Foreign language anxiety and self-perceived English pronunciation competence

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Abstract

In foreign language learning a negative correlation has been reported between language anxiety and both oral performance (Liu, 2006; Stephenson Wilson, 2006; Woodrow 2006) and self-perceived levels of speaking ability (Kitano, 2001; MacIntyre, Noels, & Clement, 1997; Piechurska-Kuciel, 2008). However, little is known about the relationship between language anxiety and the way students perceive their own competence regarding one of the integral components of oral performance – pronunciation. The present study is an attempt to investigate the link between foreign language anxiety and the self-perceived levels of pronunciation of 48 teacher training college students, who study English as a foreign language. A negative correlation, $r = -.54$ ($p < .05$), was found between the level of their language anxiety and self-perceived English pronunciation competence, indicating that more apprehensive teacher trainees perceived their pronunciation as poor, whereas those with lower levels of anxiety declared higher pronunciation competence. Moreover, statistically significant negative correlations were noted between the levels of anxiety and self-perceived competences of several suprasegmental aspects of pronunciation, such as word pronunciation, stress, weak forms, rhythm, linking, and assimilation. The teacher trainees who rated their competence of these suprasegmentals more highly experienced lower levels of foreign language anxiety. The perception of segmentals, however, appeared to be unconnected with the participants' anxiety.

Keywords: language anxiety, pronunciation, communication apprehension

As many authors attest (Cheng, 1998; Pawlak, 2003; Szpyra-Kozłowska, Frankiewicz & Gonet, 2002), developing learners' pronunciation seems to be a neglected area. At the same time, teachers and foreign language learners view pronunciation as an important facilitator of communication and fluency in speaking (Waniek-Klimczak, 1997; Wrembel, 2002). Indeed, the segmental and suprasegmental elements of pronunciation are an integral component of spoken language (Pawlak, 2011, p. 5), and as such are frequently taken into account when oral performance is evaluated (Szpyra-Kozłowska, 2003; Waniek-Klimczak & Dłutek, 2003).

Oral performance is reported to be associated with language anxiety (LA; Liu, 2006; Stephenson Wilson, 2006; Woodrow, 2006). For instance, learners are sometimes reported to experience anxiety when giving speeches in class, interacting with a native speaker, or being corrected while speaking (Mak, 2011, p. 210). Anxious foreign language learners also mention problems directly linked to pronunciation. For example, they complain about difficulties "discriminating the sounds . . . of a target language" (Horwitz, Horwitz, & Cope, 1986, p. 126) and feel embarrassed because of their pronunciation errors (Price, 1991, p. 105). These self-perceived pronunciation problems indicated by apprehensive learners have been overlooked in quantitative studies on LA, and only a few researchers have investigated whether LA interplays with the component of pronunciation in oral performance (e.g., Feigenbaum, 2007).

The purpose of the present study is to fill in the existent gap by investigating the relationship between LA and students' self-perceived levels of pronunciation competence in English as a foreign language. In the theoretical part of the paper, the concepts of LA and its relationship to both oral performance and self-perceived competence in the foreign language (FL) speaking skill is briefly described. Then, the potential link between LA and FL pronunciation is discussed. The empirical part presents the results of a correlational study confirming the hypothesis that a relationship exists between LA levels and self-perception of learners' L2 pronunciation.

LA and FL Pronunciation

LA has attracted the attention of many researchers (cf. Horwitz, 2010). The results of their studies contribute to understanding how language learners' feelings of LA interact with the process of acquiring a foreign or second language (MacIntyre, 1995; MacIntyre & Gardner, 1989; Piechurska-Kuciel, 2008). A learner in a FL classroom may experience, among other things, "the worry and negative emotional reaction aroused when learning or using a second language" (MacIntyre, 1999, p. 27), which denotes LA. It may be mani-

fested by the physical symptoms of nervousness, for instance sweating, heart pounding or feeling cold, as well as impaired cognitive abilities such as limited performance, creativity and concentration (Woodrow, 2006, p. 310).

The concept of LA subsumes anxious reactions in the context defined as a language classroom. It is categorized as situation-specific (Ellis, 1994, p. 480), because the feeling of worry and apprehension, which is often experienced in the language classroom, changes into a solidified reaction concerning language learning and language performance. This type of anxiety refers to "a single context or situation only. Thus, it is stable over time but not necessarily consistent across situations" (MacIntyre, 1999, p. 28). A learner may feel anxiety while learning a FL, but in a different context this feeling may disappear.

