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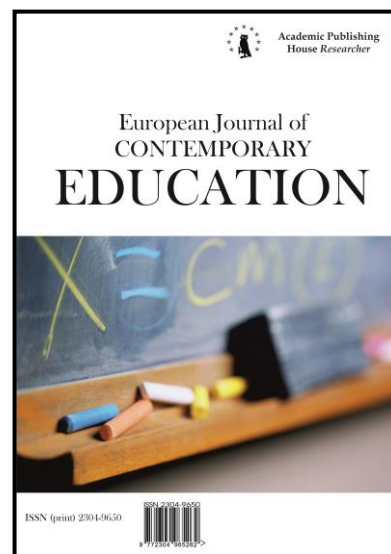
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## Personality Factors and Foreign Language Pronunciation Anxiety: The Effect of Psycho-Social Training

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### Abstract

This paper focuses on the link between 16 primary and 5 global personality factors and the Foreign Language Pronunciation Anxiety of 63 Slovak learners of English, who underwent a 24-week psycho-social training (in the experimental group) combined with English pronunciation training (both in the control and experimental group). Data was collected before and after the training interventions, using the Foreign Language Pronunciation Anxiety Scale and the Sixteen-Factor Personality Questionnaire 16 PF. Data analysis proved that the differences in the 16PF scores between the pre-test and post-test were significant for the factors Reasoning, Emotional Stability, Apprehension, Tension and Anxiety in both groups; and for Social Boldness, Vigilance and Self-Control in the experimental group only.

**Keywords:** personality, ESL, anxiety, intervention, teacher preparation.

### 1. Introduction

After researchers in the second half of the twentieth century began recognizing affective factors as equally relevant in learning as cognitive factors, one of the most examined affective variables in the field of foreign language (FL) learning was foreign language anxiety (FLA) (Horwitz, 2010). FLA is considered more of a psychological (identity-based) construct than a linguistic (competence-based) construct (Alrabai, 2015), stemming most likely from the learner's perception of "self" (Scovel, 1991), where self-perceptions, perceptions of others, perceptions of FL learning and performance play important roles (Gardner, MacIntyre, 1993; Horwitz et al., 1986; Kralova, Petrova, 2017).

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Foreign language learning itself is often considered a “profoundly unsettling psychological proposition” (Guiora, 1983: 8) because it threatens learners’ self-concepts as their self-expression is limited by their imperfect command of a FL. Especially speaking is often sensed as a “threat to peoples’ self-concept, self-identity, and ego, which they have formed in their first language as reasonable and intelligent individuals” (Horwitz et al., 1986; Hashemi, Abbasi, 2013: 645). As FL learning inevitably requires learners to experience constant change or reconstruction, learners with the capability to overcome such a “cognitive inconsistency” (Bennett, 1998) are considered successful FL learners. Risk-taking (Horwitz, 1996) and tolerance of ambiguity (Dewaele, Shan Ip, 2013) thus may well shape the success in mastering an FL.

Extraversion is another personality feature that has received attention in FL learning research over the past several decades (e.g., Dewaele, Furnham 2000; Dewaele, 2005; Ehrman et al., 2003). It is believed to be an advantage for FL speech production because extraverts tend to be outgoing, sociable, lively, impulsive, carefree and risk-taking; they like parties, changes, have many friends, seek novelty and change (Eysenck, Eysenck, 1964). Other personality traits studied in FL learning were emotional stability (Dewaele, Al-Saraj, 2015; MacIntyre, Charos, 1996), perfectionism (Gregersen, Horwitz, 2002), neuroticism (Dewaele, 2013), emotional intelligence (Dewaele et al., 2008), verbal intelligence (Fahim, Pishghadam, 2007), integrativeness (Gardner, MacIntyre, 1993), and empathy (Guiora et al., 1972a).

Relatively few researchers have tried to link FLA measures with personality traits. Creativity, cooperativeness, competitiveness, individualism, self-worth and coping self-efficacy were examined as potential predictors of FLA (Bailey et al., 2000; Onwuegbuzie et al., 1999). Gregersen and Horwitz (2002) concluded that more anxious participants tended to be more perfectionist. Dewaele et al. (2008) found out that higher levels of emotional intelligence corresponded to significantly lower FLA, and a significant relation was revealed between communicative competence and openness to experience (Verhoeven, Vermeer, 2002).

