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Functional Bilingualism: Definition and Ways of Assessment

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Abstract

The purpose of the article is to research an issue concerning the bilingual status of students majoring in English as a foreign language at Tomsk State University and similar universities. The authors focus on a brief description of types of bilingualism to define the category best suited to the EFL students and discuss the complementing uses of traditionally accepted (TOEFL+ etc.) and alternative language assessment procedures (The Peabody Picture Vocabulary Test) for the stated target group to assess their competence in international education and balanced cross-cultural communication.

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1. Introduction

All-round demand for specialists equally fluent in their native language and in English raises the issue of transforming foreign language teaching to satisfy the need of modern society for such specialists. On the one hand, one of the language training requirements is to prepare students for further education in foreign partner Universities, and thus, the educational focus is on developing their academic language. On the other hand, it is also vital to prepare them for natural cross-cultural communication covering not only topics about universal values but also aspects of everyday life. The researchers in teaching methodology are in search of new teaching methods to facilitate foreign language learning and to create conditions in learning environments which will foster natural

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acquisition of this language and enhance balanced cross-cultural communication via international education. There is an implicit desire not to educate students in a foreign language but “to plant” and develop their bilingual features. As a result, new questions are raised with respect to the definition of bilingualism and ways of assessment of foreign language competence.

In this study bilinguals are broadly defined as individuals or groups of people who obtain the knowledge and use of more than one language and who have various degrees of proficiency in both languages (e.g. Hakuta, 1986; Macnamara, 1967; Mohanty and Perregaux, 1997; Valdes & Figueroa, 1994). Thus, the students of the foreign language department being bilinguals by the definition above are taken as subjects for the study to reveal the complementary nature of verbal tests used in an academic environment for non-native speakers and tests used by psychologists and speech therapists for monolinguals.

2. Bilingual teaching and learning

One of the current trends in teaching foreign languages is “bilingual teaching,” meaning that the language is no longer the subject matter of education, but serves as the medium of instruction in science and art classrooms around the world.

The social meaning of “bilingual teaching” in general, irrespective to a certain language, is disclosed in “The UNESCO recommendation concerning the promotion and use of multilingualism and universal access to cyberspace” (2010): “The public and private sectors and the civil society at local, national, regional and international levels should work to provide the necessary resources and take the necessary measures to alleviate language barriers and promote human interaction on the Internet by encouraging the creation and processing of, and access to, educational, cultural and scientific content in digital form, so as to ensure that all cultures can express themselves and have access to cyberspace in all languages, including indigenous ones”.

Thus, creating and preserving a bilingual education system, where the mother tongue is used together with the second language as a means of instruction, multicultural education is advocated as the main trend of the modern education system. Leaving aside the problem of bilingual education employing minority languages, the present research focuses on English as a lingua franca. It is not a secret that English currently seems to be the ‘unofficial’ language not only of the European Union but of Russia as well, at least in academia. A new state 5-100 Federal Program of University Support aims to propel five Russian universities into the international rating’s top 100 by 2020 and proficiency in English has become crucial for Russian universities.

Instruction in English is a necessary precondition for any kind of professional training for future specialists. European bilingual education models are currently exemplified by CLIL – Content and Language Integrated Learning, a new generic and/or umbrella term for bilingual education, which has been rapidly spreading throughout Europe since the mid-nineties. Generally, the basis of this educational approach is that disciplines such as history, math, geography, etc, are taught in a foreign language instead of in the mother tongue, thus exposing the students to the foreign language in a much more authentic and holistic way. Such an approach, as described in Eurydice’s (2006) report Content and Language Integrated Learning (CLIL) at School in Europe, involves learning and teaching one or more ‘non-language’ disciplines not simply in, but also with and through a foreign language (Eurydice, 2006).

3. Functional bilingualism

As a result of bilingual teaching, functional bilingualism (Niemeier, 1999) is becoming extremely wide spread. The essence of this type of bilingualism is that the second language is used for special purposes, mostly study.

In accordance with the traditional diverse classification of bilinguals the students involved in bilingual teaching and defined as having functional bilingualism could be also referred to as dominant (or unbalanced) (Peal and Lambert, 1962), late sequential (Genesee et al., 1978), coordinate (Weinreich, 1953), and productive and additive (Lambert, 1974;75) bilinguals. Below we present the explanation of the assigned characteristics to the target group.

The students of the Faculty of Foreign Languages are immersed in a foreign language environment, having 6-8 classes a day in English (both language and non-language), but their native language (L1) proficiency is still higher than that of their second language (L2) (dominant). Most students were exposed to a foreign language and have

been productive in it since 10-12 years old (sequential, late, productive bilingualism), L2 being as enrichment without loss of L1 (additive).