Horwitz et al. (1986, p. 127) distinguish three aspects of LA linked to oral performance: communication apprehension, test anxiety, and fear of negative evaluation, which are termed as performance anxieties. The first one is observed in oral communication contexts and is manifested in the levels of anxiety or fear a learner experiences while interacting in a FL. This type of anxiety may be manifested by a fear of speaking in class, called oral communication anxiety, or a fear of speaking in public – stage fright – as well as by a fear experienced while listening, termed *receiver anxiety* (Horwitz et al., 1986, p. 127). Test anxiety appears in contexts of formal evaluation, during which a learner experiences feelings of worry, which, in turn, influence the whole process of learning (Aydin, 2009, p. 128). The last one, fear of negative evaluation or social-evaluative anxiety (Piechurska-Kuciel, 2008, p. 64), is encountered when a learner fears being evaluated negatively in a range of social situations.

There is a range of research exemplifying the relationship between levels of LA and learners' oral performance (Liu, 2006; Philips, 1992; Stephenson Wilson, 2006; Woodrow, 2006). This research appears to confirm that LA is a feeling that may be associated with different forms of FL oral performance.

Liu (2006) investigated 547 first year undergraduate learners of English in China, applying an adapted Foreign Language Classroom Anxiety Scale (FLCAS; Horwitz et al., 1986) to measure LA, as well as teacher observation, reflective journals, classroom observation, and a semi-structured interview to identify the activities that made the participants most and least anxious. The researcher found that most participants experienced anxiety when giving oral presentations in class.

Philips (1992) discovered a negative correlation between LA and oral performance. She used the FLCAS to measure the levels of LA of 44 participants, who were students of a FL aged from 17 to 21. They took an oral examination whose results were analyzed and correlated with LA levels. A negative moderate relationship was found ($r = -.40$, $p < .1$), which confirmed

that "students who expressed more foreign LA tended to receive lower exam grades than their less anxious classmates" (p. 17).

A similar study was conducted by Stephenson Wilson (2006), who investigated 40 students enrolled in an English for Specific Purposes course at Granada University. LA was measured with the FLCAS translated into Spanish. The oral performance evaluation followed Philips' (1992) procedure of conducting an oral test consisting of two parts; the first one was a free discussion on a given topic, while the second one consisted of a role-play. Pearson's correlation was carried out for oral test grades and LA levels, confirming a statistically significant negative correlation ($r = -.494$ at $p < .001$).

In another study, Woodrow (2006) found a negative correlation between oral performance and speaking anxiety experienced inside and outside the classroom in the second language learning context. The quantitative data were collected from 275 participants who were studying English for Academic Purposes in Australia. The researcher proposed a dual conceptualization of speaking anxiety, referring to in-class and out-of-class second language anxiety as separate constructs and such a division was supported in the study. The correlational analysis indicated that both of these types of anxiety are related to oral performance.

Apart from the interest in finding correlations between oral performance and LA, some researchers investigated the interplay of LA and the way learners perceive their own FL abilities, including self-perceived L2 speaking competence. MacIntyre et al. (1997) investigated 37 students learning French as L2, who were asked to self-report on their perceived French competence, in the areas of speaking, listening comprehension, reading and writing. They used a 6-point Likert scale, where 0 indicated *no competence* and 6 indicated *fluency*. The participants were also tested objectively with a number of proficiency tests. LA was measured on a 19-item scale that consisted of Gardner's French use anxiety and French class anxiety scales. The results confirmed the hypothesis that "actual competence, perceived competence and language anxiety are all interrelated" (MacIntyre et al., 1997, p. 274). The negative significant correlation was found between LA and self-rated speaking proficiency. Kitano (2001) measured anxiety levels and the self-perception of speaking ability among 212 FL students. The results indicated that "an individual student's anxiety was higher as he or she perceived his or her ability as lower than that of peers and native speakers" (p. 549). The self-rating of the individuals' current level of speaking ability was negatively related to class anxiety ($r = -.509$, $p = .00$). In yet another study Piechurska-Kuciel (2008) found a strong reverse correlation between LA and self-perceived levels of the speaking skill, which was sustained over a three-year period among 393 secondary grammar

school students of English in Poland. The participants responded to a questionnaire that comprised, among others, the FLCAS and self-perception of English speaking abilities.

