neurolinguistics. And I think all of that plays into teaching somebody a second language.

Table 5. NESTs' Self-Efficacy in Pronunciation Instruction.

	Disagree		Neutral		Agree	
	N	%	N	%	N	%
1. I can teach individual sounds. e.g. vowels and consonants, etc.	2	1.3%	18	11.8%	133	86.9%
2. I can use the phonetic alphabets to teach pronunciation. e.g. /θ/, /k/, etc.	34	22.2%	44	28.8%	75	49.0%
3. I can teach word stress. e.g. CON-duct (noun) con-DUCT (verb)	5	3.3%	10	6.5%	138	90.2%
4. I can teach connected speech. e.g. Linking: 'turn off' sounds like 'tur noff'; Reduction: 'want to' sounds like wanna	5	3.3%	18	11.8%	130	85.0%
5. I can teach silent letters. e.g. debt, eight	5	3.3%	20	13.1%	128	83.7%
6. I can teach pronunciation of suffixes and inflectional endings. e.g -ed: /t/: cook /kʊk/-cooked /kʊkt/, /d/: stay /stei/-stayed /steid/, /ɪd:/want /wɑnt/-wanted / wɑntɪd / -s: /s/: drink /drɪnk/-drinks / drɪŋks/, /z/: play /plei/ - plays /pleiz/	2	1.3%	8	5.2%	143	93.5%
7. I can provide instruction on voiced/voiceless consonants. e.g. b – p d – t g – k	1	0.7%	22	14.4%	130	85.0%
8. I can teach sentence stress. Only certain words within a sentence are stressed. Also, the meaning of a sentence can change depending on which word is stressed. e.g. Can you OPEN the WINDOW, please? Can YOU open the window, please?	6	3.9%	17	11.1%	130	85.0%
9. I can teach intonation. e.g. Certainty: You don't like vegetables. (Falling tone) Question: You don't like vegetables? (Rising tone)	3	2.0%	15	9.8%	135	88.2%
10. I can teach problematic sounds. e.g. th - /θ/; /ð/ w - /w/	4	2.6%	28	18.4%	120	78.9%
11. I can set pedagogical priorities for teaching pronunciation. e.g. Intelligibility and comprehensibility deserve more attention than accent reduction.	9	5.9%	23	15.0%	121	79.1%

12. I can identify errors that impede intelligibility. e.g. /l/-/n/ (light-night), /s/-/ʃ/(sell-shell), /d/-/z/ (ride-rise)	2	1.3%	16	10.5%	135	88.2%
13. I can identify and address the potential interference and variability in errors from students' L1. Japanese students or students from Arabic-speaking background face challenges with pronunciation of /r/ vs /l/, /b/ vs /p/	4	2.6%	21	13.7%	128	83.7%
14. I can teach English rhythm. e.g. English is stress- timed, as opposed to syllable-timed	5	3.3%	38	24.8%	110	71.9%
15. I can use strategies and research-based guidelines to develop appropriate pronunciation activities. e.g. minimal pairs, shadowing pronunciation from audio and/or video recordings, modeling, etc.	6	3.9%	30	19.6%	117	76.5%
16. I can use simple language clearly to present pronunciation instruction to students.	1	0.7%	14	9.2%	138	90.2%
17. I can diagnose pronunciation difficulties that learners have.	4	2.6%	33	21.6%	116	75.8%
18. I can provide appropriate feedback to students on their pronunciation.	4	2.6%	25	16.3%	124	81.1%
19. I can encourage students to self-evaluate/self-monitor their pronunciation progress. e.g. help students set learning goals, use rubrics to achieve goals, etc.	3	2.0%	49	32.0%	101	66.0%
20. I can assess general speaking habits. e.g. clarity, speed, volume, fluency, etc.	3	2.0%	25	16.3%	125	81.7%
21. I can assess students' pronunciation learning outcomes. e.g. evaluating and monitoring students' acquisition of the target pronunciation features through multiple tasks, such as reading tasks, spontaneous interaction, presentations, etc.	9	5.9%	38	24.8%	106	69.3%
22. Overall, I am confident to teach pronunciation in class.	4	2.6%	27	17.6%	122	79.7%

NNESTs' Self-Efficacy. The average rating was 5.36 (SD = .574). As shown in Table 6, over 80% of the NNESTs rated "Agree" or "Strongly Agree" on the following items: item 1 "I can teach individual sounds." (N = 43, n = 97.7%), item 5 "I can teach silent letters." (N = 37, n = 84.1%), item 6 "I can teach pronunciation of suffixes and inflectional endings." (N = 38, n = 86.4%), item 8 "I can teach sentence stress" (N = 37, n = 84.1%), item 9 "I can teach intonation" (N = 39, n = 88.6%), item 10 "I can teach problematic sounds" (N = 38, n = 86.4%), item 12 "I can identify errors that impede intelligibility" (N = 36, n = 81.8%), item 15 "I can use strategies and research-based guidelines to develop appropriate pronunciation activities" (N = 40, n = 90.9%), item 16 "I can use simple language clearly to present pronunciation instruction to students" (N = 38, n = 86.4%), item 20 "I can assess general speaking habits" (N = 40, n = 90.9%), and item 21 "I can assess students' pronunciation learning outcomes" (N = 37, n = 84.1%).

Over half of the NNESTs rated "Agree" or "Strongly Agree" on the following items: item 2 "I can use the phonetic alphabets to teach pronunciation" (N = 34, n = 77.3%), item 3 "I can teach word stress" (N = 33, n = 75%), item 4 "I can teach connected speech" (N = 32, n = 72.7%), item 7 "I can provide instruction on voiced/voiceless consonants" (N = 34, n = 77.3%), item 11 "I can set pedagogical priorities for teach pronunciation" (N = 32, n = 72.7%), item 13 "I can identify and address the potential interference and variability in errors from students' L1" (N = 33, n = 75%), item 14 "I can teach English rhythm" (N = 34, n = 77.3%), item 17 "I can diagnose pronunciation difficulties that learners have" (N = 33, n = 75%), item 18 "I can provide appropriate feedback to students on their pronunciation" (N = 35, n = 79.5%), and item 19 "I can encourage students to self-evaluate/self-monitor their pronunciation progress" (N = 32, n = 72.7%).

None of the non-native English-speaking participants' ratings on "Agree" or "Strongly Agree" were below 70%.

The interview results from five NNESTs support the survey results. Overall, they felt confident to teach pronunciation in class. However, their confidence was based on certain conditions. Firstly, their education and teaching experiences regarding pronunciation provided them with confidence. Secondly, they only taught pronunciation as a segment of the course instead of a stand-alone pronunciation course so they thought they did not have to be an expert on pronunciation knowledge to teach it. Therefore, they felt confident teaching pronunciation in their classes.

Milica explained that her education and learning experience increased her confidence because she was an ESL student when she came to Canada. She stated that "being a non-native speaker is not a weakness but an advantage because we know how our students feel and how we relate our own learning experience to students'."

Zaina felt confident teaching pronunciation due to her education and self-study. She stated, to teach pronunciation as a segment of the course, her knowledge prepared her well to do so. She said: "My education already gave me what I need to teach pronunciation, and there are also seminars held by TESL organizations that always support my teaching when I need help."

However, there was variation among the participants with respect to their level of confidence in teaching pronunciation. Four of them had a concern regarding their accents, and were worried about not having sufficient knowledge for teaching pronunciation.

Aadila explained that not feeling fully confident resulted from not being a native speaker of the English language.

> I know I have some accent, and that might interfere. Sometimes I'm just worried that I'm not pronouncing the words correctly and I'm translating the wrong pronunciation to my students. This is why I'm always aware of that. I only teach pronunciation when I'm only confident of what I'm pronouncing.

Yet, she mentioned that she also had some advantages as a NNEST, such as hearing the differences between the target language and the source language, identifying the problems derived from the students' L1, etc. She described those advantages below:

> I think that somehow it gives (me) an advantage, because, I don't know. I think, our ears might hear problems that, they, native speakers might not. You know, understand where they're coming from… I know all Arabic speakers because Arabic is my first language. All Arabic speakers have a problem with "p", with the "p" sound, and so on.

Paolo felt confident to teach pronunciation when it came to teaching certain aspects of pronunciation. He explained that he was not confident in his ability to teach the phonetic alphabet or explain the differences in the pronunciation of certain words, while he was confident teaching stress and intonation.

> I feel confident teaching pronunciation when it comes to intonation, stress and lower level (classes)... Pronunciation is a very complex subject that conveys a lot of rules, when it comes to pronunciation. I do not feel comfortable if I have to, for example, teach the phonetic alphabet… When students have questions about, you know, the difference of how to pronounce different words or what is probably the best about how to move the tongue… I don't feel comfortable teaching it.

Marie stated that not being a native English speaker was her biggest challenge because she was not confident about her accent and whether she pronounced correctly. In addition, she

indicated that she needed more preparation and education on how to teach pronunciation. Otherwise, she felt confident teaching pronunciation in class.

Table 6. NNESTs' Self-Efficacy in Pronunciation Instruction

	Disagree		Neutral		Agree	
	N	%	N	%	N	%
1. I can teach individual sounds. e.g. vowels and consonants, etc.	0	0.0%	1	2.3%	43	97.7%
2. I can use the phonetic alphabets to teach pronunciation. e.g. /θ/, /k/, etc.	0	0.0%	10	22.7%	34	77.3%
3. I can teach word stress. e.g. CON-duct (noun) con-DUCT (verb)	0	0.0%	11	25.0%	33	75.0%
4. I can teach connected speech. e.g. Linking: 'turn off' sounds like 'tur noff'; Reduction: 'want to' sounds like wanna	0	0.0%	12	27.3%	32	72.7%
5. I can teach silent letters. e.g. debt, eight	0	0.0%	7	15.9%	37	84.1%
6. I can teach pronunciation of suffixes and inflectional endings. e.g -ed: /t/: cook /kʊk/-cooked /kʊkt/, /d/: stay /stei/-stayed /steid/, /ɪd:/want /wɑnt/-wanted / wɑntɪd / -s: /s/: drink /drɪnk/- drinks / drɪŋks/, /z/: play /plei/ - plays /pleiz/	0	0.0%	6	13.6%	38	86.4%
7. I can provide instruction on voiced/voiceless consonants. e.g. b – p d – t g – k	0	0.0%	10	22.7%	34	77.3%
8. I can teach sentence stress. Only certain words within a sentence are stressed. Also, the meaning of a sentence can change depending on which word is stressed.	0	0.0%	7	15.9%	37	84.1%

e.g. Can you OPEN the WINDOW, please? Can YOU open the window, please?						
9. I can teach intonation.	0	0.0%	5	11.4%	39	88.6%
e.g. Certainty: You don't like vegetables. (Falling tone)						
Question: You don't like vegetables? (Rising tone)						
10. I can teach problematic sounds.	0	0.0%	6	13.6%	38	86.4%
e.g. th - /θ/; /ð/ w - /w/						
11. I can set pedagogical priorities for teaching pronunciation.	0	0.0%	12	27.3%	32	72.7%
e.g. Intelligibility and comprehensibility deserve more attention than accent reduction.						
12. I can identify errors that impede intelligibility.	0	0.0%	8	18.2%	36	81.8%
e.g. /l/-/n/ (light-night), /s/-/ʃ/(sell-shell), /d/-/z/ (ride-rise)						
13. I can identify and address the potential interference and variability in errors from students' L1.	0	0.0%	11	25.0%	33	75.0%
Japanese students or students from Arabic-speaking background face challenges with pronunciation of /r/ vs /l/, /b/ vs /p/						
14. I can teach English rhythm.	0	0.0%	10	22.7%	34	77.3%
e.g. English is stress- timed, as opposed to syllable-timed						
15. I can use strategies and research-based guidelines to develop appropriate pronunciation activities.	0	0.0%	4	9.1%	40	90.9%
e.g. minimal pairs, shadowing pronunciation from audio and/or video recordings, modeling, etc.						

16. I can use simple language clearly to present pronunciation instruction to students.	0	0.0%	6	13.6%	38	86.4%
17. I can diagnose pronunciation difficulties that learners have.	0	0.0%	11	25.0%	33	75.0%
18. I can provide appropriate feedback to students on their pronunciation.	0	0.0%	9	20.5%	35	79.5%
19. I can encourage students to self-evaluate/self-monitor their pronunciation progress. e.g. help students set learning goals, use rubrics to achieve goals, etc.	0	0.0%	12	27.3%	32	72.7%
20. I can assess general speaking habits. e.g. clarity, speed, volume, fluency, etc.	0	0.0%	4	9.1%	40	90.9%
21. I can assess students' pronunciation learning outcomes. e.g. evaluating and monitoring students' acquisition of the target pronunciation features through multiple tasks, such as reading tasks, spontaneous interaction, presentations, etc.	0	0.0%	7	15.9%	37	84.1%
22. Overall, I am confident to teach pronunciation in class.	0	0.0%	5	11.4%	39	88.6%

In addition to comparing the difference in Self-efficacy between NESTs and NNESTs, the current study also compared the differences in self-efficacy in segmentals, suprasegmentals and instructional strategies between two groups of teachers.

The hypothesis was that there were statistically significant differences in self-efficacy in three aspects of pronunciation instruction (segmentals, suprasegmentals and instructional strategies) between NESTs and NNESTs. However, the results generated by one-way MANOVA did not support the hypothesis. The mean of NESTs' ratings of self-efficacy in segmentals (M = 5.16, SD = .745) and instructional strategies (M = 5.07, SD = .836) were lower than the mean of NNESTs' ratings (M = 5.29, SD = .652; M = 5.20, SD = .578), while the mean of NESTs' ratings (M = 5.25, SD = .809) on self-efficacy in suprasegmentals was higher than the NNESTs' ratings (M = 5.20, SD = .679). The results are shown in Table 7. The differences between NESTs and NNESTs on the self-efficacy in the three aspects of pronunciation instruction was not statistically significant, F (3, 193) = 2.46, Pillai's Trace = .037, p = .064.

Table 7. Descriptive Statistics of Self-Efficacy in Pronunciation Instruction

Pronunciation Aspects	Teacher Group	Mean	Std. Deviation	N
Segmentals	NESTs	5.16	.745	153
	NNESTs	5.29	.652	44
	Total	5.19	.726	197
Suprasegmentals	NESTs	5.25	.809	153
	NNESTs	5.20	.679	44
	Total	5.24	.781	197
Instructional Strategies	NESTs	5.07	.836	153
	NNESTs	5.20	.578	44
	Total	5.10	.786	197

2. What are the self-reported levels and perceived required levels of language proficiency and pronunciation proficiency among ESL teachers?

Levels of language and pronunciation proficiency of participants started at B2 and continued with the level between B2 and C1, C1, the level between C1 and C2, and C2. Levels calculation was done using an 11-point scale, and then converted to a 6-point scale for clear interpretations.

Self-Reported Level of Language Proficiency. One hundred sixty-four participants completed this section of the survey. The average of the participants' self-reported level of language proficiency was 5.81 (SD = .725). One hundred and twenty-seven participants rated their language proficiency level at C2 (n = 77.4%). Twenty-one participants rated their level of language proficiency between C1 and C2. Twelve participants selected C1 as their self-reported level (n = 7.3%). Only four of the participants believed their level was between B2 and C1 (n = 2.4%). The results are shown in Table 8.