Therefore, we may argue with F. Grosjean and et al. who claimed that we cannot compare language competence of a FL student and a monolingual native speaker (Grosjean, 2008; Cook, 1992, 1996; Herdina & Jessner, 2000). Sharing the idea of F. Grosjean about efficient bilingual language competence as functional aspect of language use we propose an approach aimed at revealing the nature of methodological gaps in language teaching which may lead to systematic differences in bilingual and monolingual language use.

4. Assessment Instruments

To assess language competence of FL students the following standardized language tests are mostly used at TSU and TPU: Cambridge English Language Assessment (Advanced (CAE), First (FCE), Key (KET), Preliminary (PET), Proficiency (CPE)), International English Language Testing System (IELTS), and Test of English as a Foreign Language (TOEFL).

The purpose of such tests is to evaluate the English proficiency of people whose native language is not English. The scores are primarily used as a measure of the ability of international students to use English in an academic environment. To quote the original TOEFL® framework document (Jamieson, Jones, Kirsch, Mosenthal, & Taylor, 2000, pp.10–11): “The purpose of the ... test will be to measure the communicative language ability of people whose first language is not English ... The test will measure examinees’ English-language proficiency in situations and tasks reflective of university life...” where instruction is conducted in English. Most language assessment centers (for example, <http://www.elearningeasy.com/HigherEducation/GCS.html>) at Universities claim that a score of 100 or higher on the internet-based TOEFL demonstrates that a candidate’s English language skills are strong enough for admission to any college in the country, while a score of 60 or lower restricts the opportunities for getting higher education at the most prestigious universities.

A peculiar feature of the above mentioned standardized tests is that they are aimed at assessing language proficiency irrespective of FL students’ age, focusing on language performance rather than on language production (verbal intelligence).

4.1. Receptive vocabulary test

The most popular standardized test to assess an individual’s verbal intelligence is The Peabody Picture Vocabulary Test or the PPVT originally launched in 1959 by Llyod M. Dunn and Leota M. Dunn. This test was designed to satisfy the special needs of scholars in their pursuit of a measurement of verbal ability in standard American English vocabulary rather than an assessment of language proficiency as it was. At present, the PPVT is used on a wide age range of students studying English as a second language to assess their language proficiency.

According to the information provided on the official site, The Peabody Picture Vocabulary Test has the following characteristics: “The Peabody Picture Vocabulary Test is a relatively short test. It lasts about 20 to 30 minutes. To administer the PPVT, the examiner presents a series of pages that contains four black-and-white pictures. Each picture is numbered. Then, the examiner says a word and the examinee will identify the number of the picture that best corresponds to the word. If the examinee has speech problems, he or she may point to the picture. All the words in PPVT are organized in age-appropriate item sets of twelve. The test is administered to establish the examinee’s Basal Set and the Ceiling Set, being the lower and upper boundaries of a person’s vocabulary and showing whether it is appropriate to the person’s age. The Basal Set is established in case the examinee makes one or zero errors in a set. The Ceiling Set rule is 8 or more errors in a set”. <http://www.brighthubeducation.com/special-ed-learning-disorders/13495-what-is-the-peabody-picture-vocabulary-test-all-about/>

4.2. Student's PPVT performance evaluation

The authors of the study used PPVT as a preliminary test to the experiment which is part of the project “Knowledge of collocations in monolinguals, bilinguals and multilinguals” coordinated by Dr. Judith Wylie, Queen’s University Belfast. The project aims to investigate binomial processing in monolingual and bilingual participants. Bilinguals are recruited from several linguistic contexts with differing L1/L2 balances including Hong Kong, Japan, Malta and Russia. The binomials will be presented in English to all participants. The PPVT was used to assess the vocabulary of the students of the Faculty of Foreign Languages, Tomsk State University, and the students of the International Education and Language Communication Institute, Tomsk Polytechnic University, who are considered functional bilinguals. The number of EFL students tested is 11. As the experiment is still in progress, we believe that some preliminary results could be of interest as they seem to reveal a gap between academic and colloquial English registered in bilinguals and give grounds to reconsider the way English is taught to students. Having studied English for 10-15 years at school and university, they still lack the vocabulary of 13-year-old native speakers, though they display profound knowledge of adult native speakers’ vocabulary. The experiment results (Table 1) show that the number of errors suddenly increases in Set 11 for all participants, the total number of errors being 32, which differs considerably from the total number of errors in the previous Set 10 (8 errors) and following Set 12 (13 errors). The rise in the amount of errors in Set 16 can be explained by the rise in language level, which is predictable.