Much in the same vein, Onwuegbuzie, Bailey, and Daley (1999) investigated factors associated with FL anxiety among 210 students. The instrument measuring LA was the FLCAS, and the self-perceived competence of learners was measured with Self-Perception Profile for College Students questionnaire. A multiple regression analysis showed that one of the factors predicting the level of LA is perceived scholastic competence.

The relationship between pronunciation as a component of oral performance and FL anxiety is still a barren land in research studies. Nevertheless, there is some justification for directing attention towards the potential links between aspects of FL pronunciation and LA. Shams (2006) claims that pronunciation might contribute the three components of anxiety, that is communication apprehension, test anxiety, and fear of negative evaluation. LA may be triggered by communication apprehension when a learner fears that communication will break down because of his or her poor pronunciation. Pronunciation may also play a role in test anxiety "when the subject feels that the teacher is assessing and 'grading' the quality of pronunciation. It can also contribute to fear of negative evaluation when the speaker fears what others may think of the way she sounds" (p. 55).

The potential connection between FL pronunciation and LA might be of a physiological and affective nature. The first link concerns the motor activity of speech mechanisms the learners activate when speaking. Pronunciation encompasses "meaningful use of TL [target language] phonological features" (Burgess & Spencer, 2000, p. 191) produced with the help of respiratory, phonatory and articulatory speech organs (Rogerson-Revell, 2011, p. 28). The articulation of phonological features, represented by both segmentals, such as vowels and consonants, and suprasegmentals, such as weak forms, linking, assimilation, stress, rhythm and intonation, may be physically affected by the feeling of apprehension. LA as an emotional arousal is manifested in physical changes or tensions in the muscles, which may alter the way a learner speaks or pronounces the target language (Scovel, 1978). In other words, a high level of anxiety may affect the language learner's FL learning, and may also lead to neuromuscular problems with pronunciation by physically impeding the FL learner's speech.

The other potential connection between pronunciation and LA is signalled, though not developed thoroughly, in very few studies A hypothetical link between affect and pronunciation has been revealed by some language learners, including the ones in the study of Derwing and Rossiter (2002, p. 161), where 60 out of 100 respondents perceived a change in their pronuncia-

tion when nervous and the same number declared a change in accent when they were excited. In another study, one learner claimed that "I hate it when the teacher calls on me to speak. I freeze up and can't think of what to say or how to say it. And my pronunciation is terrible" (Horwitz & Young, 1991, p. xiii). These examples signal that the area in question is under-researched.

The statements on pronunciation problems expressed by apprehensive language learners draw attention to the issue of how LA interacts with learners' perceptions of competence. Price (1991, p. 105) finds self-perceived pronunciation problems as a source of classroom-related anxiety. The anxious learners in Price's (1991) study compared their pronunciation to that of a native speaker, and the inability to articulate FL words correctly made them feel embarrassed and intimidated. According to Young (1991), the discrepancy between a learner's perceived competence and reality may trigger high levels of anxiety, as in the case of a learner who views pronunciation as the most significant aspect of the target language. However, the reality is that most "students, unless they are highly motivated, will not sound like a native speaker" (p. 428). It is important to note that care needs to be taken to ascertain whether LA is the cause or the effect of different aspects of FL learning (cf. Stephenson Wilson, 2006, p. 93).

Moreover, MacIntyre, Noels, and Clement (1997) note that "highly anxious students do not perceive their competence to be as high as a more objective analysis reveals it to be" (p. 278). Therefore, the danger in self-perceived pronunciation competence ratings is that students may under-estimate their abilities if they are not confident enough in pronouncing words in a FL. Alternatively, they may want to raise or protect their feelings of self-worth by over-estimating the quality of their pronunciation. MacIntyre et al. (1997, p. 278) name these two approaches as 'self-enhancement' and 'self-derogation,' respectively. The results of research on the pronunciation self-perception of advanced learners confirm the discrepancies between learners' self-perceived and externally evaluated pronunciation competences (Dlaska & Krekeler, 2008; Nowacka, 2006). To the best of the author's knowledge, none of the studies so far have investigated self-perceived pronunciation levels with reference to LA.