Most studies on FLA have concluded that speaking is the skill most affected by FLA (Horwitz, 2010), and one of its most immediate determinants is the concern over FL pronunciation (Baran-Łucarz, 2011), an essential factor in FL speaking. Pronunciation is seen as the most salient aspect of the language ego (Guiora et al., 1972b) and strongly related to human identity and the speaker’s level of self-confidence.

The relationship between FL pronunciation achievement and personality can thus be rather significant. Several scholars investigated the effect of personality on FL oral production, trying to determine predictors of FL pronunciation quality (e.g., Baran-Łucarz, 2012; Dewaele, Furnham, 2000; Flege et al., 1995; Hu et al., 2011; Hu et al., 2013; Piske et al., 2001).

Hu et al. (2011, 2013) aimed at clarifying the neuro-psychological origins of individual differences in FL pronunciation aptitude, finding empathy a significant predictor of FL pronunciation aptitude. Concerning level of FL pronunciation, Kralova (2012) detected a significant positive relationship between sensitivity and openness to change and a significant negative relationship between tough-mindedness and anxiety. On the other hand, Baran-Łucarz (2012) reported no systematic relationship between the level of ambiguity tolerance, the thickness of ego boundaries and attainments in FL pronunciation.

The trait theories of personality identify personality features as relatively stable, long-term and consistent (e.g., Eysenck, 1981; Kerry, 1990) and consider them to be biologically determined and inherited. However, many researchers believe that this traditional conception “does not do justice to the dynamic, fluid and continuously fluctuating nature of learner factors and neither does it account for the complex internal and external interactions that we can observe” (Dörnyei, 2010: 253).

Seemingly few studies have examined the relation of personality variables and FLA in a longitudinal design applying any kind of intervention. Tracy-Ventura et al. (2016) demonstrated significant changes in the emotional stability of participants after a year spent in a FL-country. The effect of affective strategy instruction (relaxation, music, visualization, humour, positive self-talk, risk-taking, and monitoring emotions) on FL oral tasks has also been examined (Rossiter, 2003). Ganesan and Kulkarni (2016) attempted to reduce English language anxiety through a combination of behaviour modification techniques in a one-month intervention. Both studies recognized the positive influence of the applied affective strategies on oral performance and anxiety levels, yet they did not examine the effect of any intervention on personality factors.

The links between FLA and personality traits have been under-researched (Dewaele, 2013), and there is continuing need for more intervention studies to determine the effects of affective strategies on FL learning. Moreover, applying affective intervention strategies in FL learning/teaching is in line with the current trends in linguistics and psychology. The post-communicative approach (Modern Language Association of America, 2007) in FL teaching and learning utilizes psychological methods and techniques to make it more effective and enjoyable, and the positive psychology (Oxford, 2015) aims to activate character strengths and self-regulated learning to enhance professional and personal well-being.

What is more, nearly all interventions attempting to reduce FLA are learner-oriented and rely on FL teachers to implement anxiety-relieving behaviours and practices in their classrooms (Skrinda, 2017). It is often forgotten that many FL teachers themselves are not native speakers and may face FLA (Horwitz, 1996). However, the research on teachers' and student teachers' FLA is still rather limited, and this despite the fact that it can have an undesirable influence on FL learning as the role of the teacher is undoubtedly crucial in making FL learning less stressful and more effective (Hashemi, Abbasi, 2013; Horwitz, 1996).

Therefore, a longitudinal study of training interventions specifically aimed at reducing pre-service teachers' FL pronunciation anxiety (FLPA) levels and how this reflects their personality characteristics can shed more light on the issue and complement the existing findings. In the current study, an affective intervention was applied to a group of pre-service EFL teachers in the form of psycho-social training combined with intensive English pronunciation training<sup>1</sup> in order to determine whether there is any effect of this intervention on their personality and English pronunciation anxiety.

In this context, two research questions were formulated:

1. What changes does the psycho-social training induce in foreign language pronunciation anxiety?
2. What changes does the psycho-social training induce in personality factors?

## **2. Materials and Methods**

### **Objectives**

The main objectives of this study were to determine the effect of psycho-social training on the analysed personality variables and FLPA. Many researchers (e.g., Hashemi, Abbasi, 2013; MacIntyre, 1995) have acknowledged the need of FLA coping training for FL learners as a supplement to skills training. Based on the literature review, it was assumed that some personality traits enhanced by psycho-social training might contribute to the reduction of FLPA, especially the primary factors positively related to the global factor Extraversion and those negatively related to the global factor Anxiety.