Table 8. Self-Reported Level of Language Proficiency

Level		N	%	Cum%
4.5	Between B2 and C1	4	2.4	2.4
5	C1	12	7.3	9.8
5.5	Between C1 and C2	21	12.8	22.6
6	C2	127	77.4	100.0
	Total	164	100.0	

Perceived Required Level of Language Proficiency. One hundred sixty-nine participants completed this section. The average level of the participants' rating on required level of language proficiency was 5.07 (SD = 1.339). 21.9% of the participants felt that ESL teachers should have the level of C2 to teach pronunciation effectively (N = 37). 26.6% rated the level between C1 and C2 (N = 45), and 24.3% the level of C1 (N = 41). 11.2% of the participants thought that teachers should have the level between B2 and C1 to teach pronunciation (N = 19). 16% of the teachers felt that the minimum level of B2 is required to teach pronunciation (N = 27). The results are shown in Table 9.

Table 9. Perceived Required Level of Language Proficiency

Level		N	%	Cum%
4	B2	27	16.0	16.0
4.5	Between B2 and C1	19	11.2	27.2
5	C1	41	24.3	51.5
5.5	Between C1 and C2	45	26.6	78.1
6	C2	37	21.9	100.0
	Total	169	100.0	

Self-Reported Level of Pronunciation Proficiency. One hundred seventy-two participants completed this section of the survey. The average rating of the participants' self-reported level of pronunciation proficiency was 5.82 (SD = .657). Over three quarter of the participants self-rated their pronunciation proficiency at the level of C2 (N = 132, n = 76.7%). 15.1% of the participants rated their level of pronunciation proficiency between C1 and C2 (N = 26). 7% of the participants believed their level was C1 (N = 12), and 1.2% self-reported their level between B2 and C1 (N = 2). The results are shown in Table 10.

Table 10. Self-Reported Level of Pronunciation Proficiency

Level		N	%	Cum%
4.5	Between B2 and C1	2	1.2	1.2
5	C1	12	7.0	8.1
5.5	Between C1 and C2	26	15.1	23.3
6	C2	132	76.7	100.0
	Total	172	100.0	

Perceived Required Level of Pronunciation Proficiency. One hundred seventy-two participants completed this section of the survey. The average rating of the participants' perceived required level of pronunciation proficiency to teach pronunciation was 5.15 (SD = 1.343). 26.2% of the participants selected C2 as the level they thought is required (N = 45). 28.5% of them rated the level between C1 and C2 (N =49). 22.1% of the participants thought that the level of C1 is required to teach pronunciation (N = 38). 9.3% of them thought that the

level between B2 and C1 is required (N = 16), and 14% thought that the level of B2 (N = 24) is sufficient. The results are shown in Table 11.

Perceived Required Level of Pronunciation Proficiency

Level		N	%	Cum%
4	B2	24	14.0	14.0
4.5	Between B2 and C1	16	9.3	23.3
5	C1	38	22.1	45.3
5.5	Between C1 and C2	49	28.5	73.8
6	C2	45	26.2	100.0
	Total	172	100.0	

2a. What is the gap between self-ratings of teachers on language proficiency/pronunciation proficiency and the level they think is required to teach it effectively?

Paired sample *t*-tests provided an image of the gap between two levels of ratings on language proficiency and pronunciation proficiency. As discussed below, there were gaps between the self-reported level and the required level of both language and pronunciation proficiency. The results showed that the ratings of the self-reported levels were significantly higher than the ratings of required level on both language and pronunciation proficiency.

Language Proficiency. The self-reported level of language proficiency (M = 10.65, SD = .725) was significantly higher than the perceived required level to teach pronunciation (M = 9.30, SD = 1.339), t (162) = 10.02, $p < .001$, d = .78. The mean difference was 1.35. Prior to conducting the analysis, the assumption of normally distributed difference scores was examined. The results are shown in Tables 12 and 13.

Table 11. Language Proficiency Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Self-Reported Level of Language Proficiency	10.65	163	.725	.057
	Required Level of Language Proficiency	9.30	163	1.339	.105

Table 12. Language Proficiency Paired Samples Test

		Paired Differences							
		Mean Difference	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper	t	df	Sig. (2-tailed)
Pair 1	Self-Reported Level -Required Level	1.35	1.72	.14	1.08	1.62	10.02	162	.00

Pronunciation Proficiency. The self-reported level of pronunciation proficiency (M = 10.67, SD = .657) was significantly higher than the reported required level to teach pronunciation (M = 9.44, SD = 1.343), t (171) = 10.09, $p < .001$, d = .77. The mean difference was 1.238. The results are shown in Tables 14 and 15.

Table 13. Pronunciation Proficiency Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Self-Reported Level	10.67	172	.657	.05
	Required Level	9.44	172	1.343	.102

Table 14. Pronunciation Proficiency Paired Samples Test

	Paired Differences						
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference	t	df	Sig. (2-tailed)

					Lower	Upper			
Pair 1	Self-Reported Level – Required Level	1.238	1.61	.12	.996	1.48	10.09	171	.00

2b. How do native English-speaking teachers and non-native English-speaking teachers compare?

Language Proficiency.

Self-Reported Level of Language Proficiency. The average rating of the self-reported level of language proficiency of the NESTs was 5.98 (SD = .201). Almost all the NESTs rated their level at C2 (N = 114, n = 95.8%). Only five participants chose the level between C1 and C2 (n = 4.2%). In contrast, the average rating of the level of the NNESTs was 5.37 (SD = .952). 28.9% of them believed their level was at C2 (N = 13). 35.6% of the NNESTs (N = 16) rated their level between C1 and C2. 23.7% of them selected C1 as their language proficiency level (N = 12). Only four participants (8.9%) chose the level between B2 and C1. The results are shown in Table 16.

Table 15. Frequency of Self-Reported Level of Language Proficiency

Teacher Group	Level	N	%	Cum%
NESTs	Between C1 and C2	5	4.2	4.2
	C2	114	95.8	100.0
	Total	119	100.0	
NNESTs	Between B2 and C1	4	8.9	8.9
	C1	12	26.7	35.6
	Between C1 and C2	16	35.6	71.1
	C2	13	28.9	100.0
	Total	45	100.0	

Perceived Required Level of Language Proficiency. The average rating of the NESTs' perceived required level of language proficiency was 4.94 (SD = 1.355). 17.7% (N = 22) rated

C2 as the required level. 21% of them (N = 26) believed the level between C1 and C2 as the required level. 29% of the NESTs (N = 36) selected C1 as the required level of language proficiency. 19.4% of them (N = 24) chose B2. Only 12.9% chose the level between B2 and C1 (N = 16). Unlike the ratings of the NESTs', the average rating of the NNESTs' required level was 5.39 (SD = 1.153). 33.3% of the NNESTs rated C2 as the required level (N = 15). 42.2% of them selected the level between C1 and C2 (N = 19). 11.11% believed that the level of C1 was required (N = 5). Only three participants chose the level between B2 and C1 (n = 6.7%), and three participants chose B2 (n = 6.7%). The results are shown in Table 17.

Table 16. Frequency of Perceived Required Level of Language Proficiency

Teacher Group	Level	N	%	Cum%
NESTs	B2	24	19.4	19.4
	Between B2 and C1	16	12.9	32.3
	C1	36	29.0	61.3
	Between C1 and C2	26	21.0	82.3
	C2	22	17.7	100
	Total	124	100.0	
NNESTs	B2	3	6.7	6.7
	Between B2 and C1	3	6.7	13.3
	C1	5	11.1	24.4
	Between C1 and C2	19	42.2	66.7
	C2	15	33.3	100
	Total	45	100.0	

Pronunciation Proficiency.

Self-reported Level of Pronunciation Proficiency. The average rating of the NESTs' self-reported level of pronunciation proficiency was 5.95 (SD = .309). 92.1% of the NESTs (N = 117) believed their pronunciation proficiency level was at C2. 7.1% of them (N = 7) selected the level between C1 and C2. Only one participant (n =0.8%) chose C1 as the self-reported level. While, the average rating scores of the NNESTs' self-reported level was 5.45

(SD = .879). 3.3% of the NNESTs (N = 15) perceived their level at C2. 37.8% of them (N = 17) reported the level between C1 and C2. 24.4% (N = 11) believed they were C1. Only 4.4% (N = 2) selected the level between B2 and C1. The results are shown in Table 18.

Table 17. Frequency of Self-Reported Level of Pronunciation Proficiency

Teacher Group	Level	N	%	Cum%
NESTs	C1	1	.8	.8
	Between C1 and C2	9	7.1	7.9
	C2	117	92.1	100.0
	Total	127	100.0	
NNESTs	Between B2 and C1	2	4.4	4.4
	C1	11	24.4	28.9
	Between C1 and C2	17	37.8	66.7
	C2	15	33.3	100.0
	Total	45	100.0	

Perceived Required Level of Pronunciation Proficiency. The average rating of the NESTs' required level of pronunciation proficiency was 5.06 (SD = 1.402). 24.4% of the NESTs (N = 31) selected C2. 25.2% of them (N = 32) believed the required level of pronunciation proficiency was between C1 and C2. 22% of them (N =28) chose C1 as the required level. 11% chose the level between B2 and C1. 17.3% (N = 22) believed that ESL teachers should have B2 level. In contrast, the average rating of the NNESTs' required level of pronunciation proficiency was 5.38 (SD = 1.057). 31.1% of the NNESTs (N = 14) rated the required level at C2. 37.8% of them (N = 17) were at the level between C1 and C2. 22.2% (N = 10) believed that C1 was required. Only 4.4% (N = 2) selected the level between B2 and C1, and 2% (N =4) chose the level of B2. The results are shown in Table 19.

Table 18. Frequency of Self-Reported Level of Pronunciation Proficiency

Teacher Group	N	%	Cum%
B2	22	17.3	17.3

NESTs	Between B2 and C1	14	11.0	28.3
	C1	28	22.0	50.4
	Between C1 and C2	32	25.2	75.6
	C2	31	24.4	100.0
	Total	127	100.0	
	B2	2	4.4	4.4
NNESTs	Between B2 and C1	2	4.4	8.9
	C1	10	22.2	31.1
	Between C1 and C2	17	37.8	68.9
	C2	14	31.1	100.0
	Total	45	100.0	

In addition, the current research also examined whether NESTs and NNESTs differ on language and pronunciation proficiency by comparing mean scores. The independent *t* tests were employed to compare mean differences.

Language Proficiency.

Self-Reported Level of Language Proficiency. The difference between the means of NESTs (M = 10.96, SD = .201) and NNESTs (M = 9.84, SD = .952) was 1.12. The results showed that this difference was statistically different. The results are shown in Table 20.

Table 19. Comparison of NESTs and NNESTs on the Self-Reported Level of Language Proficiency (N = 119 NESTs and 45 NNESTs)

Variable	*M*	*SD*	*Mean Difference*	*t*	*df*	*p*
Self-reported level of language proficiency			1.12	7.778	45.497	.000
NESTs	10.96	.201				
NNESTs	9.84	.952				

[a]The *t* and *df* were adjust because variances were not equal.

Perceived Required Level of Language Proficiency. The difference between the means of NESTs (M = 9.05, SD = 1.355) and NNESTs (M = 9.89, SD = 1.153) was -.84. The results showed that this difference was statistically different. The results are shown in Table 21.

Table 20. Comparison of NESTs and NNESTs on the Perceived Required Level of Language Proficiency (N = 124 NESTs and 45 NNESTs)

Variable	*M*	*SD*	*Mean Difference*	*t*	*df*	*p*
Perceived required level of language proficiency			-.84	-3.702	167	.000
NESTs	9.05	1.355				
NNESTs	9.89	1.153				

Ten interviewees were asked why there were differences between their ratings on the required level and the ratings on their self-reported level of language proficiency. Four native English-speaking interviewees and one non-native English-speaking interviewee indicated their self-reported levels of language/pronunciation proficiency were higher than the levels they thought were required to teach pronunciation. The reasons were given by the interviewees: 1) teachers do not need to have the highest level of language proficiency, as long as the level is higher than their students; 2) teachers' levels only need to be high enough to meet learners' needs, but it does not mean that teachers should reach the highest level; 3)

Wendy (NEST) explained why the required level was lower than her self-reported level of proficiency. She explained:

> For example, I was teaching a lower level of class and I had a student coming to me with some questions. I said: "Try your best." Then, I had that student ask me: "What does try mean?" I do really feel proud of my language skills and vocabulary. I tend to find…I'm used to teaching the upper levels where I want to find the most difficult word or more academic words than the one they're struggling with. And in the lower levels you need to actually do it the opposite way. You're trying to find language to explain simple concepts and I don't necessarily feel like, like your language

> proficiency has to be at a sixth level…I don't necessarily think you need to be at the level six (the highest level in the survey) in order to be a strong teacher.

Marie (NNEST) explained that teachers did not have to reach the highest level of language proficiency to teach pronunciation. She described her reasoning as below:

> There are activities and exercises that you can do no matter what your level of English proficiency is. It's just a question of having access to those activities and knowing which activity is most useful for your learners. It doesn't matter whether you make mistakes when you speak or not. That's why I don't think you have to be at 6.

However, four non-native English-speaking interviewees' ratings on the required level were higher than their self-reported level of language proficiency. All four believed that the higher the level of teacher's proficiency, the more effectively teachers could teach.

Paolo (NNEST) believed that teachers should pursue a level of proficiency as high as possible to obtain the best teaching results. He said:

> I'm a perfectionist, and I always think that there is some room for improvement. The more I learn, the better I can teach my students. The higher proficiency I have, the better teaching performance I have. As a teacher, I need to prove that I'm able to effectively explain what I teach. If I can reach the highest level, I'll feel very confident teaching it.

Aadila (NNEST) explained that teachers should be highly qualified to teach pronunciation. In order to be qualified, the higher the level of language proficiency teachers could reach, the more effectively and confidently they could teach.

Pronunciation Proficiency

Self-Reported Level of Pronunciation Proficiency. The difference between the means of NESTs (M = 10.91, SD = .309) and NNESTs (M = 10.00, SD = .879) was .91. The results showed that this difference was statistically different. The results are shown in Table 22.

Table 21. Comparison of NESTs and NNESTs on the Self-Reported Level of Pronunciation Proficiency (N = 127 NESTs and 45 NNESTs)

Variable	*M*	*SD*	*Mean Difference*	*t*	*df*	*p*
Self-reported level of pronunciation proficiency			.91	6.822	47.911	.000
NESTs	10.91	.309				
NNESTs	10.00	.879				

[a]The *t* and *df* were adjust because variances were not equal.

Perceived Required Level of Pronunciation Proficiency. The difference between the means of NESTs (M = 9.28, SD = 1.402) and NNESTs (M = 9.87, SD = 1.057) was -.59. The results showed that this difference was statistically significant. The results are shown in Table 23.

Comparison of NESTs and NNESTs on the Perceived Required Level of Pronunciation Proficiency (N = 127 NESTs and 45 NNESTs)

Variable	*M*	*SD*	*Mean Difference*	*t*	*df*	*p*
Self-reported level of pronunciation proficiency			-.59	-2.904	102.084	.0045
NESTs	9.28	1.402				
NNESTs	9.87	1.057				

[a]The *t* and *df* were adjusted because variances were not equal.

Three NESTs indicated that their self-reported level of pronunciation proficiency was lower that the level they thought was required to teach pronunciation. They explained that teachers' pronunciation proficiency levels did not have to meet the highest level, as long as their levels were higher than their students and enabled them to properly teach pronunciation. In addition, the content was more important than the proficiency.