Table 1. The total number of mistakes made by the participants.

Set №	10	11	12	13	14	15	16
Start Ages	11-12	13	14-16	17-18	19-Adult	Adult	Adult
The total number of mistakes	8	32	13	16	27	24	60

The increase in errors in Set 11 brought up the issue of language content education in Russian schools and universities. Owing to the fact that Set 11 corresponds to Age 13 we can speculate that the vocabulary taught in Russia in FL classes at this age differs from the vocabulary of a 13 year old native speaker or is taught but not processed properly, which leads to its poor activation later in life or study.

The difference between the everyday language of face-to-face interaction and the language of schooling is clearly expressed by Pauline Gibbons (1991) in outlining the differences between what she terms playground language and classroom language: “This playground language includes the language which enables children to make friends, join in games and take part in a variety of day-to-day activities that develop and maintain social contacts”.

As it is stated by Jim Cummins (2000): “Fluency with this kind of language is an important part of language development; without it a child is isolated from the normal social life of the playground. ... But playground language is very different from the language that teachers use in the classroom, and from the language that we expect children to learn to use. The language of the playground is not the language associated with learning in mathematics, or social studies, or science”.

It is believed that during the language acquisition process, immigrant children often achieve conversational fluency within one to two years, but their ability to reach grade appropriate academic proficiency can take up to five years or longer. Thus, we can observe the opposite situation to the language acquisition process which occurs in artificially created surroundings.

The vocabulary skipped by the participants during the PPVT administration within the given project includes various types of words (Table 2.): nouns denoting objects (e.g. trumpet), generalising nouns (e.g. apparel), nouns denoting actions (e.g. detonation), adjectives denoting states or properties (e.g. weary), and gerunds denoting actions (e.g. incarcerating). Most words that are not familiar to the participants belong to common class nouns (there are 25, or about 47 %), then come adjectives (there are 10, or about 19 %), gerunds of verbs denoting actions (the total number is 9, or about 17 %), generalising nouns (7, 13%) and noun-events (2, 4%). Fields that seem to be neglected in educating Russian-English bilinguals are related to the human body (sternum, cornea), music (trumpet,

clarinet), the plant and animal world (tusk, rodent, talon, feline, mammal, fern), geometry (wedge, parallelogram, pentagon), engineering (lever, clamp, valve, glider).

Table 2. The errors made by the participants.

№	The words that are not familiar to the participants	The number of the participants the word is not familiar to
1	incarcerating	8
2	sternum	8
3	trumpet	8
4	tusk	8
5	apparel	7
6	hatchet	7
7	talon	7
8	wedge	7
9	depleted	6
10	dejected	6
11	hedge	6
12	snarling	6
13	clarinet	5
14	constrained	5
15	valve	5
16	feline	4
17	inflated	4
18	lever	4
19	rodent	4
20	syringe	4
21	cerebral	3
22	cornea	3
23	cultivating	3
24	dilapidated	3
25	glider	3
26	pentagon	3
27	pillar	3
28	poultry	3
29	clamp	2
30	detonation	2
31	fern	2
32	hovering	2
33	hydrant	2
34	links	2
35	parallelogram	2
36	pastry	2
37	submerging	2
38	quintet	2

The authors realize that it might be too early to draw any conclusions from the data presented, but some preliminary speculations can be made.

The interest of the present article lies in the characteristics of the words skipped by the participants from Set 11 (Table 3).

Table 3. The errors made by the participants in Set 11.

№	Words from Set 11	The number of the participants the word is not familiar to
1	tusk	8
2	trumpet	8
3	snarling	6
4	inflate	4
5	rodent	4

The words presented in Table 3 can be analysed in terms of their place in prototype categories. As it is stated by cognitive linguists (Rosch, 1977, 1978) prototype categories in different cultures differ by the representations at their basic or generic level. As we can see from the list of skipped words *trumpet* is not a prototype word in Russian to represent musical instrument. The word *snarling* can be characterized as onomatopoeic and corresponds to the above mentioned playground language from early childhood which is very specific for different cultures. The superordinate level can also be culturally specific. Only recently *rodent* species became popular as pets (hamsters were the most popular representatives) and the word *rodent* is often used by Russian children in Russian to cover all the variety offered in pet shops. The word *tusk* refers to the list of attribute (parts of body) for an *elephant*, which is usually acquired in early childhood as part of one's native playground language. The word *inflated* is interesting for its morphological structure (*in-flat-ed*), an understanding of which develops with age, and which provides semantic clues for the listener which a non-native listener, acquiring the language at a later age, might not be able to understand.