### **Participants**

63 Slovak first-year EFL student-teachers served as participants in this study. After the pre-test, they were subdivided into two groups (the experimental group – 30 students and the control group – 33 students) by stratified random sampling to obtain the comparable level of FLPA in both groups. Further, the experimental group was divided into two sub-groups of 15 participants each, as psycho-social training is proven to be most effective in smaller groups from 5 to 12-15 people (Wilkinson, Canter, 1982). The two experimental sub-groups were given identical amounts and qualities of intervention and were treated as a whole in the analysis.

### **Instruments**

**The Sixteen-Factor Personality Questionnaire (16PF).** Information concerning personality was elicited from the participants by the way of the Sixteen-Factor Personality Questionnaire, 5<sup>th</sup> edition (Cattell et al., 1997), which was administered and evaluated by a psychologist (one of the authors). The questionnaire assesses personality traits according to five global factors and sixteen contributing primary factors (Table 1) by means of self-reported answers to 185 multiple-choice questions. The personality features are evaluated on a 10-point scale with a higher score indicating a higher tendency towards the given personality trait.

**Table 1.** Global and contributing primary factors in the 16PF (Cattell et al., 1997)

<b>Global Factor Definition</b>	<b>Contributing Primary Factors</b>
<p><b>Extraversion (EX)</b> Social orientation; the desire to be around others and be noticed by them; the energy invested in initiating and maintaining social relationships.</p>	A Warmth
	F Liveliness
	H Social Boldness
	N Privatness -
	Q2 Self-Reliance -
<p><b>Anxiety (AX)</b> Emotional adjustment; the types of emotions experienced and the intensity of these.</p>	C Emotional Stability -
	L Vigilance
	O Apprehension
	Q4 Tension
<p><b>Tough-Mindedness (TM)</b> The way a person processes information; the extent to which they will solve problems at an objective, cognitive level or by using subjective or personal considerations.</p>	A Warmth -
	I Sensitivity -
	M Abstractedness -
	Q1 Openness to Change -
<p><b>Independence (IN)</b> The role a person assumes when interacting with others; the extent to which they are likely to influence or be influenced by the views of other people.</p>	E Dominance
	H Social Boldness
	L Vigilance
	Q1 Openness to Change
<p><b>Self-Control (SC)</b> Response to environmental controls on behaviour; internal self-discipline.</p>	F Liveliness -
	G Rule-Consciousness
	M Abstractedness -
	Q3 Perfectionism

**Foreign Language Pronunciation Anxiety Scale (FLPAS).** The FLPAS (see Appendix)<sup>2</sup> has been used to examine the participants' English pronunciation anxiety level before and after the intervention. Its design was inspired by the Foreign Language Classroom Anxiety Scale (Horwitz et al., 1986) and the Phonetics Learning Anxiety Scale (Baran-Lucarz, 2013), based on the authors' teaching experiences in English phonetics courses and reflecting the students' opinions on their English pronunciation weak points and worries.

The questionnaire included 20 declarative statements to gather participants' perceptions of their English pronunciation and required them to indicate the extent to which they agree/disagree to the statements based on a 5-point Likert scale (1 – strongly disagree, 2 – disagree, 3 – undecided, 4 – agree, and 5 – strongly agree). The anxiety score ranged from 20 to 100, with higher scores reflecting greater anxiety. For some items, a reversed scoring was used.

### **Procedure**

Pre-test: 16PF and FLPAS were conducted with all participants. After the pre-test, the participants were subdivided into the experimental group and the control group 33 students to obtain a comparable level of FLPA in both groups.

Intervention: Psycho-social training was provided to the experimental group over the course of 24 weeks (a total of 36 hours). Pronunciation training was provided to both groups over the course of 24 weeks (a total of 36 hours).

Post-test: 16PF and FLPAS were conducted with all participants after 24 weeks of intervention.

### **Intervention**

**Psycho-social training.** Psycho-social training is a widely accepted and applied non-therapeutic intervention training program of active social learning in all levels of education in the United States and Western Europe (Coleman, Deutsche, 2000). Compared to more traditional forms of education, it induces deeper and longer-term positive changes in participants' social competences (Positive Youth Development, 2014).