Jenn (NEST) stated that it was unnecessary to achieve the highest level of pronunciation proficiency, as long as teachers could make themselves understood.

> I think that teachers need to be at a higher level than the students that they are teaching for sure, but it's not really necessary to reach the highest level of pronunciation proficiency to be able to teach pronunciation. As teachers, they need to know their stuff. They need to be comprehensible. They need to, maybe, know the language and those are the things that are most important.

Two NESTs and five NNESTs explained that teachers should have very high levels of pronunciation proficiency, because, firstly, teachers were responsible for delivering correct pronunciation to their students; secondly, the higher the level of pronunciation proficiency they had, the more confident they were.

Wendy (NEST) explained that her pronunciation proficiency at highest level in the survey did not mean she had perfect pronunciation and that perfect pronunciation did not exist. However, she indicated that teachers should pursue a higher level of pronunciation proficiency, because poor pronunciation proficiency would affect comprehension and teaching performance. She explained:

> When it comes to teaching pronunciation, I think teachers should have relatively higher level of proficiency, because teachers are models of their students. If they pronounce a wrong word, then their students would copy what teachers have said… I think our role as pronunciation teachers is a little bit weird, because people are coming here to learn how to pronounce correctly. So, if you're constantly making pronunciation mistakes, I do think that affects comprehension and your ability to teach.

Aadila (NNEST) expressed her worries regarding pronunciation proficiency. She described that her pronunciation proficiency affected her confidence in teaching pronunciation in class.

> Sometimes I'm just worried that I am not pronouncing the words correctly and I'm translating wrong pronunciation to my students. This is why I'm aware of that and I only teach pronunciation when I'm confident of what I can pronounce.

When it came to the level she thought was required for an ESL teacher to teach pronunciation. She said: "The higher, the better."

3. *Is there a relationship between ESL teachers' self-ratings on language proficiency/pronunciation proficiency and their level of self-efficacy on pronunciation teaching?*

The results generated by Spearman's rho showed that there was no statistically significant correlation between language proficiency and self-efficacy. However, there was a correlation between the pronunciation proficiency and the self-efficacy.

Spearman's rho correlation. The test results showed that the assumption of the correlation (r = .14) between language proficiency and the self-efficacy was not supported, r (162) =.14, p = .069. Thus, it was concluded that there was no statistically significant correlation. The results are shown in Table 24. However, the assumption of the correlation (r = .23) between the pronunciation proficiency level and the self-efficacy level was true, r (166) = .23, p = .002.). The data is shown in Table 25.

Table 22. Correlations Between Language Proficiency and Self-Efficacy

		Self-Reported Level of Language Proficiency	Self-Efficacy
Self-Reported Level of	Correlation Coefficient	1.000	.144
	Sig. (2-tailed)	.	.069

Language Proficiency	N	164	161
	Correlation Coefficient	.144	1.000
Self-Efficacy	Sig. (2-tailed)	.069	.
	N	161	197

Table 23. Correlation Between Pronunciation Proficiency and Self-Efficacy

		Self-Reported Level of Pronunciation Proficiency	Self-efficacy
Self-Reported Level of Pronunciation Proficiency	Correlation Coefficient	1.000	.232**
	Sig. (2-tailed)	.	.002
	N	172	168
Self-Efficacy	Correlation Coefficient	.232**	1.000
	Sig. (2-tailed)	.002	.
	N	168	196

**. Correlation is significant at the 0.01 level (2-tailed).

The follow-up interviews offered a deeper insight into the relationship between language proficiency/pronunciation proficiency and self-efficacy in teaching pronunciation. The interviewees indicated their language and pronunciation proficiency influenced their self-efficacy to a certain degree. Ten interviewees stated that their language proficiency had no impact on their self-efficacy in teaching pronunciation. Three interviewees believed that neither language nor pronunciation proficiency influenced their self-efficacy in teaching pronunciation. They explained that the knowledge of pronunciation was more important than the level of proficiency, because teachers could not teach if they did not know what and how to teach. They believed that knowledge of pronunciation had a stronger influence on the level of confidence in teaching it.

Milica (NNEST) said they both did not affect her teaching.

> It doesn't matter how fluently you speak and how 'perfect' your pronunciation is. It has to be how much you know about your students' level and their language ability, and also how much knowledge you know about pronunciation when it comes to teaching pronunciation. I'm not confident sometimes not because my language or pronunciation is poor. You need to have the specific knowledge to assist your students, but sometimes I don't feel I have that knowledge. So, I don't feel quite confident teaching it. As long as I have the knowledge of what I teach, then I think I'm a good teacher.

Sophie (NEST) indicated that her language/pronunciation proficiency did not affect her self-confidence in pronunciation instruction. She said: "I think my language and pronunciation are fine, but if you don't have the training or, you know, background in pronunciation, then how are you supposed to teach them?"

Jenn (NEST) indicated that her self-efficacy in pronunciation instruction was not impacted by her language/pronunciation proficiency, but her education and teaching experience did. She explained: "I don't think that my language or pronunciation affects my confidence, but not knowing what I teach would definitely hurt my confidence in teaching it."

Seven interviewees stated that their language proficiency did not impact their confidence, but their pronunciation proficiency did. They explained that their level of language proficiency enabled them to clearly express themselves to students. However, poor pronunciation proficiency would lead to issues of comprehensibility, which hurt their confidence and willingness to teach pronunciation.

Helen (NEST) stated that her language proficiency was not the factor that influenced her self-efficacy in pronunciation teaching. She emphasized that her extensive education

regarding phonology built her confidence. Nevertheless, she mentioned that pronunciation proficiency had an impact on pronunciation teaching. She explained: "You have to know what you teach and whether you are able to teach. If you're not sure, how are you going to teach it to your students?"

Wendy (NEST) indicated that language proficiency did not affect self-efficacy much. She said: "I think it goes back to the level that you're teaching. I think that you can be an amazing teacher with limited vocabulary and language skill." However, she indicated that her pronunciation proficiency affected her teaching ability in class. She said: "if I do not pronounce a word correctly, then I wouldn't want to teach it because I'm unable to teach it."

Gordon (NEST) explained that language proficiency did not affect his self-efficacy in teaching pronunciation in class. He believed that his teaching and learning experience had more influence on his confidence.

Marie and Aadila (NNESTs) expressed that pronunciation proficiency had an impact on their self-confidence in teaching pronunciation. They both had a concern regarding being understood by their students. Marie said: "I can pronounce clearly enough to be understood, but I'm worried that my accent might cause some mispronunciation and set a wrong model for my students. Therefore, sometimes, I don't feel confident teaching the sounds that I'm not sure, and I feel unwilling to teach it." Aadila provided the similar explanation. She said: "I can speak naturally and clearly, but I'm not sure whether my sentence or word stress or accent would affect the meanings, and students may copy a wrong pattern from me. That's why I'm not confident when I feel my pronunciation proficiency is not good enough."

4. *What level of knowledge do ESL teachers report they have, and what level they need for effective pronunciation instruction?*

One hundred sixty-nine participants completed this section of the survey. The self-reported levels and the required levels of knowledge started from Level One (1) to Level Six (6). The average mean scores were calculated based on the scores from one to six. The average rating of the self-reported level of knowledge was 5.19 (SD = .919). The average rating of the perceived required level of knowledge was 4.52 (SD = .902).

Self-Reported Level of Knowledge. The average rating of the self-reported level of pronunciation instruction knowledge was 5.19 (SD = .919). 47.3% of participants reported their level of knowledge at Level Six (N = 80). 29.6% of them rated level 5 (N = 50). Thirty-three participants rated their knowledge of pronunciation instruction at level 4 (n = 18.3). Only seven participants were at level 3 (n = 4.1%) and one participant at Level Two (n = 0.6%). No participant rated knowledge of pronunciation instruction at Level One. The data is shown in Table 26.

Table 24. Frequency of the Self-Reported Level of Pronunciation Instruction Knowledge

Level	N	%	Cum%
Level 2	1	.6	.6
Level 3	7	4.1	4.7
Level 4	31	18.3	23.1
Level 5	50	29.6	52.7
Level 6	80	47.3	100.0
Total	169	100.0	

In addition, the participants reported their levels specifically on 22 items on the survey. The results showed that over half of the participants rated themselves Level Six on the following items: item1 “Knowledge of individual sounds” (N = 107, n = 63.3%), item 3 “Knowledge of word stress” (N = 101, n = 59.8%), item 4 “Knowledge of connected speech” (N = 92, n = 54.4%), item 5 “Knowledge of silent letters” (N = 109, n = 64.5%), item 6 “Knowledge of pronunciation of suffixes and inflectional endings” (N = 110, n = 65.1%),

item 7 “Knowledge of providing instruction on voiced/voiceless consonants” (N = 103, n = 60.9%), item 8 “Knowledge of sentence stress” (N = 100, n = 59.2%), item 9 “Knowledge of intonation” (N = 103, n = 60.9%), item 10 “Knowledge of problematic sounds” (N = 88, n = 52.1%), item 11 “Knowledge of setting pedagogical priorities for teaching pronunciation” (N = 86, n = 50.9%), item 12 “Knowledge of identifying errors that impede intelligibility” (N = 84, n = 50.3%), and item 16 “Knowledge of using simple language clearly to present pronunciation instruction to students” (N = 96, n = 57.1%). The results are shown in Table 27.

Furthermore, the study also explored the average rating of each item. Four items received relatively lower ratings with the average scores below five. They are: 1) item 2 “knowledge of using the phonetic alphabet to teach pronunciation” (M = 4.47, SD = 1.48); 2) item 14 “knowledge of English rhythm” (M = 4.98, SD = 1.223); 3) item 17 “knowledge of diagnosing pronunciation difficulties that learners have” (M = 4.90, SD = 1.042); 4) item 19 “knowledge of encouraging students to self-evaluate/self-monitor their pronunciation progress” (M = 4.80, SD = 1.103). The average ratings were above 5 on the following items: item 1 “knowledge of individual sounds” (M = 5.33, SD = .968); item 3 “knowledge of word stress” (M = 5.41, SD = .862); item 4 “knowledge of connected speech” (M = 5.17, SD = 1.089); item 5 “knowledge of silent letters” (M = 5.30, SD = 1.089); item 6 “knowledge of pronunciation of suffixes and inflectional endings” (M = 5.33, SD = 1.067); item 7 “knowledge of providing instruction on voiced/voiceless consonants” (M = 5.30; SD = 1.089); item 8 “knowledge of sentence stress. Only certain words within a sentence are stressed” (M = 5.42; SD = .813); item 9 “knowledge of intonation” (M = 5.36, SD = .895); item 10 “knowledge of problematic sounds” (M = 5.15; SD = 1.095); item 11 “knowledge of setting pedagogical priorities for teaching pronunciation” (M = 5.08, SD = 1.192); item 12

"knowledge of identifying errors that impede intelligibility" (M = 5.17; SD = .998); item 13 "knowledge of identifying and addressing the potential interference and variability in errors from students' L1" (M = 5.01, SD = 1.05); item 15 "knowledge of using strategies and research-based guidelines to develop appropriate pronunciation activities" (M = 5.04, SD = 1.063); item 16 "knowledge of using simple language clearly to present pronunciation instruction to students" (M = 5.36, SD = .898); item 18 "knowledge of providing appropriate feedback to students on their pronunciation" (M = 5, SD = 1.044); item 20 "knowledge of assessing general speaking habits" (M = 5.10, SD = 1.004); item 21 "knowledge of assessing students' pronunciation learning outcomes" (M = 5, SD = 1.105); item 22 "overall knowledge of teaching pronunciation" (M = 5.05, SD = .94). The results are shown in Table 2

Table 25. Frequency of Self-Reported Level of Pronunciation Instruction Knowledge

	Level 1		Level 2		Level 3		Level 4		Level 5		Level 6	
	N	%	N	%	N	%	N	%	N	%	N	%
1. Knowledge of individual sounds e.g. vowels and consonants, etc.	0	0.0%	1	0.6%	6	3.6%	36	21.3%	19	11.2%	107	63.3%
2. Knowledge of the phonetic alphabet to teach pronunciation e.g. /θ/, /k/, etc	7	4.1%	16	9.5%	12	7.1%	50	29.6%	23	13.6%	61	36.1%
3. Knowledge of word stress e.g. CON-duct (noun) con-DUCT (verb)	0	0.0%	2	1.2%	4	2.4%	18	10.7%	44	26.0%	101	59.8%
4. Knowledge of connected speech e.g. Linking: 'turn off' sounds like 'tur noff'; Reduction: 'want to' sounds like wanna	0	0.0%	2	1.2%	18	10.7%	22	13.0%	35	20.7%	92	54.4%
5. Knowledge of silent letters e.g. debt, eight	0	0.0%	1	0.6%	20	11.8%	16	9.5%	23	13.6%	109	64.5%
6. Knowledge of pronunciation of suffixes and inflectional endings e.g -ed: /t/: cook /kʊk/-cooked /kʊkt/, /d/: stay /stei/-stayed /steid/, /ɪd:/want /wɑnt/-wanted / wɑntɪd / -s: /s/: drink /drɪnk/- drinks /drɪŋks/, /z/: play /plei/ - plays /pleiz/	0	0.0%	1	0.6%	19	11.2%	14	8.3%	25	14.8%	110	65.1%
7. Knowledge of providing instruction on voiced/voiceless consonants e.g. b – p d – t g – k	0	0.0%	2	1.2%	4	2.4%	39	23.1%	21	12.4%	103	60.9%
8. Knowledge of sentence stress.	0	0.0%	1	0.6%	3	1.8%	20	11.8%	45	26.6%	100	59.2%

Only certain words within a sentence are stressed. Also, the meaning of a sentence can change depending on which word is stressed. e.g. Can you OPEN the WINDOW, please? Can YOU open the window, please?												
9. Knowledge of intonation e.g. Certainty: You don't like vegetables. (Falling tone) Question: You don't like vegetables? (Rising tone)	0	0.0%	1	0.6%	2	1.2%	36	21.3%	27	16.0%	103	60.9%
10. Knowledge of problematic sounds e.g. th - /θ/; /ð/ w - /w/	1	0.6%	5	3.0%	6	3.6%	32	18.9%	37	21.9%	88	52.1%
11. Knowledge of setting pedagogical priorities for teaching pronunciation e.g. Intelligibility and comprehensibility deserve more attention than accent reduction.	4	2.4%	5	3.0%	2	1.2%	37	21.9%	35	20.7%	86	50.9%
12. Knowledge of identifying errors that impede intelligibility e.g. /l/-/n/ (light-night) /s/-/ʃ/(sell-shell), /d/-/z/ (ride-rise)	0	0.0%	4	2.4%	3	1.8%	38	22.8%	38	22.8%	84	50.3%
13. Knowledge of identifying and addressing the potential interference and variability in errors from students' L1	0	0.0%	6	3.6%	10	6.0%	25	14.9%	62	36.9%	65	38.7%

e.g. Japanese students or students from Arabic-speaking background face challenges with pronunciation of /r/ vs /l/, /b/ vs /p/												
14. Knowledge of English rhythm e.g. English is stress-timed, as opposed to syllable-timed	1	0.6%	4	2.4%	23	13.7%	24	14.3%	34	20.2%	82	48.8%
15. Knowledge of using strategies and research-based guidelines to develop appropriate pronunciation activities e.g. minimal pairs, shadowing pronunciation from audio and/or video recordings, modelling, etc.	2	1.2%	2	1.2%	7	4.2%	38	22.6%	46	27.4%	73	43.5%
16. Knowledge of using simple language clearly to present pronunciation instruction to students	0	0.0%	2	1.2%	6	3.6%	18	10.7%	46	27.4%	96	57.1%
17. Knowledge of diagnosing pronunciation difficulties that learners have	0	0.0%	4	2.4%	11	6.5%	43	25.6%	50	29.8%	60	35.7%
18. Knowledge of providing appropriate feedback to students on their pronunciation	0	0.0%	5	3.0%	8	4.8%	37	22.0%	50	29.8%	68	40.5%
19. Knowledge of encouraging students to self-evaluate/self-monitor their pronunciation progress e.g. help students set learning goals, use rubrics to achieve goals, etc.	1	0.6%	5	3.0%	9	5.4%	55	32.7%	40	23.8%	58	34.5%
20. Knowledge of assessing general	1	0.6%	1	0.6%	6	3.6%	43	25.6%	39	23.2%	78	46.4%

speaking habits e.g. clarity, speed, volume, fluency, etc.												
21. Knowledge of assessing students' pronunciation learning outcomes e.g. evaluating and monitoring students' acquisition of the target pronunciation features through multiple tasks, such as reading tasks, spontaneous interaction, presentations, etc.	2	1.2%	5	3.0%	8	4.8%	28	16.7%	58	34.5%	67	39.9%
22. Overall knowledge of teaching pronunciation	1	0.6%	2	1.2%	8	4.8%	24	14.3%	75	44.6%	58	34.5%