Little is known about the relationship between LA and the way students perceive one of the integral components of speaking – pronunciation. As hardly any studies have been conducted in this area, the present study fills in this gap by investigating the relationship between FL anxiety and students' self-perceived pronunciation competence (here also referred to more succinctly as self-evaluation) of English as a FL. The hypothesis adopted for the purpose of the study is the following: LA is negatively correlated with the self-perceived compe-

tence of FL learners. In other words, students experiencing higher levels of LA perceive their pronunciation to be worse in comparison to less anxious learners.

Method

The empirical part provides a detailed description of the participants, the instruments used to measure FL anxiety and self-perceived pronunciation competence, as well as the procedure followed in the study.

Participants

The participants were 48 teacher training college students aged between 19 and 36. The average age of the respondents was 21. There were 41 female and 7 male students. They were studying to become English teachers at all educational levels in Poland, and they were in their first of three years of training. All of them were taking part in a pronunciation course at the teacher training college offered throughout the first and second semester of their studies (60 hours in total). The course was important for the participants, as it finishes with an examination they were obliged to pass to continue their teacher training studies.

The participants of the study were familiar with the basic notions describing different aspects of phonetics, which were used in the pronunciation self-perception questionnaire. The segmental features, that is, vowels and consonants, were studied thoroughly in the first semester, and the suprasegmentals were referred to in the second semester. Therefore, the participants chosen for the study were aware of the nuances of English pronunciation and were able to self-rate their pronunciation competence.

Instruments and Procedure

The first instrument used in the study was the FLCAS developed by Horwitz et al. (1986) to measure the level of FL anxiety. The wording in the survey was slightly adapted to suit the context; for example, instead of using the original expression "foreign language class," a reference to all classes conducted in English was made. The participants were asked to respond to the 33 FLCAS items referring to their feelings of anxiety experienced during the classes and lectures conducted in English at the college. The responses were given on a 5-point Likert scale, where 1 indicated *strong disagreement*, and 5 – *strong agreement* with a statement. When calculating the data from the FLCAS, it was taken into consideration that nine items were reversed. The co-

efficient Cronbach alpha was calculated indicating the high internal reliability of the tool (alpha = .94).

The second instrument used in the study, the Pronunciation Self-evaluation Form (PSF), was a questionnaire designed by the author to measure the participants' self-perceived level of aspects of their segmental pronunciation, that is, vowels and consonants, as well as suprasegmentals, such as pronunciation of individual words, word stress, weak forms, rhythm, linking, assimilation, and intonation. Additionally, the participants were asked to rate their overall perceived pronunciation competence. The choice of these aspects of pronunciation was largely dependent on the pronunciation course content, which aimed at familiarizing teacher trainees with and creating opportunities for practicing the segmental and suprasegmental features of English pronunciation mentioned above.

The respondents were instructed to self-rate each aspect of their pronunciation on a 5-point Likert scale (1 indicated *very poor* and 5 *very good*). Moreover, they were reminded of the aspects focused on by the questionnaire both orally before the distribution of the questionnaire, and in writing in the form of a key reminding them of these aspects of pronunciation which constituted an integral part of the questionnaire. The key included examples of each pronunciation aspect listed in the questionnaire. Additionally, the respondents were asked to provide basic biodata.

The respondents were invited to participate in the study in the spring semester of 2011. They were requested to write their names on both questionnaires in order for the researcher to be able to match the data from both of the instruments. However, at the same time, they were informed that this information would be used only for the purposes of the study. After receiving oral consent from the teacher trainees, the author chose two consecutive pronunciation classes to collect the data. It took approximately 30 minutes to respond to each survey. The instruments were administered separately with a week-long break in-between. This time interval allowed the students to concentrate on one concept at a time. First, the participants were asked to respond to the FLCAS. After a week, they were given the pronunciation self-perception questionnaire and reminded of the meaning and interpretation of each aspect of pronunciation mentioned in the questionnaire. Additionally, to avoid misinterpretations, they were provided with a key including short explanations and examples of those aspects.