It is a non-therapeutic intervention training program of active social learning that should help individuals cope with stressful situations by developing their social abilities (sensitivity, assertiveness, empathy, communication and cooperation). It helps participants understand their own and the other people's emotions and behavior and enhance their self-confidence, acquire adequate reactions, realize the reasons for diffidence, strengthen their will and active self-knowledge and cope with stage fright.

Psycho-social training was led by a psychologist (one of the authors) and implemented exclusively in the experimental group for 24 weeks (one 90 minute session per week). The primary rules of psycho-social training are smaller groups of attendants, sitting in a circle, uninterrupted sessions and psychologists as lecturers. The purpose of psycho-social training is to create a supportive environment and an atmosphere that generates psychological trust, to enhance self-expression and openness.

Each session introduced a different topic (Who am I?; What am I like?; We all are different; Myself; Team; Communication; Emotions; Conflict; How to solve conflicts?; Conflict and I; Conflict and you; Conclusion) and had a similar structure. The first session started with introducing the participants to each other and making them aware of the objectives of the training. The next sessions started with a 10-minute talk about each participant's opinions and problems and continued with the discussion of the topic of the session (10-15 minutes). The program of the training was semi-structured and included the participants' topical issues, if required (for more details see Skorvagova, 2016).

The sessions were experiential in nature and the methodology was participatory, i.e., learning through the sharing of ideas and through practice. Individual, pair or group work, role playing, discussions and brain storming were used in the sessions to encourage the participants to experience, understand and contribute towards individual as well as collective learning. The participants were encouraged to use various expressive techniques (e.g., puppet play, drawing, writing and physical activities) to acknowledge their feelings and problems.

Psychotherapeutic activities applying cognitive-behavioural, modelling, metaphor, systematic reinforcement and mindfulness techniques were the core of each session and took from 10 to 75 minutes. After each activity, a short discussion (debriefing) was initiated by the psychologist to reflect the participants' feelings. The session was concluded by a 5-minute summary of the session.

**Pronunciation training.** The phonetic training was led by a phonetician (one of the authors), which was equally implemented in both the experimental and control groups for 24 weeks (one 90-minute session per week). The phonetics classes were predominantly practical with complementary theoretical input on English phonetics and phonological issues (Roach, 2009). The pronunciation training focused on eliminating the native language interference in English. Both segmental and supra-segmental features of English were presented in a detailed manner, using mostly an inductive approach (students tried to observe the phonetic phenomena and come up with the rules).

The classes consisted of standard instruction for EFL phonetics courses and usually started with a theoretical explanation followed by oral practice. Different types of techniques were applied to practice pronunciation (listen, identify, repeat and produce) using audio- and video-recordings and the teacher as a model of articulation. The last part of the lesson was devoted to transcription practice using IPA symbols.

**Data analysis**

The 16PF score for each factor was computed using the DOS Psychosoft System Brno, which provides automatic scoring and interpretation. The FLPAS score for each subject was computed by summing up the scores of each questionnaire item (with respect to the reverse scoring). The data were collected and evaluated, and the individual scores of the respective parts were analysed using descriptive statistics and non-parametric tests to examine the changes of participants' 16 PF and FLPAS scores. A quantitative analysis of the data obtained by the instruments (16PF and FLPAS) applied in the pre-test and post-test was performed using the Wilcoxon Signed Rank Test and the Wilcoxon Rank Sum Test in the program STATISTICA because of the small sample without normal distribution.

**3. Results**

**Foreign Language Pronunciation Anxiety Scale (FLPAS)**

First, the means of the self-reported anxiety levels in the pre-test and post-test in both groups (Table 2) were calculated and compared. The Wilcoxon Rank Sum Test proved that the differences between the FLPA scores of the control group and the experimental group are statistically insignificant ( $p > 0.05$ ) in the pre-test:  $Z = 0.089496$ ,  $p = 0.928688$ ,  $\alpha = 0.05$  and statistically significant ( $p < 0.05$ ) in the post-test:  $Z = 2.51329$ ,  $p = 0.011961$ ,  $\alpha = 0.05$ . A non-parametric one-side Wilcoxon Signed Rank Test proved that the differences in the FLPA scores between the pre-test and post-test were statistically significant ( $p < 0.01$ ,  $\alpha = 0.01$ ) both in the control group ( $Z = 4.396575$ ,  $p = 0.000011$ ) and the experimental group ( $Z = 4.78214$ ,  $p = 0.00000$ ).