Table 26. Average ratings on Knowledge of Pronunciation Instruction

	N	Mean	SD
1. Knowledge of individual sounds e.g. vowels and consonants, etc.	169	5.33	.968
2. Knowledge of the phonetic alphabet to teach pronunciation e.g. /θ/, /k/, etc	169	4.47	1.48
3. Knowledge of word stress e.g. CON-duct (noun) con-DUCT (verb)	169	5.41	.862
4. Knowledge of connected speech e.g. Linking: 'turn off' sounds like 'tur noff'; Reduction: 'want to' sounds like wanna	169	5.17	1.089
5. Knowledge of silent letters e.g. debt, eight	169	5.30	1.089
6. Knowledge of pronunciation of suffixes and inflectional endings e.g -ed: /t/: cook /kʊk/-cooked /kʊkt/, /d/: stay /stei/-stayed /steid/, /ɪd:/want /wɑnt/-wanted / wɑntɪd / -s: /s/: drink /drɪnk/- drinks /drɪŋks/, /z/: play /plei/ - plays /pleiz/	169	5.33	1.067
7. Knowledge of providing instruction on voiced/voiceless consonants e.g. b – p d – t g – k	169	5.30	.98
8. Knowledge of sentence stress. Only certain words within a sentence are stressed. Also, the meaning of a sentence can change depending on which word is stressed. e.g. Can you OPEN the WINDOW, please? Can YOU open the window, please?	169	5.42	.813
9. Knowledge of intonation e.g. Certainty: You don't like vegetables. (Falling tone) Question: You don't like vegetables? (Rising tone)	169	5.36	.895
10. Knowledge of problematic sounds e.g. th - /θ/; /ð/ w - /w/	169	5.15	1.095
11. Knowledge of setting pedagogical priorities for teaching pronunciation e.g. Intelligibility and comprehensibility deserve more attention than accent reduction.	169	5.08	1.192
12. Knowledge of identifying errors that impede intelligibility e.g. /l/-/n/ (light-night), /s/-/ʃ/(sell-shell), /d/-/z/ (ride-rise)	167	5.17	.998
13. Knowledge of identifying and addressing the potential interference and variability in errors from students' L1	168	5.01	1.05

e.g. Japanese students or students from Arabic-speaking background face challenges with pronunciation of /r/ vs /l/, /b/ vs /p/			
14. Knowledge of English rhythm	168	4.98	1.223
e.g. English is stress-timed, as opposed to syllable-timed			
15. Knowledge of using strategies and research-based guidelines to develop appropriate pronunciation activities	168	5.04	1.063
e.g. minimal pairs, shadowing pronunciation from audio and/or video recordings, modelling, etc.			
16. Knowledge of using simple language clearly to present pronunciation instruction to students	168	5.36	.898
17. Knowledge of diagnosing pronunciation difficulties that learners have	168	4.90	1.042
18. Knowledge of providing appropriate feedback to students on their pronunciation	168	5.00	1.044
19. Knowledge of encouraging students to self-evaluate/self-monitor their pronunciation progress	168	4.80	1.103
e.g. help students set learning goals, use rubrics to achieve goals, etc.			
20. Knowledge of assessing general speaking habits	168	5.10	1.004
e.g. clarity, speed, volume, fluency, etc.			
21. Knowledge of assessing students' pronunciation learning outcomes	168	5.00	1.105
e.g. evaluating and monitoring students' acquisition of the target pronunciation features through multiple tasks, such as reading tasks, spontaneous interaction, presentations, etc.			
22. Overall knowledge of teaching pronunciation	168	5.05	.94

Perceived Required Level of Knowledge. The average rating of the perceived required level of pronunciation instruction knowledge was 4.52 (SD = .902). 13.7% of the participants thought that ESL teachers should reach the highest level to teach pronunciation effectively (N = 23). 38.1% of the participant believed that Level 5 was reasonable to acquire to teach pronunciation (N = 64). 37.5 of them believed that Level 4was required (N = 63). 8.9% selected Level 3 (N = 15). Only three participants chose Level 2 (n = 1.8%). The results are shown in Table 29.

Table 27. Frequency of the Perceived Required Level of Pronunciation Instruction Knowledge

Level	N	%	Cum%
Level 2	3	1.8	1.8
Level 3	15	8.9	10.7
Level 4	63	37.5	48.2
Level 5	64	38.1	86.3
Level 6	23	13.7	100.0
Total	168	100.0	

4a. What is the gap between the self-reported level of knowledge and the level ESL teachers think is required to teach pronunciation?

Mean Difference. The results generated by a paired t-test showed that there was a statistically significant mean difference (Mean difference = .665) between the self-reported level and the level teachers think is required to teach pronunciation. The statistical data indicated the difference was significant, t (167) = 6.993, $p < .001$, $d = .54$. The participants reported higher ratings on their self-reported level of knowledge (M = 5.18, *SD* = .92), but lower ratings on the required level (M = 4.53, *SD* = .902). The results are shown in Tables 30 and 31.

Table 28. Paired Samples Statistics of Knowledge of Pronunciation Instruction

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Self-Reported Level	5.18	168	.920	.071
	Required Level	4.53	168	.902	.070

Table 29. Paired Samples Test of Knowledge of Pronunciation Instruction

		Paired Differences					t	df	Sig. (2-tailed)
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper			
Pair 1	Self-Reported Level - Required Level	.655	1.214	.094	.470	.840	6.993	167	.000

4b. How do native English-speaking teachers and non-native English-speaking teachers compare?

Self-Reported Level of Knowledge. The average rating of the NESTs' self-reported level of pronunciation instruction knowledge was 5.35 (SD = .864). Over half of the NESTs rated their level at Level 6 (N = 67, n = 53.6%). 34.4% of them believed their level at Level 5 (N = 43). 6.4% perceived their level at four (N = 8), 4.8% Level 3 (N = 6), and 0.8% Level 2 (N = 1). In contrast, the average rating of the NNESTs' self-reported level of pronunciation instruction knowledge was 4.73 (SD = .924). 29.5% of them believed their level at Level 6 (N = 13). Seven participants selected Level 5 (n = 15.9%). Over half of the NNESTs perceived their level at Level 4 (N = 25, n = 52.3%). Only one participant chose Level 3 (2.3%). The results are shown in Table 32.

Frequency of the Self-Reported Level of Pronunciation Instruction Knowledge

Teacher Group		N	%	Cum%
NESTs	Level 2	1	.8	.8
	Level 3	6	4.8	5.6
	Level 4	8	6.4	12.0
	Level 5	43	34.4	46.4
	Level 6	67	53.6	100.0
	Total	125	100.0	
NNESTs	Level 3	1	2.3	2.3
	Level 4	23	52.3	54.5
	Level 5	7	15.9	70.5
	Level 6	13	29.5	100.0
	Total	44	100.0	

Mean Difference. Independent *t* tests were performed to compare the mean differences between the two groups of teachers' self-reported level of pronunciation instruction knowledge. The difference between the means of NESTs (M = 5.35, SD = .864) and NNESTs (M = 4.73, SD = .924) was .62. The results showed that this difference was statistically significant. The results are sßåhown in Table 33.

Table 30. Comparison of NESTs and NNESTs on the Self-Reported Level of Pronunciation Instruction Knowledge (N = 125 NESTs and 44 NNESTs)

Variable	*M*	*SD*	*Mean Difference*	*t*	*df*	*p*
Self-reported level of Pronunciation Instruction Knowledge			.62	4.051	167	.000
NESTs	5.35	.864				
NNESTs	4.73	.924				

Furthermore, the research also compared the mean differences between NESTs' and NNESTs' self-reported level of knowledge of segmentals, suprasegmentals and instructional strategies. The hypothesis was that there were differences. One-way MANOVA was employed and the results showed that there were differences. The differences between NESTs and NNESTs

on the self-reported level of knowledge of the three aspects of pronunciation instruction was statistically significant, F (3, 165) = 14.39, Pillai's Trace = .207, $p < .001$. As a follow-up test, the independent *t* test was employed to investigate the differences and whether the differences were statistically significant.

Mean Difference in Self-Reported Level of Knowledge of Segmentals, Suprasegmentals and Instructional Strategies between NESTs and NNESTs. The results showed that there were statistically significant differences. The mean scores of the self-reported level of segmental, suprasegmental knowledge and knowledge of instructional strategies rated by NESTs (M = 5.33, SD = .831; M = 5.52, SD = .789; M = 5.15, SD = 1.063) were higher than the scores rated by the NNESTs (M = 4.84, SD = 1.01; M = 54.70, SD = .878; M = 4.68, SD = .934). The difference between the means of segmental knowledge was .487, t (167) = 3.156, $p = .002$. The difference between the means of suprasegmental knowledge was .815, t (167) = 5.723, $p < .001$. The difference between the means of instructional strategies was .47, t (167) = 2.601, $p = .01$ The results are shown in Table 34.

Table 31. Comparison of NESTs and NNESTs on the Self-Reported Level of Segmental, Suprasegmental and Instructional Knowledge (N = 124 NESTs and 44 NNESTs)

Variable	*M*	*SD*	*Mean Difference*	*t*	*df*	*p*
Self-reported level of Segmental Knowledge			.487	3.156	167	.002
NESTs	5.33	.83				
NNESTs	4.86	.765				
Self-reported level of Suprasegmental Knowledge			.815	5.723	167	.000
NESTs	5.52	.789				
NNESTs	4.70	.878				
Self-reported level of Instructional Strategies Knowledge			.470	2.601	167	.010
NESTs	5.15	1.063				

NNESTs	4.68	.934

Perceived Required Level of Knowledge. The average rating of the NESTs' perceived required level of pronunciation instruction knowledge was 4.41. (SD = .92). 20.1% of NESTs (N = 15) selected Level Six. Level Five were selected by 32.3% of them (N = 40). Level Four was chosen by 42.7% of NESTs (N = 53) as the required level for effective pronunciation instruction. 10.5% of them believed that Level Three was required and three NESTs (N = 2.4%) chose Level Two. The NNESTs had different results. The average rating of the NNESTs' perceived required level of pronunciation instruction knowledge was 4.86 (SD = .765). Level Six was selected by 18.2% of the NNESTs (N = 8) as the required level. Over half of the NNESTs (N = 24) selected Level Five as the required level to teach pronunciation effectively. 22.7% of them (N = 10) believed that Level Four should be required. Only two participants (n = 4.5%) selected Level Three. The results are shown in Table 35.

Table 32. Frequency of the Required Level of Pronunciation Instruction Knowledge

Teacher Group		N	%	Cum%
NESTs	Level 2	3	2.4	2.4
	Level 3	13	10.5	12.9
	Level 4	53	42.7	55.6
	Level 5	40	32.3	87.9
	Level 6	15	12.1	100.0
	Total	124	100.0	
NNESTs	Level 3	2	4.5	4.5
	Level 4	10	22.7	27.3
	Level 5	24	54.5	81.8
	Level 6	8	18.2	100.0
	Total	44	100.0	

Mean Difference. Independent *t* tests were performed to compare the mean differences between the two groups of teachers perceived required level of pronunciation instruction knowledge. The difference between the means of NESTs (M = 4.41, SD = .92) and NNESTs

(M = 4.86, SD = .765) was .45. The results showed that this difference was statistically significant. results are shown in Table 36.

Table 33. Comparison of NESTs and NNESTs on the Perceived Required Level of Pronunciation Instruction Knowledge (N = 127 NESTs and 45 NNESTs)

Variable	*M*	*SD*	*Mean Difference*	*t*	*df*	*p*
Self-reported level of Pronunciation Instruction Knowledge			-.45	-2.922	166	.004
NESTs	4.41	.92				
NNESTs	4.86	.765				

Four non-native English-speaking participants rated their self-reported level of pronunciation instruction knowledge lower than the level they believed was required to teach pronunciation effectively. They believed that, as ESL teachers, they should achieve a higher level of knowledge to teach pronunciation effectively and properly. However, they did not think that they reached the required level due to a lack of professional training/education in the area of pronunciation.

Marie's rating on her level of knowledge was lower than the level she thought was required to teach pronunciation. She was asked to provide reasons. She explained:

> There wasn't a lot of pronunciation training in my TESL program. There definitely wasn't a lot of pronunciation teaching when I learned in class. So, a lot of what I do now, and what I know now, you know, are just to read articles. I've read blog posts, but that's not scientific. I don't consider it scientific. I think, you need to be equipped with sufficient pronunciation knowledge to teach it effectively. However, I don't think

> I reach the level yet. I hope that there is more training of pronunciation because it is very important.

Three NESTs and one NNESTs reported higher ratings on their self-reported level of knowledge than the required level of knowledge. Two reasons were given. Firstly, the level of knowledge is not the only standard for effective pronunciation teaching. Pronunciation learning and teaching experience also play important roles. Secondly, students' needs decide what level of teachers' knowledge is sufficient.

Helen (NEST) indicated her level was higher than the level she thought was required to teach pronunciation effectively. She explained that her high level of knowledge came from comprehensive education and training regarding pronunciation. However, she did not think that it was necessary for teachers to reach the highest level:

> Teachers might want to pursue the higher level of knowledge, but, I think it's adequate if teachers only have medium level of knowledge. To teach pronunciation effectively, it's not only about how much knowledge you know but also your experience, like, teaching and learning experience.

Jenn (NEST) suggested that the level required to teaching pronunciation depended on what level of the learners and teachers' level should be higher than their students'. She did not believe that reaching the highest level was necessary for ESL teachers.

> I think that there are more challenges with teaching pronunciation TESL than ESL and academic preparation classes. You know the pronunciation in ESL classes are for the usage and the immediate application. But, TESL is so technical. I mean, as you mentioned before, I ended up getting a lot of … I guess it's objection and attitude about international phonemic alphabet. Why do we need to know this? Why is it

> important? Native speakers, especially, get frustrated because they don't know it and they can't see the value until it's explained to them. This is very technical. I would say, if you want to be a trainer, for sure you need a very high level of such knowledge, but if you're teaching regular ESL classes, then your level should be higher than your students. There's no need to reach the highest level all the time.