Results

The present section presents a number of analyses used to investigate the relationship between FL anxiety and the self-perceived pronunciation competence of the participants. Firstly, the basic statistics for LA and aspects

of the self-perceived pronunciation of the participants are given. Secondly, Pearson's correlation between LA and the aggregated data from the PSF is calculated. Thirdly, Spearman's rho correlations between LA and each pronunciation aspect, evaluated by the 48 participants, are obtained. Finally, the 48 participants are divided into two groups of high and low anxiety learners, whose self-perceived pronunciation competence levels are measured with a *t* test to find out whether these levels differ in the two groups.

The data collected from the FLCAS were computed and aggregated. The sum of points for each participant indicated an individual's level of LA with the lowest LA score being 43 (the minimal value of the scale was 33) and the highest LA reaching 128 out of a maximum of 165 points. The mean LA of the 48 participants was 81.35 and standard deviation equaled 23.07.

The data from the second questionnaire, the PSF, were calculated to obtain the following: points indicating self-rated pronunciation competence referring to each segmental and suprasegmental aspect, an individual's overall self-perceived pronunciation level, and the aggregated self-assigned points of all pronunciation questionnaire items. Means, standard deviations, and minimum (Min.) and maximum (Max.) values were calculated for each self-evaluated aspect of pronunciation, as well as for the aggregated overall pronunciation level (see Table 1).

The respondents rated their pronunciation of segments very highly: consonants (*M* = 3.9) and vowels (*M* = 3.8), similarly to their ability to pronounce individual words (*M* = 4). The average scores for the self-perceived competence of suprasegmentals, such as word stress, weak forms, rhythm, linking, assimilation and intonation, were very similar (either *M* = 3.4 or *M* = 3.5).

Table 1 Means, minimum values, maximum values and standard deviations of self-perceived levels of aspects of pronunciation and the aggregated data of the self-perceived pronunciation questionnaire (pronunciation competence) of the participants (*N* = 48)

No.	Aspect of pronunciation	*M*	Min.	Max.	*SD*
1.	Vowels	3.8	3	5	.63
2.	Consonants	3.9	3	5	.62
3.	Word pronunciation	4.0	3	5	.62
4.	Word stress	3.4	2	5	.84
5.	Weak forms	3.5	2	5	.85
6.	Rhythm	3.4	1	5	1.03
7.	Linking	3.5	1	5	.87
8.	Assimilation	3.5	2	5	.77
9.	Intonation	3.5	1	5	.92
10.	Self-perceived overall pronunciation	3.5	2	5	.68
11.	Pronunciation competence	3.59	2.3	4.8	.55

Then the Pearson's Product Moment correlation coefficient of LA and the aggregated values of the pronunciation self-perception questionnaire were calculated for the 48 participants. The correlation coefficient equaled $r = -.54$ ($p < .05$), which indicated quite a strong negative relationship between these two variables. This statistical measure confirmed that students who declared lower pronunciation competence experienced a higher level of FL anxiety, and those who perceived their pronunciation as better were less anxious.

Subsequently, the level of language anxiety was correlated with each of the subparts of the pronunciation self-evaluation questionnaire using Spearman's rho (rank-order correlation coefficient R). The self-perceived levels of segmental aspects of pronunciation, that is, vowels and consonants, turned out to be insignificantly related to the teacher trainees' language anxiety levels (see Table 2).

Table 2 Spearman's rho correlation of the language anxiety level and pronunciation self-evaluation items for $N = 48$ (* indicates statistical significance at the minimum .05 level)

No.	Language anxiety level correlated with pronunciation self-perceived competence of the following:	R	p
1.	Vowels	-.1	.48
2.	Consonants	-.25	.07
3.	Word pronunciation	-.29*	.04
4.	Word stress	-.52*	.00
5.	Weak forms	-.32*	.02
6.	Rhythm	-.57*	.00
7.	Linking	-.44*	.00
8.	Assimilation	-.36*	.01
9.	Intonation	-.27	.06
10.	Overall pronunciation	-.46*	.00

Self-evaluation of the learners' pronunciation of words was weakly but statistically significantly correlated with language anxiety ($R = -.29$, $p = .04$). Other weak negative correlations with language anxiety concerned self-perception of weak forms ($R = -.32$, $p = .02$) and assimilation ($R = -.36$, $p = .01$). The data showed that the level of language anxiety was most strongly related to the self-perception of rhythm ($R = -.57$, $p = .00$) and word stress ($R = -.52$, $p = .00$). The link between that overall pronunciation evaluation of the respondents and language anxiety was also indicated by a considerably strong negative correlation ($R = -.46$, $p = .00$). The self-rated aspects of pronunciation that did not correlate significantly with language anxiety were vowels, consonants and intonation.