**Table 2.** FLPA scores in the pre-test and in the post-test

pre-test	control group	post-test	control group
	72.97		68.36
	experimental group		experimental group
	72.70		61.97

**16 Personality Factor Questionnaire (PF16)**

The means of the 16 PF in the pre-test and post-test in both groups were calculated and compared (Table 3).

**Table 3.** Wilcoxon Signed Rank Test results of 16PF

factor	control group (n = 33)				experimental group (n = 30)			
	means		Z	p	means		Z	p
	pre-test	post-test			pre-test	post-test		
A	5.70	5.88	1.43	0.15	5.77	5.57	0.75	0.45
B	5.73	6.30	3.18	0.00*	5.70	6.73	3.43	0.00*
C	4.70	5.03	2.52	0.01*	4.47	5.50	3.02	0.00*
E	5.03	4.97	identical		4.93	4.83	0.34	0.73
F	6.18	6.06	1.83	0.07	6.13	6.20	0.18	0.86
G	4.67	4.82	1.83	0.07	4.57	4.80	0.58	0.56
H	6.09	6.18	1.01	0.31	6.07	7.53	3.72	0.00*

I	6.36	6.24	1.47	0.14	6.40	6.33	0.33	0.74
L	6.79	6.61	1.35	0.17	6.90	5.37	3.71	0.00*
M	6.03	6.00	identical		5.90	6.10	0.61	0.54
N	5.67	5.52	1.83	0.07	5.53	5.47	0.01	0.99
O	6.03	5.36	3.18	0.00*	5.93	4.33	3.70	0.00*
Q1	5.67	5.82	1.83	0.07	5.73	5.97	0.60	0.55
Q2	5.64	5.73	1.21	0.22	5.67	5.83	0.35	0.73
Q3	4.82	4.91	1.60	0.11	4.67	4.80	0.64	0.52
Q4	5.82	5.27	2.58	0.01*	5.87	4.37	4.13	0.00*
EX	5.79	5.76	0.37	0.72	5.77	5.77	0.09	0.93
AX	6.61	5.97	3.41	0.00*	6.67	4.53	4.69	0.00*
TM	4.76	4.70	0.80	0.42	4.87	4.63	0.65	0.51
IN	5.70	5.61	identical		5.57	5.53	0.28	0.78
SC	4.58	4.73	1.18	0.24	4.63	5.97	3.23	0.00*

The Wilcoxon Rank Sum Test (Table 4) proved that the differences between the 16PF scores of the control group and the experimental group are statistically insignificant ( $p > 0.05$ ,  $\alpha = 0.05$ ) in the pre-test on all factors and statistically significant ( $p < 0.05$ ,  $\alpha = 0.05$ ) in the post-test on the factors marked by \* (H – Social Boldness, L – Vigilance, O – Apprehension, Q4 – Tension, AX – anxiety and SC – Self-Control).

**Table 4.** Wilcoxon Rank Sum Test results of 16PF

factor	pre-test		post-test	
	Z	p	Z	p
A	-0.13	0.89	0.66	0.51
B	0.059	0.95	-1.82	0.07
C	1.015	0.31	-1.45	0.15
E	0.29	0.77	0.29	0.77
F	0.14	0.89	-0.32	0.75
G	0.15	0.88	0.02	0.98
H	0.16	0.87	-2.80	0.01*
I	0.07	0.94	-0.36	0.72
L	-0.19	0.85	2.74	0.01*
M	0.40	0.69	-0.24	0.81
N	0.35	0.73	0.22	0.83
O	0.26	0.80	2.52	0.01*
Q1	-0.13	0.90	-0.44	0.66
Q2	-0.02	0.98	-0.32	0.75
Q3	0.06	0.95	0.06	0.96
Q4	0.04	0.97	2.45	0.01*
EX	0.07	0.94	-0.11	0.92
AX	-0.20	0.84	2.81	0.01*
TM	-0.30	0.76	0.17	0.86
IN	0.31	0.75	0.23	0.82
SC	0.01	0.99	-3.04	0.00*

A non-parametric one-side Wilcoxon Signed Rank Test (Table 3) proved that the differences in the 16PF scores between the pre-test and post-test were statistically significant ( $p < 0.01$ ,  $\alpha =$

0.01) only for the factors marked by \*. In the control group: B – Reasoning, C – Emotional Stability, O – Apprehension, Q4 – Tension, AX – Anxiety; and in the experimental group: B – Reasoning, C – Emotional Stability, H – Social Boldness, L – Vigilance, O – Apprehension, Q4 – Tension, AX – Anxiety and SC – Self-Control.