Aadila's (NNEST) self-reported level was higher than her perceived required level. She was asked about the reason. Reasons are described below:

> I don't think you need to be at the highest level to teach it effectively. You can have some knowledge and still teach good pronunciation. Some teachers might prefer "the higher the better", but I think medium level is sufficient, because the students I'm teaching now do require a high level of pronunciation knowledge.

Along with the comparison of the perceived required level of pronunciation knowledge between native English-speaking and NNESTs, the current study also compared the two groups of teachers' ratings on the three aspects of pronunciation knowledge: segmentals, suprasegmentals, and instructional strategies.

One-way MANOVA was employed to investigate whether there were statistically significant differences. The results showed that there were statistically significant differences, $F(3, 164) = 7.197$, Pillai's Trace = .116, $p < .001$. In order to gain knowledge of the differences in those three aspects between two groups of teachers, independent *t* tests were employed.

Mean Difference in Perceived Required Level of Knowledge of Segmentals, Suprasegmentals and Instructional Strategies between Two Groups of Teachers. The results showed that there were statistically significant differences. The mean scores of the perceived required level of segmental, suprasegmental knowledge and knowledge of instructional

strategies rated by NESTs (M = 4.32, SD = .942; M = 4.45, SD = .982; M = 4.44, SD = 1.023) were lower than the scores rated by the NNESTs (M = 4.89, SD = .784; M = 5.20, SD = 1.002; M = 4.84, SD = .713). The difference between the means of segmental knowledge is - .564. The results showed that the difference was statistically significant, t (166) = -3.556, $p < .001$. The difference between the means of suprasegmental knowledge is -.753. The results showed that the difference was statistically significant, t (166) = - 4.345, $p < .001$. The difference between the means of instructional strategies is -.397. The results showed that the difference was not statistically significant, t (166) = - 2.378, $p = .019$ The results are shown in Table 37.

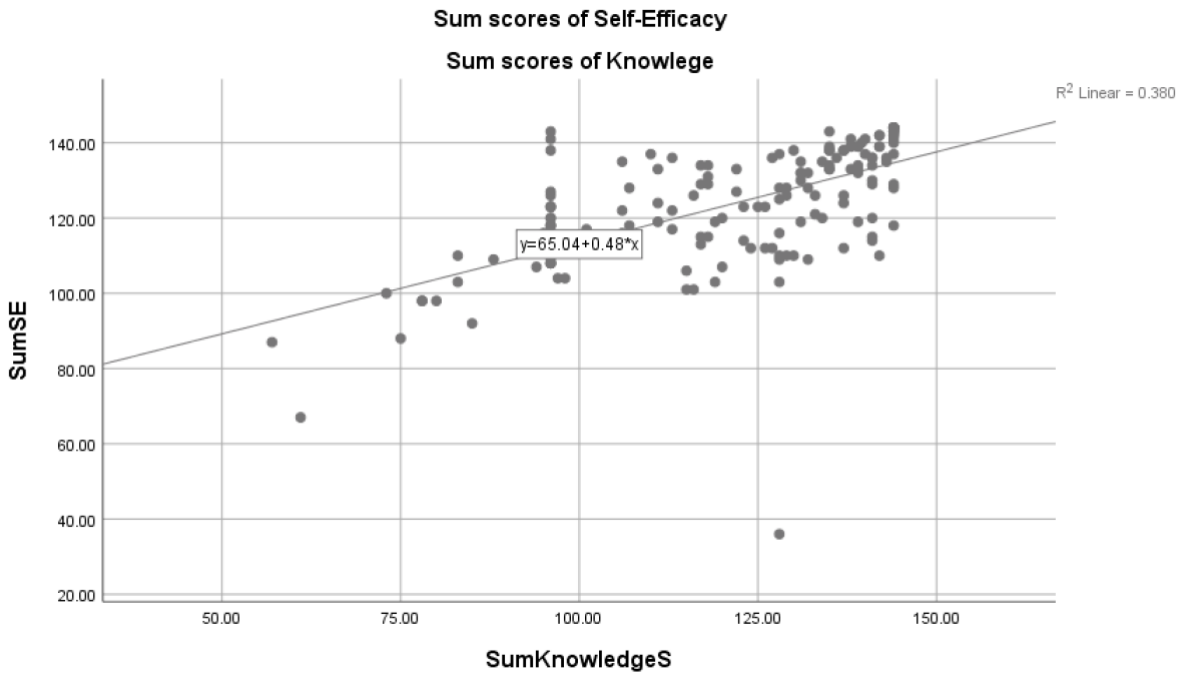
Table 34. Comparison of NESTs and NNESTs on the Perceived Required Level of Segmental, Suprasegmental and Instructional Knowledge (N = 124 NESTs and 44 NNESTs)

Variable	*M*	*SD*	*Mean Difference*	*t*	*df*	*p*
Required level of Segmental Knowledge			- .564	3.156	166	.002
NESTs	4.32	.942				
NNESTs	4.89	.784				
Required level of Suprasegmental Knowledge			-.753	5.723	166	.000
NESTs	4.45	.982				
NNESTs	5.20	1.002				
Required level of Instructional Strategies Knowledge			-.397	2.601	166	.019
NESTs	4.44	1.023				
NNESTs	4.84	.713				

4c. Is there a relationship between ESL teachers' self-reported knowledge of pronunciation and their confidence in teaching pronunciation?

The study assumed that there was a correlation between the self-reported knowledge and their confidence in teaching pronunciation. Preliminary analyses showed that relationship to be linear with outliers (See Figure 1). The results proved that the assumption was true: there was a strong positive correlation.

Figure 1. Scatter plot of Self-Efficacy and Perceived Level of Knowledge of Pronunciation Instruction



Spearman's rho correlation. There was a strong positive correlation (r = .68) between self-efficacy in pronunciation instruction and self-reported knowledge of pronunciation instruction, r (163) = .68, p < .001. Table 6 showed that participants' self-efficacy in pronunciation instruction and their self-rated knowledge of pronunciation teaching were significantly correlated. The results are shown in Table 38.

Table 35. Correlation Between Self-Efficacy and Knowledge of Pronunciation Instruction

		Self-Efficacy	Knowledge
Self-Efficacy	Correlation Coefficient	1.000	.680**
	Sig. (2-tailed)	.	.000
	N	196	165
Knowledge	Correlation Coefficient	.680**	1.000
	Sig. (2-tailed)	.000	.
	N	165	166

** Correlation is significant at the 0.01 level (2-tailed).

All the interviewees stated that their level of knowledge had an impact on their confidence teaching pronunciation. They explained that knowing what to teach brought confidence to them; otherwise, they felt insecure to demonstrate knowledge they were not sure of to their students, which led to unwillingness to teaching it.

Aadila (NNEST) said: "Because you cannot teach what you don't know. If I know it, if I'm, if I have more training or knowledge, I will have better confidence, and I would be more equipped to actually teach better."

Paolo (NNEST) indicated that his knowledge definitely impacted his confidence. He explained as below:

> I have the information, but it doesn't mean I don't have any questions. I'll try my best to get the answers. I think I'm confident to what I do again. There are some areas of pronunciation that, for example, I haven't studied too much, so I don't feel too comfortable teaching on pronunciation. I would like to take more courses or more training pronunciation to teach a class.

Marie (NNEST) believed that the knowledge of pronunciation affected her confidence in teaching pronunciation.

> The more you know, the better you can teach. If you know where to find answers to pronunciation problems, then you're going to be better. And you can find your things, you can find your activities. You know, different students have different problems, and you can find answers to different problems. You know, the more knowledge you have, the higher your confidence is.

5. What are the self-reported practices of ESL teachers regarding pronunciation instruction?

The information obtained from the survey provided a general image of self-reported teaching practices and issues that ESL teachers have in class, including frequency of pronunciation teaching, aspects of pronunciation instruction, general teaching approaches, activities and assessment methods used, teaching and learning goals, as well as teaching and learning issues.

a. *Frequency of pronunciation teaching.* The participants were asked to report how often they taught pronunciation in class from "never" to "always". The results showed that the majority of the participants (N = 79, n = 32.9%) taught pronunciation very often; 26.3% (N = 63) answered "sometimes" and 17.5% (N = 42) said "always". Only 0.4% (N = 1) said "never" and 8.3% (N = 20) answered "rarely". The results are shown in Table 39. Thirty-five comments (n = 15.5%) were categorized into two sections: teaching pronunciation as the issue arises; and integrating teaching into tasks. Two instructors mentioned that they did not teach pronunciation in class very often due to limited time in class for pronunciation.

Table 36. Frequency of Pronunciation Teaching

Frequency	N	%
Very often	79	32%
Sometimes	63	26.3%
Always	42	17.5%
Rarely	20	8.3%
Never	1	0.4%
Other	35	15.5%

b. *Aspects of pronunciation instruction.* The participants were asked what aspects of pronunciation instruction they preferred to teach in class. One hundred and seven participants (n = 44.6%) selected suprasegmental instruction, and 85 ESL teachers (n = 35.4%) preferred to teach segmentals in class. Only 48 participants (n = 20%) left

comments in this section. Forty-six of them (n = 19.17%) indicated that they taught both in class. Two participants (n = 0.83%) indicated that they did not have preference due to the curriculum and teaching materials.

Table 37. Aspects of Pronunciation Instruction

Aspects	N	%
Suprasegmental Instruction	107	44.6%
Segmental Instruction	85	35.4%
Both	46	19.17%
No Preference	2	0.83%

c. *General teaching approaches.* The participants were asked to select their general approaches to pronunciation teaching. They were allowed to check one or more that applied to them. 821 responses were received from 240 participants. 85.4% of the respondents indicated that they taught specific pronunciation features (N=205). 78.3% of the respondents selected "integrate pronunciation instruction into general teaching" (N=188). 59.2% of the respondents chose "I use extra resources to work on common problematic features for learners" (N = 142). 55.4% stated that they regularly corrected mispronunciation (N = 133). 45.4% of the respondents indicated that they work on pronunciation activities presented in the textbook (N = 109). Thirty-five participants left comments in this section. Their comments were categorized into the following sections: 1) focusing on errors that students learned before (N = 4, n = 11.42%); 2) focusing on stress, syllables, and intonation (N = 5, n = 14.29%); 3) addressing the issues based on students' L1 (N = 10, n = 28.58%); 4) designing activities and exercises (N = 3, n = 8.57%); 5) teaching pronunciation based on students' level (N = 5, n = 14.29%); 6) teachings pronunciation by using the similar sounds of students' L1 (N = 3, n = 8.57%); and 7) correcting pronunciation when it comes to comprehensibility (N = 5, n = 14.29%).

General Teaching Approaches

Approaches	N	%
Teach Specific Pronunciation Features	205	85.4%
Integrate Pronunciation Instruction into General Teaching	188	78.3%
Use Extra Resources to Work on Common Problematic Features	142	59.2%
Regularly Corrected Mispronunciation	133	5.4%
Work on Pronunciation Activities Presented in The Textbook	109	45.4%
Focusing on Errors That Students Learned Before	4	11.42%
Focus on Stress, Syllables, And Intonation	5	14.29%
Address the Issues Based on Students' L1	10	28.58%
Design Activities and Exercises	3	8.57%
Teach Pronunciation Based on Students' Level	5	14.29%
Teach Pronunciation by Using the Similar Sounds of Students' L1	3	8.57%
Correct Pronunciation When It Comes to Comprehensibility	5	14.29%

d. *Activities and assessment methods used*. Comments were written in this section by the participants. 219 participants answered the kinds of activities they were using in class to teach pronunciation, such as minimal pairs, choral reading, imitation, repetition, tongue twisters, drills, dictations, shadowing, chanting, songs, videos, games, IPA analysis, word/sentence stress and rhythm analysis, etc. Repetition was commonly mentioned (40 times) by the participants, followed by reading aloud 35 times, word/sentence analysis mentioned 30 times, and minimal pairs mentioned 27 times. Drills were mentioned 20 times. Tongue twisters were mentioned 15 times. Using IPA/raising phonemic awareness was mentioned 12 times. One participant mentioned that explicit pronunciation teaching was not applied at the advanced level in his/her class.

216 comments were collected regarding assessment methods used in class. Forty-five participants (n= 20%) indicated that comprehensibility was their assessment method of pronunciation. Forty-seven participants (n= 21.76%) indicated that they assessed students' pronunciation outcomes by providing feedback, including taking notes, recording

speeches, correcting specific features, using assessment tools (e.g. Canadian Language Benchmark, IELTS), etc. Twenty-six participants (n= 12%) stated that students' pronunciation production was assessed through in-class discussion, presentations, speaking tests, and other types of speaking activities. Five participants (n= 2.31%) indicated that they only provided informal assessment to students. Those activities were mainly implicit and informal because the participants did not want to interrupt their students' speaking or discourage them. Twelve of the participants (n= 5.56%) reported that formal assessment was implemented because that was part of the curriculum. Twenty-six participants (n= 12.04%) indicated they provided formal and informal assessment methods regularly. Twenty participants (n= 9.26%) indicated that they assessed students by listening for improvement. Eighteen participants (n= 8.33%) stated that they assessed specific features that were problematic for students. Seventeen participants (n= 7.87%) reported that they did not assess students' learning outcomes due to a lack of guidelines, benchmarks, or knowledge.

e. *Teaching and learning issues in class.* 214 responses were collected regarding which aspects of pronunciation were the most difficult to teach. Comments written by the participants were grouped into three aspects: segmentals, suprasegmentals and other issues. Difficulties at the suprasegmental level were mentioned 66 times, including intonation, rhythm, word/sentence stress, connected speech, linking, etc. Difficulties at the segmental level were mentioned 54 times, including vowels (20 times), individual sounds (15 times), consonants (12 times), etc. Among these responses, 10 participants (n = 4.67%) specifically mentioned that vowels, individual sounds, and consonants that did not exist in students' L1 were challenging to teach. 20 participants (n = 9.35%)

mentioned that applying phonetic symbols and raising phonemic awareness were the most difficult aspects. 15 participants (n = 7.01%%) indicated that they did not have difficulties teaching pronunciation. 11 comments (n = 5.14%) stated that tongue placement was an issue because it was difficult for teachers to show where the tongue should place and difficult for students to see it as well. The other difficulties include correcting fossilized errors/language (5 times), encouraging students to speak (4 times), providing feedback (6 times). Participants also mentioned that age was a challenge for both teachers and students, that students' levels caused various difficulties, and that meeting the needs and the lack of the curriculum caused the most difficulties. One participant stated that she/he had all the difficulties and needed training in this area.