Finally, to confirm that the aggregated data of self-perceived levels of pronunciation competence were different in the two different groups of more apprehensive and less apprehensive participants, a *t* test for unmatched samples was used (see Table 3).

Table 3 The results of the *t* test for unmatched high language anxiety (HLA) and low language anxiety (LLA) groups

	HLA Mean	LLA Mean	*t*	df	*p*	HLA *SD*	LLA *SD*
HLA vs. LLA	34	37	-2.56	46	.01	4.65	5.84

The teacher trainees participating in the study were assigned to the high language anxiety (HLA) group if their LA level exceeded the mean score *M* = 81.35. Those participants whose LA score was below the mean constituted the group of low language anxiety (LLA). There were 24 participants in each group. Then their aggregated scores of self-perceived pronunciation competence were calculated with a *t* test. The results showed that these two groups differed significantly (*t* = -2.56, *p* = .01). Highly anxious teacher trainees evaluated their pronunciation competence significantly differently than the low anxiety group.

Discussion

The hypothesis that there is a negative relationship between the levels of learners' LA and the way learners perceive their target language pronunciation has been generally confirmed in this study. The results of the study reveal that a link exists between one of the affective factors of LA, and the self-perception of learners' abilities to pronounce words in a FL. The correlation coefficient indicates a negative relationship, which means that the students who experience higher levels of LA perceive their pronunciation competence as worse than those whose anxiety is lower. Highly apprehensive learners feel insecure with their way of pronouncing a FL. That negative perception may further affect students' oral performance because if learners do not feel confident enough with the way they articulate foreign utterances, they may limit their oral communication in a foreign language.

Most self-perceived suprasegmental aspects of pronunciation, apart from intonation, are found to be significant correlates of LA. The highest negative correlation is observed between the level of LA and self-evaluation of rhythm, as well as word stress. Self-perceived levels of linking, assimilation, weak forms and word pronunciation indicate a lower but still significant correlation with LA. These results draw attention to suprasegmentals, which play an immense role in

communication (Gregersen, 2011, p. 159). Without the proper use of stress, rhythm, weak forms or sound links, the message is devoid of cues enriching oral communication. If a highly anxious learner perceives himself or herself as unable to use them properly, his or her oral performance may suffer.

However, not all aspects of self-perceived pronunciation are found to correlate significantly with general FL anxiety levels in the present study. The only suprasegmental feature that does not correlate with LA in this study is intonation. It is considered one of the least teachable aspects of pronunciation because, among other things, it is "quite sensitive to the discourse context and the speaker's intent" (Celce-Murcia, Brinton, & Goodwin, 1996, p. 175). The respondents might have been uncertain or even unaware of their intonation competence because of the complexity of the phenomenon and the context specificity of this aspect. Intonation is believed to be the pronunciation feature that learners "are sensitive to, but mostly at an unconscious level" (Kelly, 2000, p. 86).

The study reveals that the way the participants perceive their competence in segmentals is independent of anxiety levels. The two segmental pronunciation categories whose self-perceived levels of pronunciation do not confirm a significant relationship with the respondents' levels of LA are vowels and consonants. Their self-perception levels among the respondents were considerably high, with the mean for consonants reaching $M = 3.9$ and for vowels $M = 3.8$ on a 5-point Likert scale. The reason may lie in the amount of time spent practicing these aspects during their phonetics course and the fact that they had already been tested on these aspects. Thus, the teacher trainees feel quite confident about their pronunciation of consonants and vowels, regardless of their level of LA. The explanation for this might be that the speech sounds of the target language are for adult FL learners perceptually related to the sounds assigned to the mother tongue (L1) sound inventory (Flege, Yeni-Komshian, & Liu, 1999) or, in other words, L1 phonological category. This filtration might result in the inability to detect new sounds, and in consequence, perhaps in an inaccurate self-perception of one's own pronunciation. A FL sound may be difficult to discriminate by a language learner if it is perceived as similar to an L1 sound, and then an L2 sound can be assimilated to the same 'phonological space' as an L1 sound (Strange & Shafer, 2008, p. 171).