#### **4. Discussion**

The purpose of this study was to investigate to what extent the aspects of EFL student teachers' personalities changed after the 24-week psycho-social training in the experimental group combined with English pronunciation training conducted in both groups. After the intervention, FLPA was reduced in both groups, probably due to the phonetic training conducted in both groups, which improved participants' English pronunciation quality and therefore confidence. However, the decrease of FLPA in the post-test was more significant in the experimental group, probably due to the psycho-social training provided.

The next research question investigated to what extent the examined personality factors changed after the intervention as measured by the 16PF questionnaire. The 16PF results were similar for both groups in the pre-test with rather high scores on L – Vigilance, I – Sensitivity, and the global factor AX – Anxiety. The lowest scores were on C – Emotional Stability, G – Rule-Consciousness), Q3 – Perfectionism and the global factor SC – Self-Control, without any significant differences between the control and experimental groups.

The participants were young (18-19 years of age), just starting their university studies, with many worries and expectations. Late adolescence is a period of identity formation, and some emotional instability and doubts about oneself are an integral part of it, which could partly explain such factor proportions.

After the intervention, the groups differed in six factors, with the experimental group scoring significantly higher in Social Boldness and Self-Control, and significantly lower in Vigilance, Apprehension and Tension contributing to the global factor Anxiety. However, Apprehension, Tension and Anxiety were significantly reduced also in the control group, which can be attributed to two semesters of targeted FL pronunciation training. The participants' self-perception of their FL pronunciation quality was better, which resulted (inter alia) in reduced Anxiety and related primary factors. Nevertheless, Social Boldness, Vigilance and Self-Control did not change in the control group.

When comparing the factor changes within each group, Reasoning and Emotional Stability increased in both groups as well. The emotional, social and cognitive development of the participants enhanced by the psycho-social training could result in increased relaxation, patience, adaptation, self-assurance, confidence, self-satisfaction and internal self-discipline, and in reduced suspicion and distrust.

A significant increase in Reasoning in both groups after two semesters of university study is undoubtedly a gratifying finding. However, the relation to the intervention applied seems to be blurred, as the psycho-social training does not primarily develop cognitive aspects. The considerable improvement in Reasoning in the experimental group might correspond to the phenomenon of divided attention between the task-related and emotion-related cognition among anxious individuals, making cognitive performance less efficient (Eysenck, 1981; MacIntyre, Gardner, 1991). The significantly-reduced anxiety in the experimental group might reflect the facilitative effect on the mental capacity of the participants.

Most of the factors that changed were the primary factors contributing to the global factor Anxiety, and their significant change can be attributed to the effect of both the pronunciation and psycho-social training. The combination of FLA coping intervention as a supplement to FL skills training is generally considered effective (e.g., Horwitz, 1996; Hashemi, Abbasi, 2013; MacIntyre, 1995). However, an overall maturation effect that occurs naturally over time and does not result from the intervention applied and the effect of environmental factors on personality profiles (Pervin, Cervone, 2010) have to be taken into account when interpreting the data.

Even so, the exact nature of the relationship between personality factors and FLPA may be influenced by various concomitant factors, which prevents generalized linear correlations from reaching overall significance. However, no other significant variables have been traced during the current experiment, so it can be summarized that both the psychological training combined with phonetic training had facilitative effects in reducing this specific type of FLA.



## 5. Conclusion

The aim of this study was to introduce psycho-social training as a novel approach to reducing FLPA. The psychologist conducting the psycho-social training observed that most participants achieved deeper self-knowledge and higher spontaneity in their interpersonal relations. The participants' feedback revealed that they appreciated mostly the activities supporting their self-reflection and the others' reflections on the issues, which stimulated them to interact in a group and be more open and spontaneous. The major benefit of the psycho-social training was that the participants who showed low self-esteem and increased self-consciousness previous to the training were given sensitive support and feedback. They had an opportunity to develop their social abilities and competencies, such as their ability to communicate, cooperate and accept others.