199 responses were collected regarding what were the most serious pronunciation issues they had experienced as a teacher. Interference from students' L1 was considered as the most serious pronunciation issues the participants had experienced as a teacher and was mentioned 56 times. This issue included that it was very difficult to teach individual sounds that do not exist in students' L1 systems, that teaching students whose L1 had similar words to English, etc. Suprasegmental features, such as intonation, rhythm, linking, word/sentence stress, were mentioned 50 times. Segmental features including consonants and vowels were mentioned 35 times. Students' ability of hearing differences between words was mentioned 17 times. Not understanding students' speech were mentioned 15 times. Two participants mentioned that their own accent was the most serious issues they had experienced. 12 participants (n = 6.03%) indicated that they did not experience any serious issue while teaching pronunciation and two participants wrote N/A. Ten participants (n = 5.03%) stated that physically showing students how to

produce individual sounds was very difficult because their students couldn't find the right muscles to produce specific sounds and they did not have systematic solutions to help. The other issues included students' attitude toward pronunciation learning, lack of professional development, limited time in class, learning disabilities, medical conditions, setting learning and teaching goals, etc. One of the participants commented that her/his Indonesian student who had numerous problems with segmental and suprasegmentals needed one on one pronunciation practice, but there was no time to do that in class. Furthermore, three teachers expressed that setting learning and teach goals were difficult due to the variety of students' needs. One participant stated that students with different English abilities in the same class was the most serious issue she/he had experienced. Some of them pursued "good" accents while some were still working on intelligibility and comprehensibility. Four participants explicated that unwillingness by funders and administrators to devote time and money to pronunciation, a lack of teaching materials and curriculum, and the limited class time caused difficulties when they applied their teaching skills in class.

Chapter 5: Discussion and Conclusion

5.1 Discussion

The results of this study revealed that, overall, ESL teachers in Canada reported high levels of self-efficacy in pronunciation instruction, high levels of language and pronunciation proficiency, and high levels of pronunciation instruction knowledge. NNESTs reported higher levels of self-efficacy in pronunciation instruction when compared to NESTs. This finding contradicts the common assumption that native English speakers are more proficient and therefore more confident teachers. In addition, NNESTs reported higher ratings on the required levels of language and pronunciation proficiency and pronunciation instruction knowledge, while NESTs reported lower ratings would be sufficient for teaching pronunciation Furthermore, the results also showed that ESL teachers' language proficiency did not correlate with their self-efficacy in pronunciation instruction, but ESL teachers' pronunciation proficiency and knowledge of pronunciation instruction correlated with their self-efficacy in pronunciation instruction. This finding is noteworthy because many studies have shown that English language teachers' language proficiency correlates with their self-efficacy (e.g. Chacon, 2002;2005; Eslami and Fatahi, 2008 Ghasemboland & Hashim; Lee, 2009; Yilmaz, 2011).

1. *What are the levels of self-efficacy among ESL teachers for pronunciation instruction?*

Unlike the studies indicating that teachers lack the confidence to teach pronunciation and choose to ignore it (Baker, 2011; Foote, Holtby, & Derwing, 2011; Fraser, 2000; Macdonald, 2002), ESL teachers surveyed in Canada in the current study showed a strong confidence in teaching pronunciation in Canadian classrooms. The interviewees elaborated on their confidence and strong desire for teaching it in class. They mostly believed that pronunciation instruction was an essential part of ESL teaching and learning. However, they also indicated that their

confidence was based on certain conditions and factors. Firstly, their education was a main factor in boosting their confidence. This finding was also reported by Buss (2016) who indicated that one of the reasons that the participants of her study were confident was the training in pronunciation received by the participants. The second reason for participants' confidence was their pronunciation teaching experiences. Faez and Valeo (2012) have also suggested that actual teaching experience was influential to teachers' self-efficacy. Similarly, Ghaith and Shaaban (1999) also reported that the more years teachers had taught, the more confidence they had in their ability to teach.

1a. How do Native English-speaking teachers and non-native English-speaking teachers compare?

In the current study, both NESTs and NNESTs were confident teaching pronunciation. The reasons given for this confidence shared commonalities. Firstly, education and training helped. Darling-Hammond, Chung and Frelow (2002) also showed that teachers' preparedness was correlated with their self-efficacy. Secondly, pronunciation teaching was a small segment of the ESL courses. With regard to this condition, there is a lack of literature related to whether the amount of content teaching was a factor that influenced teachers' self-efficacy.

Surprisingly, NNESTs reported higher ratings on their self-efficacy in pronunciation instruction when compared to NESTs. Non-native English-speaking interviewees indicated that their confidence in teaching pronunciation came from their own L2 learning experience. Similarly, Murphy (2014b) demonstrated that NNESTs feel confident in teaching pronunciation due to their own L2 learning experience. In addition, many NNESTs have formally studied phonetics including the phonetic alphabet, whereas many NESTs may have little experience with explicit learning about the phonetic alphabet. This finding is in line with findings of Buss'(2016)

study where almost all of the non-native English-speaking participants had received education in phonetics and phonology, and tended to apply what they learned to their pronunciation teaching.

However, some NNESTs indicated their insecurity related to teaching pronunciation due to their accents. One reason for this may be that teachers with a perceived "foreign accent" have experienced negative student reactions (Mayuzumi, 2015). This result contradicted the results from Buss's (2016) study where EFL teachers did not believe that heavy accents were a problem because NNESTs working in an EFL setting were less likely to encounter "situations in which they suffer discrimination because of their accents" (p. 633).

Compared to NNESTs, NESTs' confidence came from their L1. Native English-speaking interviewees stated their L1 contributed to their confidence because they had no concern about how to use their own language. Arva & Medgyes (2000) also reported that "the primary advantage attributed to NESTs lies in their superior English-language competence" (p. 361).

2. *What are the self-reported levels and self-rated required levels of language proficiency and pronunciation proficiency among ESL teachers?*

Self-reported Level of Language/Pronunciation Proficiency

The findings showed that over half of the participants indicated that their language and pronunciation proficiency were at Level 5 to Level 6. The average of the participants' self-reported level of language was 5.81 (SD = .725), and pronunciation proficiency was 5.82 (SD = .657). The interviewees explained that they had to have a certain level of language proficiency to teach their classes. The Canadian context may have influenced these results. In Canada, under current English language policies, all the teachers are required to have certification to teach English for the majority of programs, and the certification requires a minimum IELTS level of 7

in each skill (TESL Canada, n.d.; TESL Ontario, n.d.). This may explain why ESL teachers in Canada reported high levels of proficiency.

Perceived Required Level of Language/Pronunciation Proficiency

The participants were also asked to rate the level they believed was required to teach pronunciation effectively. Surprisingly, the highest level was not the choice of most of the participants. The average level of the participants' ratings on required level of language proficiency was 5.07 (SD = 1.339), and pronunciation proficiency was 5.15 (SD = 1.343). The interviewees explained that teachers needed to have a certain level of proficiency, but the level did not have to be the highest. Some stated that teachers should have a higher level than their students which would enable them to be understood by their students.

Yet, when comparing the perceived level and required level of proficiency in an EFL context, Butler (2004) reported results that were opposite to the results generated by the current study in an ESL context. Butler (2004) found that participants' perceived level of English proficiency was lower than the level they believed necessary to teach pronunciation.

2a. What is the gap between self-ratings of teachers on language proficiency and pronunciation proficiency and the level they think is required to teach it effectively?

The results suggested that there was a gap between the self-reported level and the required level of both language and pronunciation proficiency. The test results showed that the self-reported level of proficiency was higher than the required level of proficiency. Butler's (2004) EFL study showed that there were gaps between teachers' self-perceived English proficiency and the level needed to teach. However, the difference between the self-perceived level and the needed level in the current study is different from Butler's study. Based on the data generated by Butler (2004), the self-perceived levels were lower than the desired levels, while

the current study showed the self-perceived levels were higher than the desired levels. This difference may be explained by the fact that the studies were conducted in different contexts as the current study was conducted in an ESL context but Butler's study was done in an EFL context.

2b. How do native English-speaking teachers and non-native English-speaking teachers compare?

The findings showed that NESTs' self-reported levels of language and pronunciation proficiency were higher than those of NNESTs. Some NESTs indicated that they had no problems explaining themselves clearly to students or helping students with their pronunciation issues because English was their first language, whereas some non-native English-speaking interviewees stated that they were worried about teaching pronunciation in their second language, even though they felt confident in their overall pronunciation teaching abilities. The idea that NNESTs tend to have concerns about teaching pronunciation in their second language is supported by a study conducted by Richardson, McBey, & McKenna (2006). A potential reason for these findings may be students' attitudes toward NESTs and NNESTs. Walkinshaw and Duong (2014) showed that 60% of the students in their studies perceived pronunciation as an advantage of NESTs and 60% of them perceived "poor" pronunciation as a disadvantage of NNESTs.

When it came to the level participants believed was required to teach pronunciation, NNESTs reported higher levels were required compared to NESTs. Some native English-speaking interviewees expressed that, for a regular ESL class, teachers did not have to reach a very high level as long as teachers could explain themselves clearly to their students. In addition, native English-speaking interviewees believed that extra materials and activities would make up for lower language proficiency. In contrast, NNESTs believed that they were qualified to teach

pronunciation, but it would improve their pronunciation teaching performance if they continued to improve their own English pronunciation. This fits the assumption of many in the English language teaching profession that NNESTs are able to teach English if they improved "their mastery of English" (Richards, 2017, p. 8).

3. *Is there a relationship between ESL teachers' self-ratings on language proficiency/pronunciation proficiency and their level of self-efficacy in pronunciation teaching?*

The findings showed that ESL teachers' language proficiency was not related to their self-efficacy in teaching pronunciation, unlike the studies that showed that teachers' language proficiency was correlated with their teaching efficacy (Chacon, 2002; 2005; Eslami and Fatahi, 2008 Ghasemboland & Hashim; Lee, 2009; Yilmaz, 2011). The difference may be due to 1) different contexts; and more importantly 2) the specific focus. Firstly, the current study was conducted in an ESL context, while other studies were conducted in an EFL context. Secondly, the current study surveyed ESL teachers' language proficiency regarding pronunciation instruction specifically, while other studies focused on overall language proficiency. This is an important distinction noted by Manh, Hoa, and Burn who indicated that teachers attaining language proficiency did not mean they could "effectively use English for teaching purposes" (as cited in Freeman, 2017, p. 47).

The findings of the interviews clarified the current survey results. The interviewees stated that teaching pronunciation did not rely heavily on language proficiency. Activities and extra materials would make up for lower language proficiency. Moreover, to be ESL teachers, they had already reached a high level of language proficiency to teach. Therefore, they did not feel that language proficiency was affecting their current pronunciation teaching ability in class. Such results are different from some studies that showed that NNESTs' teaching practices were

influenced by their perceptions of language proficiency (Chacon, 2005; Eslami & Fatahi, 2008; Horwitz, 1996).

Although ESL teachers' language proficiency did not correlate with their self-efficacy, their pronunciation proficiency was positively correlated to teachers' self-efficacy. Interview results supported this finding. Participants explained that teachers should be models for their students because learners were coming to learn correct pronunciation. This can lead to insecurity for some teachers. These results echoed the findings of Murphy (2014b) who pointed out that NNESTs did not feel confident in teaching pronunciation due to insecurity related to their own pronunciation. Unfortunately, there is a lack of research related specifically to NESTs' views on their own pronunciation, which makes it difficult to compare them to the views of NNESTs.

4. What level of knowledge do ESL teachers report they have, and what level do they need for effective pronunciation instruction?

Pronunciation experts point out that knowledge of phonology and knowledge of techniques and approaches for teaching pronunciation are especially important for teachers to teach pronunciation (Baker, 2011).

In the current study, findings show that more than 50% of the participants reported their level of knowledge at Level 5 out of 6 or above. The average level of self-reported knowledge was 5.19 (SD = .919). However, it is interesting to note that more than half of the participants believed that Level 4 or above was required to teach pronunciation, which was lower than their perceived level of knowledge. The average level of the required level was 4.52 (SD = .902).

It appeared that the participants in this study tended to report high levels of self-perceived pronunciation knowledge. Also, the interviewees still expressed their desires for

more professional training in pronunciation. For example, some teachers interviewed believed the International Phonetic Alphabet (IPA) would definitely help their students with decoding and producing sounds, but they did not have much knowledge regarding how to use it in the classroom. Teachers indicated that the more knowledge they had about the different aspects of pronunciation, the more confidence they would have teaching those aspects.

Moreover, the teachers interviewed explained that although they were equipped with enough knowledge to teach pronunciation in general, they felt that their knowledge was insufficient when it came to the specific aspects of teaching pronunciation, such as providing feedback, assessing learners' progress, and so on. This is significant because as Kenworthy (1987) and Morley (1994) noted, it is important to understand how to provide feedback, set pronunciation priorities, assess progress, etc. (as cited in Baker, 2011).

In addition to exploring the participants' self-rated level and perceived required level of pronunciation instruction knowledge, this study also investigated which knowledge of pronunciation instruction received low ratings. "Knowledge of using the phonetic alphabet to teach pronunciation" received the lowest ratings. Couper (2017) showed that participants did not know how to apply the phonetic alphabet to teaching situations even though they received education on it. "Knowledge of English rhythm" was also rated low. Rhythm was also identified as a major area of difficulty in teaching pronunciation in a number of other studies (e.g. Burgess & Spencer, 2000; Derwing et al., 2012). In addition, "knowledge of diagnosing pronunciation difficulties that learners have" and "knowledge of encouraging students to self-evaluate/self-monitor their pronunciation progress" both received low ratings under the category of instructional strategies. This could be explained by teachers receiving education that mainly focuses on phonological knowledge over practical teaching skills. Other

researchers have found that teachers often receive more phonological knowledge than instructional strategies (Couper, 2017; Murphy, 1997). There is little evidence to specifically explain why the participants in this study reported low ratings on "Knowledge of diagnosing difficulties" and "Knowledge of encouraging students to self-evaluate/self-monitor their pronunciation progress".

4a. What is the gap between the self-reported level of knowledge and the level ESL teachers think is required to teach pronunciation?

Overall, participants reported that the level of their pronunciation knowledge was higher than the level they believed was required to teach pronunciation effectively. Studies have shown that there are gaps in knowledge between what ESL teachers want to know and the knowledge they have (Burns, 2006; Couper, 2017; Foote et al., 2016; Henderson et al., 2012; Murphy, 2014a). However, those studies indicated that what teachers wanted to know was, in fact, often more than the knowledge they possessed, which contradicts the results shown by the current study.

Qualifications for teaching ESL in Canada may be a factor in the differences between the current study and the studies listed above. Firstly, to teach ESL at Languages Canada certified schools, ESL teachers are required to hold TESL certification. These certification courses must be "equivalent to 100 hours of methodology and 20 hours of practicum in institutions offering TESL training" (Languages Canada, p.12). Over half of the participants in the current study have TESL certifications. Since TESL training covers pronunciation teaching, participants may feel that their training provides enough knowledge to teach pronunciation in their classes. Secondly, most teachers were native English speakers and others who were NNESTs were highly proficient teachers, not only by their self-reports but also by the

requirements of their teacher certification. In order to have certification to teach English in Canada. TESL Canada and TESL Ontario require overall IELTS levels of 7 with a minimum 7 in each skill area (TESL Canada, n.d.; TESL Ontario, n.d.). These high standards may explain why both NESTs and NNESTs reported high levels of pronunciation knowledge.

Another factor that could explain the difference in results between the current and previous studies may be that curriculum and materials do not require much effort on teaching pronunciation due to a lack of focus on pronunciation instruction. Derwing, Dipenbroek, and Foote (2012) revealed that there was only a range of 0.4% to 15.1% of the coverage of pronunciation topics in 48 L2 textbooks and six teachers' manuals. This could suggest that curriculum does not require teachers to have high level of pronunciation instruction knowledge to teach the content, therefore they felt their knowledge of pronunciation instruction was sufficient to teach.

4b. How do native English-speaking teachers and non-native English-speaking teachers compare?

The findings showed that the average level of the NESTs' self-reported pronunciation instruction knowledge was higher than the average level of the NNESTs' self-reported knowledge. With regards to the required level of teaching pronunciation, the average level of knowledge that NESTs believed was required was lower than the average level of knowledge the NNESTs reported.