As has already been stated, the present study does not claim that the above-mentioned speculations are true. The purpose is to call attention to an issue and invite further research on the problem of FL proficiency by contrasting it to the proficiency of native speakers in order to reveal and then close the gaps in language education .

5. Conclusion

If we are to speak about real language proficiency in FL for the students involved in international education, everyday language of face-to-face interaction and the language of schooling should be taken into consideration and assessed equally. The complementary relationship between academic and social English language skills raises the issue of developing and administrating English Language Proficiency tests aimed at covering both aspects mentioned. On the one hand, there is a debate about the validity of assessing bilinguals and monolinguals using the same scale but, on the other hand, scholars have always been concerned with the distinction of linguistic competence from than the actual performance of the language user, or, in the words of Saussure, who had emphasized this distinction before: with langue rather than parole.

One cannot deny that language performance assessment attracts specialists in the field of language testing looking for alternative ways to assess language, which is seen not as a goal in itself, but as a stimulus for methodological transformations in language education. The development of proper testing methods and approaches and consistent feedback for language instructors will help to satisfy the need of a modern poly-lingual community for multilingual specialists fluent not only in their professional field, but in everyday activities.

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References

Cook, V.J. (1992). Evidence for multi-competence. *Language Learning*, 42(4), 557-591.

- Cook, V.J. (1996). Competence and multi-competence. In G. Brown, K. Malmkjaer, & J. Williams (eds.), *Performance and Competence in Second Language Acquisition*. Cambridge: Cambridge University Press, 57-69.
- Cummins, J. (2000). *Language, power, and pedagogy: bilingual children in the crossfire*. Clevedon, U.K.: Multilingual Matters.
- Eurydice's (2006) report Content and Language Integrated Learning (CLIL) at School in Europe. http://www.indire.it/lucabas/lkmw_file/eurydice/CLIL_EN.pdf
- Genesee, F., Hamers, J., Lambert, W. E., Mononen, L., Seitz, M., and Starck, R. (1978). Language processing in bilinguals. *Brain and Language*, 5, 1–12.
- Gibbons, P. (1991). *Learning to Learn in a Second Language*. Newtown, NSW: Primary English Teachers Association.
- Grosjean, F. (2008). The bilingualism and biculturalism of the deaf. *Studying Bilinguals*. Oxford: Oxford University Press.
- Hakuta, K. (1986). *Cognitive development of bilingual children*. Center for Language Education and Research Educational Report Series, No. 3. UCLA.
- Herdina, P., & Jessner, U. (2000). The dynamics of third language acquisition. In J. Cenoz & U. Jessner (Eds.) *English in Europe: The acquisition of a third language* (pp. 84–98). Clevedon: Multilingual Matters.
- Jamieson, J., Jones, S., Kirsch, I., Mosenthal, P., & Taylor, C. (2000). *TOEFL® 2000 framework: A working paper (TOEFL® Monograph No. MS-16)*. Princeton, NJ: ETS.
- Lambert, W.E. (1974). Culture and language as factors in learning and education. In F. F. Aboud and R. D Meade (eds.), *Cultural Factors in Learning and Education*. Bellingham, Wa: Western Washington State University.
- Macnamara, J. (1967). The bilingual's linguistic performance. A psychological overview. *Journal of Social Issue*, 23, 58-77.
- Mohanty, A.K. & Perregaux, C. (1997). Language acquisition and bilingualism. In J.W. Berry, P.R. Dasen & T.S. Saraswathi (Eds.), *Handbook of cross-cultural psychology, Vol. 2: Basic processes and human development (2nd ed.)*, (pp.217-253). Needham Heights, MA: Allyn & Bacon.
- Niemeier, S. (1999). A Cognitive View On Bilingualism And "Bilingual" Teaching And Learning. *Journal of English Studies*, 1, 165-185.
- Peal, E. and Lambert, W.E. (1962). The relation of bilingualism to intelligence. *Psychological Monographs*, 76, 1–23.
- Recommendation Concerning the Promotion and Use of Multilingualism and Universal Access to Cyberspace (2010) (DOC file, 79Kb) retrieved from <http://www.ifap.ru/ofdocs/unesco/multcybr.htm>
- Rosch, E. (1977). Human categorization. In N. Warren (Ed.), *Advances in cross-cultural psychology* (Vol. 1). London: Academic Press.
- Rosch, E. (1978). Principles of categorization. In E. Rosch & B. B. Lloyd (Eds.), *Cognition and categorization*. Hillsdale, NJ: Erlbaum.
- Valdés, G., & Figueroa, R.A. (1994). *Bilingualism and testing: A special case of bias*. Norwood, NJ: Ablex.
- Weinreich, U. (1953). *Languages in Contact*. The Hague: Mouton.