The psychology of personality in FL pronunciation learning and teaching seems to be the current tendency nowadays, since the nature of pronunciation is strongly related to a learners' ego. New trends in teaching pronunciation emphasize the affective aspect of learning to counterbalance the traditional cognitive learning. The results of the current study lend support to the view that psycho-social investment is a driving force in personality development (Roberts et al., 2005) and that psycho-social training is an example of an effective and easily-applicable strategy in FL education, transferable across diverse cultural and language contexts, with the potential to influence personality and thus reduce FLA.

It may be hypothesized that the lowered FLPA levels after pronunciation training resulted not only from the improvement of pronunciation but also from the participants' self-assessments and beliefs in their pronunciation skills being at a higher level after intensive pronunciation practice, which is an important contribution to the discussion of the idea that FLA may be the result as well as the source of an insufficient command in an FL (Sparks, Ganschow, 1991).

The present study is most likely unique for considering the relationship of FLPA with such a large scale of personality factors, thus contributing to a slightly clearer picture of FLA and its relationship with personality traits. However, it is important to show caution, as FLA may interact with a complex of other factors. It would be worthwhile to replicate this study, to add another perspective in considering to what extent the effect of intervention remains stable over time. Further exploration of this intriguing issue is needed, but it is hoped that another small step has been taken towards a greater understanding of the impact of personality on FL learning.

## 6. Limitations

The present study has a number of serious limitations, the first one being the choice of research instruments and the comparability of research results. The "Big Five" is more often used in related studies, however, 16PF was preferred here, as it evaluates personality on a scale among a range of aspects rather than condensing them into a small number of global factors scored high to low.

FLPAS might provide an impetus for further research. An analysis of the factorial structure of the FLPAS was outside the scope of the present study, and it was methodologically impossible due to the sample size limitation. Because the number of participants was rather small, it was impossible to use a Factor Analysis.

Space limitations prevented including the analysis of participants' pronunciation quality after the intervention as well as the interpretations of semi-structured interviews conducted with the participants after the intervention. As they will shed more light on the complex phenomenon that FLPA undoubtedly is, their results will be included in forthcoming studies.

## 7. Notes

\* The FL pronunciation quality of the participants was evaluated by 5 native speakers of English, both before and after the intervention, in a 5-point Likert scale. The impact of psycho-social training on the participants' pronunciation and the correlation between pronunciation quality and pronunciation anxiety is the subject of a separate study. However, the current results as well as some previous research (Kralova et al., 2017) indicate the strong positive influence of psycho-social training on FL pronunciation and a significant negative relationship between pronunciation quality and pronunciation anxiety.

<sup>2</sup>The participants were given the English-specific pronunciation anxiety scale, referred to as the Foreign Language Pronunciation Anxiety Scale, supposing the findings relate to general FL pronunciation anxiety issues.

## 8. Acknowledgements

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## Appendix

### English Pronunciation Anxiety Scale

The following questionnaire was designed for the purpose of academic research. Your responses will not be shared with anyone but the researchers who are conducting this study and will be kept confidential. Thank you for your time and participation.

#### **Personal background information.**

Gender:

Age:

Learning English (since when/where/how):

Time spent in an English speaking country:

Communication with English native speakers (duration/frequency):

To what extent do you agree with the following statements?

Strongly disagree/Disagree/Undecided/Agree/Strongly agree

1. I do not feel nervous when speaking English. (reverse-scoring)
2. I do not like talking to more advanced English speakers.
3. I feel embarrassed talking to people with good English pronunciation.

4. I get nervous when I have to speak English in front of other people.
5. I am satisfied with my English pronunciation. (reverse-scoring)
6. I am bothered about making pronunciation mistakes.
7. I realize how many pronunciation mistakes I make.
8. I feel embarrassed when I realize that I pronounce some words incorrectly.
9. I am afraid people will think I am silly and incompetent because of my poor English pronunciation.
10. I consider imitating native-like English pronunciation ridiculous.
11. I am afraid my future students will have better English pronunciation than I do.
12. Other students do not have better English pronunciation than I do. (reverse-scoring)
13. I am worried about not being understood because of my improper pronunciation.
14. I do not feel ashamed when people correct my pronunciation mistakes. (reverse-scoring)
15. It seems to me that I cannot get rid of my Slovak accent in English.
16. I can never master good English pronunciation.
17. I do not think English pronunciation is difficult. (reverse-scoring)
18. I consider the rules of English pronunciation incomprehensible.
19. It is very difficult to pronounce like a native speaker.
20. I think that good English pronunciation is very important for an English teacher.