The current study also compared the levels of three aspects of pronunciation instruction rated by NESTs and NNESTs: segmentals, suprasegmentals and instructional strategies. The findings suggest that NESTs report higher levels of knowledge of all three aspects than NNESTs. Concerning the required level of knowledge, the required levels to teach segmentals,

suprasegmentals and instructional strategies rated by NNESTs are higher than the levels rated by the NESTs. NESTs reported higher levels of knowledge of suprasegmentals, followed by segmentals and instructional strategies, while NNESTs reported higher levels of knowledge of segmentals, followed by suprasegmentals and instructional strategies. A reasonable conjecture for NESTs having higher levels of suprasegmental knowledge is that their first language affects the ratings. For example, one interviewee stated that speaking English with natural intonation and rhythm was an advantage. However, it is difficult for NNESTs because their language systems are different from the English language system. Some non-native English-speaking interviewees noted that it was challenging for them to evaluate whether their own intonation, rhythm, and stress were correct because such intonation, rhythm and stress were not part of their language systems. The knowledge of instructional strategies was rated the lowest level by both groups of teachers. As Richards (2017) stated, language teachers needed to know not only content knowledge, but also pedagogical knowledge because content knowledge did not "provide a sufficient basis for the teaching of a language" (p. 6). However, the interviewees in the current study expressed that there was not much training or education regarding how to employ pedagogical knowledge to their content teaching, such as techniques, ideas, and communication. Similar results were found in Couper (2017) and Murphy's studies (1997) that showed teachers received more phonological knowledge than knowledge of instructional strategies.

Interesting results were also found comparing the required level of three aspects rated by the two groups of teachers respectively. The NESTs believed that they needed to reach higher levels to teach suprasegmental features, followed by instructional strategies and then segmental features. The NNESTs also believed that they required higher levels of

suprasegmental knowledge. This confirms earlier studies that reported that suprasegmentals such as stress, rhythm and intonation are identified as major areas of difficulty (Burges & Spencer, 2000; Derwing et al., 2012), and teachers generally lack knowledge or confidence in teaching them (Burgess and Spencer, 2000; Derwing, 2003; Foote et al. 2011). Both NESTs and NNESTs believed that the required knowledge of suprasegmentals was higher when comparing the three aspects. The difference in the ratings between two groups of teachers was that the NNESTs thought knowledge of instructional strategies requires a higher level than knowledge of segmentals, while NESTs believed the opposite was true. It could be that NNESTs received formal education regarding segmentals in their English learning, while many NESTs may have little experience with it. As Buss (2016) stated, almost all of the non-native English-speaking participants in her study had received education in phonetics and phonology.

4c. Is there a relationship between ESL teachers' self-reported knowledge of pronunciation and their confidence in teaching pronunciation?

The survey findings showed that ESL teachers' self-reported knowledge of pronunciation was correlated with their confidence in teaching it, which is supported by the findings from the interviews. For example, one of the interviewees indicated that she did not have knowledge of how to assess the "right" or "wrong" intonation, and her solution was to avoid teaching it. Couper (2017) also showed that participants chose to ignore stress and intonation due to the lack of knowledge of how to teach those suprasegmental features.

These findings highlight the importance of pronunciation instruction knowledge. Firstly, a lack of knowledge leads to a lack of confidence (Ellis, 2009; Derwing & Munro, 2005; Foote et al,, 2011; Thomson, 2013). In order to improve teachers' confidence in

teaching pronunciation, teachers require more targeted pronunciation pre-service and in-service education. Secondly, a lack of knowledge affects teaching behaviours. For example, in MacDonald's study (2002), teachers seemed to have little useful knowledge of how to help learners' pronunciation, and therefore, were reluctant to monitor students' speech or teach pronunciation unless intelligibility was impeded.

5. What are the self-reported practices of ESL teachers regarding pronunciation instruction?

ESL teachers in Canada revealed that they often taught pronunciation in class. However, generally, they did not teach pronunciation as a stand-alone course or component. Instead, most of their pronunciation teaching was integrated into other tasks and activities due to a lack of materials and curriculum regarding pronunciation teaching and learning. Their foci were more explicit when students asked for help, but less explicit when it came to correcting students' speaking and/or giving feedback. These findings were contradicted by Buss (2016) who reported that teachers often prefer implicit rather than explicit teaching when students ask for help.

When the participants were asked to indicate which aspects of pronunciation they preferred to teach, most participants stated that they preferred to teach both segmentals and suprasegmentals in class. The same result was generated from two Canadian surveys that also showed that ESL teachers preferred to teach both segmentals and suprasegmentals (Breitkreutz, Derwing, & Rossiter, 2001; Foote et al., 2011). Some participants stated that they taught pronunciation based on students' backgrounds and class levels, not their preferences. This result was echoed by Burns (2006) who also indicated that teachers' decisions on teaching pronunciation is dependent on the "the type and level of class and the learners' language backgrounds" (p. 36).

Three main approaches to teaching pronunciation were mentioned by most of the participants. Firstly, they taught and corrected specific pronunciation features when problems arose. Secondly, they integrated pronunciation instruction into general teaching. Burgess and Spencer (2000) showed that teachers prefer to integrate pronunciation instruction into classes rather than teaching stand-alone pronunciation. Other studies showed similar results (e.g. Hinkel, 2006; Ketabi & Saeed, 2015). Thirdly, teachers used extra resources, such as videos, computer software and internet, to work on common problematic features.

Activities used by the participants varied. Their practices can be grouped into segmental activities and suprasegmental activities. Teachers tended to use segmental activities (e.g. minimal pairs, drills, etc.) more than suprasegmental activities (such as chanting, stress and rhythm analysis, etc.). Similar findings were found in Foote et al.'s study (2011) that showed that segmental activities were mentioned the most by the teachers. Concerning assessment methods, the participants' practices can be categorized as explicit and implicit assessment methods. Explicit methods include using language benchmarks, speaking tests, presentations, correcting specific features, etc. Using those explicit assessment methods is beneficial for both teachers and learners, because they are effective and transparent (Rust, Price & O'Donovan, 2003). However, such methods take time away from teaching, and also interrupt students' production flow. Therefore, implicit assessment methods should also be involved instead of solely relying on the explicit methods. Implicit assessment methods include assessing students' pronunciation by intelligibility and comprehensibility, listening by ear, peer evaluation, etc. Participants using implicit assessment explained that implicit assessment helped to encourage students to speak and save class time. Several participants indicated that they did not assess their students' pronunciation production. The reason behind

such a situation may be that assessing pronunciation is challenging for instructors (MacDonald, 2002) and "they do not have an assessment in place in pronunciation classes" (Foote, et al., 2011, p. 17).

The most mentioned pronunciation issues were suprasegmentals, followed by segmentals and instructional issues. Foot et al. (2011) also found that teachers reported segmentals and suprasegmentals were the top-rated teaching difficulties. Moreover, in Burgess and Spencer's study (2000), teachers reported that suprasegmentals were difficult to teach, even though teachers were aware of the importance of teaching them. Regarding issues of teaching segmentals, teachers reported that they were not sure which sounds should receive attention because class time was limited, and they were unable to teach everything. Similarly, Munro & Derwing (2006) indicated that it was important to know which sounds to teach but not enough class time was given to pronunciation instruction. Instructional issues reported by the participants include providing feedback, assessing students' progress, encouraging students to speak, etc. The reason for these issues may be a lack of education regarding instructional strategies. Murphy (1997) believes that teacher education programs must work to increase the application of "conceptual understanding to the teaching of pronunciation" to improve teaching skills (p. 755).

The participants also reported interference from students' L1 as an issue. For example, one comment states that "Asian students tend to struggle with vowel sounds /l/ and /r/", "Chinese students have difficulties with intonation", "Spanish students have problems with /b/ and /v/", etc. These findings are supported by a number of studies that show that teaching difficulties arise from the difference of individual learners such as their L1 (Baker, 2011;

Foote et al., 2011)., and "teachers are aware of the role that an L1 plays in pronunciation difficulties" (Thomson, 2013).

5.2 Implications

These findings have implications for professional associations, teacher education programs, teacher educators, language schools and teachers themselves.

The findings highlight the importance of being aware of ESL teachers' confidence levels in an ESL context and the factors that affect teachers' confidence. Although teachers are confident teaching pronunciation in Canada, their confidence is based on certain conditions: education/training, pronunciation teaching/learning experience, and focus of pronunciation teaching in curriculum, etc. Buss (2016) reported that teachers feel confident teaching pronunciation when they are adequately prepared to teach it. This may provide a clue to teacher education program developers to put more effort into training about how to teach pronunciation. In addition, in-service training may be necessary. Some participants indicated that in-service training would be helpful, since they did not have substantial background regarding pronunciation before they started their jobs. Furthermore, schools and professional associations should work towards reducing NNESTs' insecurity related to their accents by promoting the advantages of NNESTs and the benefits of diversities of accents, etc.

The findings also suggest that the general language proficiency scales used in this study to assess the proficiency level of teachers were inadequate. The general language proficiency scales may not reflect the actual language proficiency required to teach pronunciation. Therefore, developing new proficiency assessments specifically for ESL teachers is needed to accurately identify where ESL teachers need help with their teaching language skills. Professional

associations and schools could use the assessment results to provide specific training to improve teachers' proficiency to teach pronunciation effectively and confidently.

In addition, the findings indicate a direction for teacher educators, program developers and teachers themselves to prioritize teaching and learning goals. Firstly, it is important to bring not only "knowledge of phonology (subject matter knowledge)" but also "knowledge of techniques and approaches for teaching pronunciation (pedagogical content knowledge)" (Baker, 2011, p. 41). ESL teachers in the current study indicated their lack of pedagogical content knowledge and expressed their desires to know more. Secondly, a shifting of programs and teaching foci from segmentals to suprasegmentals should take place. Both NESTs and NNESTs indicated their need to improve their knowledge of suprasegmentals because most teacher education programs provided more segmental knowledge over suprasegmental knowledge. It is important for teachers to recognize their weaknesses and for teacher educators and programs to help teachers find solutions.

The findings also bring self-awareness to teachers regarding their levels of knowledge required to teach pronunciation. Teachers may not always be aware of the knowledge they possess to teach pronunciation effectively or the knowledge they lack. The current survey provides teachers with an awareness of what knowledge they need to know to be capable of teaching pronunciation and whether the knowledge teachers have is sufficient to teach pronunciation effectively.

Furthermore, the scales used in the current study could be used as a benchmark to evaluate teachers' self-confidence, teachers' proficiency and teachers' knowledge in class periodically to help teachers and schools to gain more insight into teacher classroom performance and attitudes toward pronunciation teaching.

5.3 Limitations

The scales of the survey turned out to be somewhat ambiguous, as some participants misinterpreted the descriptors of low levels as descriptions of high levels, which necessitated the removal. In the future, the survey could be worded more explicitly to help participants understand more easily.

In addition, the numbers of participants in the two groups of teachers differed greatly. This is mostly likely reflective of the proportion of NESTs and NNESTs in the teaching profession in Canada. The difference in numbers might have influenced the results when data were analyzed.

Teachers' actual practices and students' feedback regarding pronunciation teaching in class were not included due to a lack of classroom observation. All the responses were self-reported by the participants. Including classroom observation could help build a comparison and correlation between the self-reported teaching practices and teachers' actual teaching practices to indicate which aspects of pronunciation teachers teach in class.

Moreover, bias might have occurred when the online survey and interviews were conducted. Teachers might have overestimated or underestimated their abilities in teaching pronunciation when they responded to questions.

Generalization of findings is the primary concern with regards to establishing the quality of this proposed study. This study was conducted in an ESL context. Whether it can be generalized to an EFL context is uncertain. EFL participants may need to be included in the future to help with generalization. In addition, while the current study relied on both TESL Canada and TESL Ontario members, the majority of participants were likely to come from Ontario, which may not allow the results to be generalized to the national level.

5.4 Future Research

Future survey research in an ESL context could combine the survey from the current study with classroom observations of teachers' teaching performances and their students' reactions and feedback to teachers. In addition, to gain more detailed information, observations can be done based on students' levels since the participants in this study mentioned that their pronunciation teaching varied based on students' levels. Furthermore, surveys and observations combined with curriculum analysis could also be valuable to investigate teachers' practices and the reasons behind those practices.

Future studies can explore whether ESL teachers' majors/degrees have an impact on their beliefs, and compare the impact of majors/degrees between NESTs and NNESTs in terms of pronunciation knoweldge. For example, teachers with degrees in languages or humanities may have advanteges over teachers with degrees in the sciences.

In addition, future research can be done to investigate NESTs and NNESTs' beliefs, language proficiency/pronunciation proficiency, and level of pronunciation knowledge in an EFL context in addition to an ESL context. Furthermore, investigating NESTs' beliefs, attitudes and teaching practices in both ESL and EFL contexts would potentially be valuable since there appears to be a lack of research regarding NESTs' pronunciation teaching.

Future studies can develop more precise language and pronunciation proficiency scales that refer to teacher' proficiency that is required to teach the subject rather than "general English proficiency" (Freeman, et al., 2015, p. 129). It would be useful to have standard teachers' English language and pronunciation proficiency scales to test teachers' proficiencies to gain more precise knowledge.

Future research can investigate whether curriculum foci affects teachers' self-efficacy in pronunciation instruction. Curriculum foci vary from school to school. The level of focus on pronunciation teaching may affect teachers' self-efficacy in different ways. For instance, teachers may feel confident in a program that has less focus on pronunciation because they are not required to teach it often, but teachers may also feel confident in a program that has a high level of focus on pronunciation with appropriate support.

5.5 Conclusion

The current study examined ESL teachers' self-efficacy in pronunciation instruction in Canada. Unlike some studies indicating that teachers reported low levels of confidence (e.g. Baker, 2011; Foote et al., 2011; Fraser, 2000; Macdonald, 2002), ESL teachers surveyed in Canada in the current study showed high levels of confidence in pronunciation teaching. In addition, NNESTs reported higher level of confidence than NESTs due to education and learning experience concerning pronunciation.

The current study also investigated ESL teachers' language proficiency and pronunciation proficiency in Canada. The findings showed that there was a gap between teachers' perceived level of proficiency and the level they believed was required to teach pronunciation, and what the teachers possessed was higher than what they felt needed, which was contrary to Butler' (2014) findings. Interestingly, the results demonstrated that NNESTs believed that higher levels were needed when compared to NESTs.

Regarding ESL teachers' knowledge of pronunciation instruction, the current study showed that ESL teachers reported high levels of pronunciation instruction knowledge. NESTs reported high levels of suprasegmental knowledge, while NNESTs reported high levels of segmental knowledge, followed by the level of knowledge of instructional strategies. Both

NESTs and NNESTs felt that they were equipped with the knowledge they needed to know, but shared a desire for more training and education related to pronunciation.

The examination of the relationship between teachers' self-efficacy and language/pronunciation proficiency, and between teachers' self-efficacy and knowledge of pronunciation instruction proved to be compelling. ESL teachers' language proficiency does not correlate with their self-efficacy, but pronunciation proficiency and knowledge of pronunciation instruction do.

