Министерство науки и высшего образования Российской Федерации

Национальный исследовательский ядерный университет «МИФИ»

Первый Национальный конгресс по когнитивным исследованиям, искусственному интеллекту и нейроинформатике

ДЕВЯТАЯ МЕЖДУНАРОДНАЯ КОНФЕРЕНЦИЯ ПО КОГНИТИВНОЙ НАУКЕ

Сборник научных трудов

В двух частях

Часть 2

10–16 октября 2020 г., Москва, Россия

I National Congress on cognitive research, artificial intelligence and neuroinformatics

THE NINE INTERNATIONAL CONFERENCE ON COGNITIVE SCIENCE

Conference proceedings

October 10–16, 2020, Moscow, Russia

Functional bilingualism: Contribution of ambiguity tolerance to learning a foreign language¹

I.V. Atamanova Tomsk State University, Tomsk, Russia iatamanova@yandex.ru

Keywords: linguistic majors, functional bilingualism, ambiguity tolerance, target-culture transformation.

Foreign or second language learning has been currently recognized as a complex and multifaceted process by its essence (Pawlak 2013). From the functional bilingualism perspective the research focus, when examining teaching and learning a foreign language, is mostly on using the language being studied for special purposes (Nagel et al. 2015). On the other hand, exploring various issues of bilingualism involves 'language acquisition and processing, their cognitive and neural bases, and the consequences that bilingualism holds for cognition and the brain over the life span' (Kroll et al. 2015: 377). When learning a foreign language, we enter a new linguistic system and introduce ourselves to a new cultural system, i.e. some kind of the target-language culture transformation into our worldview happens (Atamanova et al. 2015).

In connection to this, ambiguity tolerance can be viewed as a psychological factor that contributes to foreign language learning, being an indicator of language learners' openness to the world of this new culture (Atamanova and Bogomaz 2014). Ambiguity tolerance 'generalizes to the various aspects of emotional and cognitive functioning of the individual, characterizing cognitive style, belief and attitude systems, interpersonal and social functioning and problem solving behaviour' (Furnham and Marks 2013: 717). The role of ambiguity tolerance in foreign language learning has been widely recognized by researchers and educators (see, for example, Kamran 2011) since foreign language learners constantly face various ambiguous stimuli including both linguistic and cultural issues. It was also revealed that ambiguity tolerance should be rather interpreted as foreign language learners' qualitative characteristic being 'a parameter determining the dynamics of learners' communicative competence development in a foreign language' (Atamanova and Bogomaz 2014: 347). Meanwhile, little is known about if there is any difference in ambiguity tolerance between foreign language learners depending on the target language being learnt. In the context of functional bilingualism this knowledge could contribute to a deeper under-

 $^{^{\}rm 1}$ The paper was prepared within the RFBR grant, project 20-013-00282a.

standing of linguistic students' personal and professional development to optimize their individual educational trajectories when majoring in foreign languages belonging to different language groups.

The paper presents a study aimed at exploring between-group differences in ambiguity tolerance among linguistic students whose majors were foreign languages belonging to different language groups. The total sample involved three groups of university students majoring in English (Group 1, n = 130), Chinese (Group 2, n = 110) and the Romance languages (Group 3, n = 78).

The study participants' ambiguity tolerance was measured by McLain's MSTAT-I research tool (McLain 1993) translated into Russian and psychometrically checked by Lukovitskaya (1998). Descriptive statistics and analysis of variance (the t-Student test for unpaired data) were used to treat the data collected.

Table 1 shows the descriptive statistics (mean, standard deviation, lower quartile, upper quartile, skewness and kurtosis) for ambiguity tolerance in university students learning English, Chinese and the Romance languages (French, Spanish, Italian and Portuguese) as their majors.

A comparative analysis of the results obtained in the groups analyzed revealed that the study participants majoring in the Romance languages had the highest scores (93.78±19.79) in ambiguity tolerance, while the lowest ones were found in the study participants learning English as their major (87.71±19.57), see Table 1. The mean values obtained are lower than those revealed for engineering students (Atamanova and Bogomaz 2014) and this finding needs reasonable interpretation (it was hypothesized that linguistic students would be higher in their ambiguity tolerance because of their readiness for encountering a new linguistic system and a new culture) and further research.

Meanwhile, the study findings can be interpreted in regard to the languages concerned. For example, the Romance languages are characterized by a certain degree of emotional expressiveness that is likely to have an effect on one's personal characteristics. This seems to matter both for people speaking such languages as their native ones and for those learning them. This emotional expressiveness can contribute to a higher degree of openness to the target-language culture, resulting in a higher level of ambiguity tolerance. The Chinese language also requires a certain degree of openness to the target-language culture because of the specifics of its linguistic system. It should be noted that there was a statistically significant difference (p < 0.05) in ambiguity tolerance between linguistic students majoring in English and the Romance languages (t-value = -2.158; p = 0.032). These values are marked with asterisks (*) in Table 1.

Thus, the study findings further research into individual differences associated with learning a foreign language from the functional bilingualism perspective. They should be taken into account to optimize linguistic students' individual educational trajectories in the context of their personal and professional development in higher educational settings.

Descriptive statistics for ambiguity tolerance in linguistic students majoring in English (Group 1, n = 130), Chinese (Group 2, n = 110) and the Romance languages (Group 3, n = 78)

	Group	Mean	Lower quartile	Upper quartile	SD	Skew- ness	Kurto- sis
Ambigu- ity toler- ance	1	87.71*	75.00	98.00	19.57	0.29	0.57
	2	92.39	79.00	104.00	19.20	0.13	-0.11
	3	93.78*	77.00	108.00	19.79	-0.08	-0.37

References

- 1. Atamanova I., Bogomaz S. 2014. Ambiguity tolerance as a psychological factor of foreign language communicative competence development. Procedia Social and Behavioral Sciences 154, 345–352.
- 2. Atamanova I.V., Bogomaz S.A., Kozlova N.V., Kashirina V.I. 2015. An educational technology for developing professionally-oriented EFL communicative competence: Its acmeological potential. Procedia Social and Behavioral Sciences 200, 236–242.
- 3. Furnham A., Marks J. 2013. Tolerance of ambiguity: A review of the recent literature. Psychology 4, 717–728.
- 4. Kamran S.K. 2011. Effect of gender on ambiguity tolerance of Iranian English language learners. Journal of Education and Practice 2(11/12), 25–33.
- 5. Kroll J.F., Dussias P.E., Bice K., Perrotti L. 2015. Bilingualism, mind, and brain. Annual Review of Linguistics 1, 377–394.
- 6. Луковицкая Е.Г. 1998. Социально-психологическое значение толерантности к неопределенности. Дис. на соиск. учен. степ. к.психол.н. СПб. 173 с.
- 7. McLain D.L. 1993. The MSTAT-1: A new measure of an individual's tolerance for ambiguity. Educational and Psychological Measurement 53, 183–189.
- 8. Nagel O.V., Temnikova I.G., Wylie J., Koksharova N.F. 2015. Functional bilingualism: Definition and ways of assessment. Procedia Social and Behavioral Sciences 215, 218–224.
- 9. Pawlak M. (ed.). 2013. New perspectives on individual differences in language learning and teaching. Berlin: Springer.