The study confirms that the way learners perceive their pronunciation is associated with feelings of LA. The results imply that the more anxious an individual is, the more critically he or she perceives their way of pronouncing most aspects of connected speech, such as weak forms, assimilation and linking, as well as word pronunciation, stress and rhythm. Obviously, this is not to say that some sort of causality may be established at this point between anxiety and perceived competence in either direction. The outcomes of the study also

focus on suprasegmental aspects of pronunciation that are considered to be more important in oral communication than the pronunciation of vowels and consonants, as they "carry more of the overall meaning load than segmental features" (Celce-Murcia, Brinton, Goodwin, & Griner, 2010, p. 163).

The study is not free from limitations that must be addressed. Firstly, the research tool used in the study for evaluation of the perceived levels of pronunciation competence refers only to some selected aspects of pronunciation. An extended list might shed more light on the phenomena investigated. Secondly, both the FLCAS and self-perception questionnaire were signed with the participants' names because of further correlational investigation, so the participants might have been tempted to build up a positive image while giving the replies. Finally, the size of the sample was limited to 48 participants. Therefore, the results of the study should be treated with care and further studies are needed as they may further illuminate the relationship between LA and self-perceived pronunciation competence.

Conclusions

A highly anxious learner or a teacher trainee who does not believe in their abilities and self-evaluates poorly, for example in the area of FL pronunciation, may be discouraged from developing FL oral communication skills and making efforts in FL learning. After all, learners compare their pronunciation with other learners, teachers and native speakers (Price, 1991). If they notice that their pronunciation is far from what they perceive as being competent, they may feel apprehensive. MacIntyre et al. (1997) assume that when a learner perceives his or her competence as low, anxiety occurs and "the arousal of anxiety probably makes some students more reluctant to speak. If language learners do not choose to communicate, they cannot re-assess their competence" (p. 278). To break this vicious circle, it is important to lower the levels of LA in the classroom, for example while practicing pronunciation.

Introducing different types of relaxation techniques when teaching pronunciation, such as breathing, guided-imagery activities or visualization activities (Celce-Murcia, Brinton, Goodwin, & Griner, 2010, p. 335) is justifiable in consideration of the above findings. These techniques can lower levels of anxiety and relax the muscles of the articulatory organs (cf. Wrembel, 2006).

Moreover, there is a need to develop pronunciation self-evaluation abilities among teacher trainees for pedagogical purposes, so that they will be able to use these abilities later in the course of teaching. L2 pronunciation self-evaluation is especially encouraged in the context of teacher training. Keys claims that the "major factor in training new teachers . . . is the emphasis on

providing learners with the skills of self-evaluation and self-improvement through analysis of their own production" (as cited in Nowacka, 2006, p. 108). Teacher trainees will have to be able to judge the pronunciation of their future learners, and the self-evaluation process gives them a great opportunity to practice. Kenworthy (1987, p. 118) maintains that pronunciation self-evaluation and monitoring should be practiced by teachers because it leads to improvements and adjustments in pronunciation. She advises teachers to integrate self-evaluation and monitoring into the process of pronunciation teaching. Nowacka (2006, p. 123) stresses the need to include pronunciation self-assessment techniques in a pronunciation teaching course for teacher trainees who in the future will have to evaluate others.

Allowing teacher trainees to get involved in self-perceived practice encourages active learning. They might feel more responsible for their own pronunciation learning processes, which may lead them to greater confidence, independence and increased awareness of their individual pronunciation needs. In general, such a type of practice may trigger teacher trainees' greater autonomy, understood as an ability that allows language learners to take responsibility for their own process of learning a language (Michońska-Stadnik, 2004, p. 12).

Self-perception of pronunciation competence is very subjective and may be inaccurate (cf. Nowacka, 2006) due to participants' tendencies to either overestimate or underestimate their competences (cf. Daley, Onwuegbuzie, & Bailey, 1999). Therefore, it might be interesting to research the link between LA levels and learners' pronunciation evaluated more objectively by external raters.

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