These findings have implications for teacher education programs, teacher educators, program developers, professional associations, language schools, and teachers. In order to provide help and support, teacher educators, teacher education program developers, professional associations, schools and teachers themselves should all be more active in supporting teachers to develop their pronunciation instruction skills. More courses focusing on pronunciation instruction should be developed to help ESL teachers improve their knowledge of pronunciation instruction and increase their confidence in teaching it. Teacher education programs and teacher educators may need to focus on not only content knowledge, but also pedagogical knowledge to better assist teachers. Professional associations and schools may need a solid and effective language and pronunciation proficiency assessment to evaluate teachers' proficiency to assist teachers accordingly.

In conclusion, pronunciation is a vital component of English language learning and teaching (MacDonald, 2002). By examining teachers' self-efficacy, language/pronunciation proficiency, and knowledge of pronunciation teaching, this study provided insight into pronunciation instruction in Canada to help teachers improve their pronunciation teaching skills and raise awareness of the unique challenges faced by NESTs and NNESTs.

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Appendix A Participants' Demographic information

1. Gender
   a. Male b. Female
   c. You don't have an option that applies to me. I identify as (please specify) ____
2. Age
   Please specify: _____
3. To which of the following groups do you belong? Please check only one:
   a. English is my first/dominant language and I do not speak any other languages.
   b. English is my first/dominant language and I speak one or more additional languages
   c. English is NOT my first/dominant language and I speak one or more additional language.
4. What is your most proficient language?
   Please specify: _____
5. What is your highest level of education? (check one or more that apply)
   a. No formal education
   b. Certificate in _____
   c. Diploma in _____
   d. Bachelor's degree in _____
   e. Master's degree in _____
   f. PhD or doctorate degree in _____
   Field of study or title held: _____
6. What kind of pronunciation training/education have you received? (Check one or more that apply.)
   a. None
   b. Sporadic workshops at conferences
   c. A course/section as part of pre-service training/education
   d. A course/section as part of in-service training/education at the workplace
   e. Other: _____
7. Are you currently teaching English in Canada?
   a. Yes b. No (if no, please skip to the question 9)
8. If yes, how long have you been teaching English?
   a. 2 years or less
   b. 3-5 years
   c. 6-10 years
   d. 11-15 years
   e. 16-20 years
   f. More than 20 years
9. If no, how long have you taught English (Skip to the question 11)?
   a. 2 years or less

b. 3-5 years
c. 6-10 years
d. 11-15 years
e. 16-20 years
f. More than 20 years

10. Where are you currently teaching English? If you answered 'no' to Q.7, please skip this question. (Check one or more that apply)
    a. Tutoring
    b. Private language school
    c. College/university
    d. Other (please specify) _____
11. List the country/countries where you have taught English.
    Please specify: _____
12. What level students have you taught so far in your career? (Check one or more that apply)
    a. Elementary/beginner
    b. Pre-intermediate
    c. Intermediate
    d. High intermediate
    e. Advanced
13. What are the L1 backgrounds of your students?
    Please specify: _____

Appendix B Teaching Practices and Self-Reported Teaching Issues (Adapted from Buss, 2016)

I: Teaching practices

1. How often do you teach pronunciation in the classroom?
   a. Never
   b. Rarely
   c. Sometimes
   d. Often
   e. Always
   Comments: _____

2. What is/are your general approach(es) to teaching pronunciation in class? (Check one or more that apply.)
   a. I regularly correct mispronunciation.
   b. I teach specific pronunciation features (e.g. sound, stress) when the need arises.
   c. I work on the pronunciation activities presented in the textbook.
   d. I use extra resources to work on common problematic features for learners.
   e. I try to integrate pronunciation instruction into my general English teaching.
   Other: _____

3. Which aspects of pronunciation do you often/prefer to teach? Why?
   a. Suprasegmental features (word stress, sentence stress, intonation, rhythm, etc.)
   b. Segmental features (individual sounds, vowels, consonants, suffixes, etc.)
   c. Other: _____
   Please explain why_____

4. What kinds of activities do you usually use to teach pronunciation?
   _____

5. How do you assess students' learning outcomes in pronunciation?
   _____

II: Self-reported Issues regarding pronunciation teaching

1. What are the most serious pronunciation problems experienced by your students?
   _____

2. Which aspects of pronunciation are the most difficult to teach in your opinion?
   _____

3. What are the most serious pronunciation issues you have experienced as a teacher?
   _____

4. How do you think someone learns pronunciation in a second language? Please comment briefly on this process and its optimal conditions.
   _____

Appendix C Teacher's Self-Efficacy in Pronunciation Instruction

How well do you think you can teach pronunciation in class?

	Strongly disagree (1)	Disagree (2)	Disagree somewhat (3)	Agree somewhat (4)	Agree (5)	Strongly agree (6)
I can teach individual sounds. e.g. vowels and consonants, etc.						
I can use the phonetic alphabet to teach pronunciation. e.g. /θ/, /ʌ/, etc.						
I can teach word stress. e.g. CON-duct (noun) con-DUCT (verb)						
I can teach connected speech. e.g. Linking: 'turn off' sounds like 'tur noff'; Reduction: 'want to' sounds like wanna						
I can teach silent letters. e.g. de~~b~~t, ei~~gh~~t						
I can teach pronunciation of suffixes and inflectional endings. e.g -ed: /t/: cook /kʊk/-cooked /kʊkt/, /d/: stay /stei/-stayed						

/steid/, /ɪd:/want /wɑnt/-wanted / wɑntɪd / -s: /s/: drink /drɪnk/- drinks / drɪŋks/, /z/: play /plei/ - plays /pleiz/, /ɪz/: face /feis/ - faces /feisɪz/						
I can provide instruction on voiced/voiceless consonants. e.g. b – p d – t g – k						
I can teach sentence stress. Only certain words within a sentence are stressed. Also, the meaning of a sentence can change depending on which word is stressed e.g. Can you OPEN the WINDOW, please? Can YOU open the window, please?						
I can teach intonation. e.g. Certainty: You don't like vegetables. (Falling tone) Question: You don't like vegetables? (Rising tone)						

I can teach problematic sounds. e.g. th - /θ/; /ð/ w - /w/						
I can set pedagogical priorities for teaching pronunciation. e.g. Intelligibility and comprehensibility deserve more attention than accent reduction.						
I can understand students' foreign accented speech.						
I can identify errors that impede intelligibility. e.g. /l/-/n/ (light-night), /s/-/ʃ/(sell-shell), /d/-/z/ (ride-rise)						
I can identify and address the potential interference and variability in errors from students' L1. e.g. Japanese students or students from Arabic speaking backgrounds- /r/ vs /l/; /b/ vs /p/						
I can teach English rhythm. e.g. English is stress-timed, as opposed to syllable-timed						
I can use strategies and						

research-based guidelines to develop appropriate pronunciation activities. e.g. minimal pairs, shadowing pronunciation from audios and videos, modeling, etc.						
I can use simple language clearly to present pronunciation instruction to students.						
I can teach the different dialects of English. e.g. British English, American English, Australian English, etc.						
I can diagnose pronunciation difficulties that learners have.						
I can provide appropriate feedback to students on their pronunciation.						
I can encourage students to self-evaluate/self-monitor their pronunciation progress. e.g. help students set learning goals, use rubrics to achieve goals, etc.						
I can assess general speaking habits. e.g. clarity, speed,						

volume, fluency, etc.						
I can assess students' pronunciation learning outcomes through multiple tasks, such as reading tasks, spontaneous interaction, presentations, etc.						
Overall, I am confident teaching pronunciation in class.						

Appendix D English Language Proficiency (Adapted from Common European Framework of Reference for Languages)

Please indicate your own language proficiency, and what level of proficiency you believe is required to teach pronunciation effectively in class. In "self-rating" column, please indicate your language proficiency by checking one box. In "level required to teach pronunciation effectively" column, please indicate what level you think is needed to teach pronunciation effectively by checking one box. You may check '√ ' if you believe your language proficiency and the level required to teach pronunciation fall between two levels.

Section 1: Language Proficiency

Language Proficiency	Self-rating	Level required to teach pronunciation effectively
Level 1 (A1) • I can understand and use familiar everyday expressions and very basic phrases aimed at the satisfaction of needs of a concrete type. • I can introduce myself and others and can ask and answer questions about personal details such as where I live, people I know and things I have. • I can interact in a simple way provided the other person talks slowly and clearly and is prepared to help.		
Somewhere between A1 and A2		
Level 2 (A2) • I can understand sentences and frequently used expressions related to areas of most immediate relevance (e.g. very basic personal and family information, shopping, local geography, employment). • I can communicate in simple and routine tasks requiring a simple and direct exchange of information on familiar and routine matters. • I can describe in simple terms aspects of my background, immediate environment and matters in areas of immediate need.		
Somewhere between A2 and B1		
Level 3 (B1) • I can understand the main points of clear standard input on familiar matters regularly encountered in work, school, leisure, etc.		

• I can deal with most situations likely to arise whilst travelling in an area where the language is spoken. • I can produce simple connected text on topics which are familiar or of personal interest. • I can describe experiences and events, dreams, hopes and ambitions and briefly give reasons and explanations for opinions and plans		
Somewhere between B1 and B2		
Level 4 (B2) • I can understand the main ideas of complex text on both concrete and abstract topics, including technical discussions in his/her field of specialization. • I can interact with a degree of fluency and spontaneity that makes regular interaction with native speakers quite possible without strain for either party. • I can produce clear, detailed text on a wide range of subjects and explain a viewpoint on a topical issue giving the advantages and disadvantages of various options.		
Somewhere between B2 and C1		
Level 5 (C1) • I can understand a wide range of demanding, longer texts, and recognize implicit meaning. • I can express myself fluently and spontaneously without much obvious searching for expressions. • I can use language flexibly and effectively for social, academic and professional purposes. • I can produce clear, well-structured, detailed text on complex subjects, showing controlled use of organizational patterns, connectors and cohesive devices.		
Somewhere between C1 and C2		
Level 6 (C2) • I can understand with ease virtually everything heard or read. • I can summarize information from different spoken and written sources, reconstructing arguments and accounts in a coherent presentation. • I can express myself spontaneously, very fluently and precisely, differentiating finer shades of meaning even in more complex situations.		

Section 2: Pronunciation Proficiency

Pronunciation	Self-rating	Level required to teach pronunciation effectively
Level 1 (A1) I can pronounce a very limited amount of learnt words and phrases. The pronunciation of these words and phrases can be understood with some effort by English speakers used to dealing with my language group.		
Somewhere between A1 and A2		
Level 2 (A2) I can pronounce words and phrases clearly enough to be understood, but with a noticeable accent. Conversation partners need to ask for repetition from time to time.		
Somewhere between A2 and B1		
Level 3 (B1) I can pronounce words and phrases clearly and intelligibly even if my accent is sometimes evident and occasional mispronunciations occur.		
Somewhere between B1 and B2		
Level 4 (B2) I can pronounce words and phrases clearly and naturally with clear and natural intonation.		
Somewhere between B2 and C1		
Level 5 (C1) I can vary intonation and place sentence stress correctly to express finer shades of meaning.		
Somewhere between C1 and C2		
Level 6 (C2) I can vary intonation, word stress, and sentence stress correctly in order to express finer shades of meaning without effort.		

Appendix E Required Knowledge for Effective Pronunciation Instruction

In the boxes below and in front of each item please indicate the level that best represents your knowledge of pronunciation teaching. Also, please indicate the level you think that best represents the level of proficiency that teachers need to have in order to teach pronunciation effectively in class. Use the scale of 1-6 as defined below.

1. Level 1 (basic knowledge): Have a common knowledge or an understanding of basic concepts.
2. Level 2 (limited experience): Have the level of experience gained from studying, teaching.
3. Level 3 (intermediate): Have this knowledge and can apply into teaching.
4. Level 4 (high intermediate): Have this knowledge and can apply into teaching independently.
5. Level 5 (Advanced): Master this knowledge.
6. Level 6 (high advanced): Master this knowledge without effort.

Knowledge of Pronunciation Teaching	Self-rating	Level required to teach pronunciation effectively
Knowledge of individual sounds e.g. vowels and consonants, etc.		
Knowledge of the phonetic alphabet to teach pronunciation e.g. /θ/, /ʌ/, etc.		
Knowledge of word stress e.g. CON-duct (noun) con-DUCT (verb)		
Knowledge of connected speech e.g. Linking: 'turn off' sounds like 'tur noff'; Reduction: 'want to' sounds like wanna		
Knowledge of silent letters e.g. de~~b~~t, ei~~gh~~t		
Knowledge of pronunciation of suffixes and inflectional endings e.g -ed: /t/: cook /kʊk/-cooked /kʊkt/,		

/d/: stay /stei/-stayed /steid/, /ɪd:/want /wɑnt/-wanted / wɑntɪd / -s: /s/: drink /drɪnk/- drinks /drɪŋks/, /z/: play /plei/ - plays /pleiz/, /ɪz/: face /feis/ - faces /feisɪz/		
Knowledge of providing instruction on voiced/voiceless consonants e.g. b – p d – t g – k		
Knowledge of sentence stress Only certain words within a sentence are stressed. Also, the meaning of a sentence can change depending on which word is stressed. e.g. Can you OPEN the WINDOW, please? Can YOU open the window, please?		
Knowledge of intonation e.g. Certainty: You don't like vegetables. (Falling tone) Question: You don't like vegetables? (Rising tone)		
Knowledge of problematic sounds e.g. th - /θ/; /ð/ w - /w/		
Knowledge of setting pedagogical priorities and goals for teaching pronunciation e.g. Intelligibility and comprehensibility deserve more attention than accent reduction.		
Knowledge of understanding students' foreign accented speech		
knowledge of identifying errors that impede intelligibility e.g. /l/-/n/ (light-night) /s/-/ʃ/(sell-shell), /d/-/z/ (ride-rise)		
Knowledge of identifying and addressing the potential interference and variability in errors from students' L1 e.g. Japanese students or students from Arabic-speaking background face challenges with pronunciation of /r/ vs /l/, /b/ vs /p/		

Knowledge of English rhythm. e.g. English is stress-timed, as opposed to syllable-timed		
Knowledge of using strategies and research-based guidelines to develop appropriate pronunciation activities e.g. minimal pairs, shadowing pronunciation from audios and videos, modelling, etc.		
Knowledge of using simple language clearly presenting pronunciation instruction to students e.g. I can use simple language clearly to explain pronunciation features to my students.		
Knowledge of different dialects of English. e.g. British English, American English, Australian English, etc.		
Knowledge of diagnosing pronunciation difficulties that learners have		
Knowledge of providing appropriate feedback to students on their pronunciation		
Knowledge of encouraging students to self-evaluation/self-monitor. e.g. help students set learning goals, use rubrics to achieve goals, etc.		
Knowledge of assessing general speaking habits. e.g. clarity, speed, volume, fluency, etc.		
Knowledge of assessing students' pronunciation learning outcomes e.g. evaluating and monitoring students' acquisition of the target pronunciation features through multiple tasks, such as reading tasks, spontaneous interaction, presentations, etc.		
Overall, knowledge of teaching pronunciation.		

1. Are you willing to participate in interviews for this study? (Interviews can be conducted over Skype and phone.)
   a. Yes
   b. No （If no, skip to the end of the survey.）

2. If you answered Yes, please provide your email address and/or any other contact information. The researcher may contact you to schedule an interview.
   Email:

   Phone number:

Curriculum Vitae

Name	Bei Zhang
Post-secondary Education and Degrees	Xi'an International Studies University 2005-2010, B.A. Fanshawe College 2015 Post-graduate diploma Western University 2015-2018, M.A.
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