Variability of the Linguistic Consciousness Development of an Individual in the Artificial Bilingualism Conditions

Варіативність розвитку мовної свідомості особистості в умовах штучного білінгвізму

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ABSTRACT
Purpose. The purpose of this study was to outline the variable markers of the individual linguistic awareness/consciousness development in the conditions of artificial bilingualism.
Methods. The main method of the study was the method of selective observation with the fixation of markers of the linguistic awareness development and qualitative indicators of respondents' mastery of English as a foreign language in the artificial bilingualism conditions. Potential standards of passive-mechanical (imitation) and active (cognitive-communicative) models of artificial bilingualism were used for comparison. Markers of the respondents’ linguistic awareness were subject to monitoring: language knowledge, culture and speaking skills (at a level sufficient for formulating and expressing thoughts in the process of interpersonal communication in a foreign language), manifestations of language socialization (mastering the norms of listening, perceiving and speaking in a foreign language at a level sufficient for communication and coordination of semantic codes of communication subjects). The obtained data were subjected to content analysis, which made it possible to evaluate the markers of the development of the respondents’ linguistic awareness in the artificial bilingualism conditions and to reveal the level of using a foreign language in communication. In order to statistically confirm the significance of the obtained data, the method of one-factor variance analysis (Fisher’s φ-criterion) was used. A multidimensional procedure of cluster analysis (K-means clustering) was also used, which made it possible to distinguish subsets of the levels of the linguistic awareness development among the respondents of the research project.

Results. The results of the data analysis of the research project proved that the differences between the experimental and control groups of junior high school students in identifying markers of linguistic awareness are reliably significant relative to individual predictors of the logical ordering of speech-thinking dimensions of language awareness (at p ≤ 0.05). Respondents of the experimental group demonstrate better results in listening, understanding the content of oral expression in a familiar everyday context and in communicative competences. The dominance of markers of an average level of linguistic awareness development among younger schoolchildren was also recorded.

Conclusions. In the realities of permanent transformations of the modern information society, bilingualism appears as a predictor of foreign language mastery at a level sufficient for communication and exchange of ideas with other subjects of linguistic activity. Language (and foreign language in particular) is not only a communication tool, but also a way of perceiving, organizing and encoding (or decoding) the surrounding reality. In this context, linguistic awareness is interpreted as an invariant of possible schemes of mastering reality, which is most suitable for the purposes of communication between people. The analysis of markers of the junior high school students’ linguistic awareness development proved that when an active (cognitive-communicative) model of artificial bilingualism is implemented, the respondents demonstrate statistically better results in listening, understanding the content of oral expression in a familiar everyday context and in identifying communicative competences.

Key words: linguistic awareness, linguistic consciousness, language worldview, bilingualism, artificial bilingualism, bilingual personality development, foreign language communication, primary school age.
Introduction

The linguistic awareness of an individual means the purposefulness of linguistic actions, which are built on the basis of the objective reality anticipatory reflection with the help of generalized meanings objectified in words and fixed in social experience. Numerous studies by scientists in the field of linguistics, social linguistics and psycholinguistics (Yavorska, 2000; Selihey, 2009; Tokareva, 2018; Ivaniuk, Goroshko & Melnyk, 2020 etc.) prove that language awareness directs a person’s speech and language activity, “forms, preserves and transforms linguistic signs, the rules of their conjugation, usage, views and attitudes towards language and its elements” (cited by: Selihey, 2009: 13), which allows an individual to realize and interpret the facts of linguistic behavior of an individual and/or national communities.

In the study of prescriptive linguistics as a discourse, Yavorska (2000) considers the linguistic awareness or consciousness of an individual as a result of reflection; language reflection takes place on two levels: the first (surface) consists of language views and assessments inherent in a certain community, the second (deep) is realized when choosing language options for text creation. Therefore, attitudes about language behavior and a person’s evaluative attitude towards language are possible only where there is variability. In this context, Yavorska (ibid.) interprets linguistic awareness as “a set of culturally and socially determined attitudes towards language that reflect collective value orientations” (ibid.: 145).

Given the debatable nature of the categorization of linguistic consciousness in psycholinguistic science (Tokareva, 2018; Ivaniuk, Goroshko & Melnyk, 2020; Shymko, 2021 etc.), we must specify the defined concept in the discourse of this study: we consider linguistic awareness as one of the levels of the structure of a holistic the picture of the human world, an invariant from the multitude of possible schemes of mastering reality, which is most suitable for the purposes of communication between people (Ivaniuk, Goroshko & Melnyk, 2020: 64). In this context, language is not only a communication tool, but also a way of perceiving, organizing and encoding (or decoding) the surrounding reality. On the basis of the polyfunctional language system internalized by the linguistic personality, the human consciousness
Variability of the Linguistic Consciousness development...

produces a kind of conceptual-linguistic universe – a language world view; the logical-semantic constructs, subject, predicate, modal, discursive and other “quanta” of meaning reflected in it form a coherent unity (a kind of collective philosophy, which is a projection of the sociolect of speech subjects), which forms the conceptual space of the mental continuum (Tokareva, 2018)). Predictors of the language world view perceived by the subject and the content characteristics of speech activity determine the vectors of self-expression and self-affirmation, the expression of the national identity of the community (people) to which the individual belongs.

An important marker of the individual worldview is bilingualism (from the Latin bi – “two” and lingua – “language”), determined by the spread of population migration due to political and social crises in society and closely related to the marginalized groups life activities, their educational and economic problems.

The phenomenological field of bilingualism is not new to the scientific community (Weinreich, 1953; Fabbro, 1999; Howat & Widdowson, 2004), but it still remains ambiguous and hotly debated; the terminological difficulties of defining this concept and describing its essential features began to be traced. The debate about the influence of the practice of alternating use of two languages on the development of individual intelligence started at the beginning of the 20th century with the research of the well-known linguists-theoreticians of language contact Urie Weinreich (Weinreich, 1953) and Einar Haugen (Haugen, 1953). In linguistic studies, scientists specifically stated that bilingualism occurs when a person switches from one language code to another in specific conditions of speech communication (regardless of whether it is a transition from one language to another, from a national language to a dialect, or to languages of international, international communication). At the same time, Weinreich (1953) recognized that the degree of mastery of two languages cannot be formulated purely in linguistic terms; this is one of the numerous aspects of bilingualism, for the study of which linguistics needs cooperation with psychology and social sciences.

Already at the end of the 20th century, Azhniuk, in the field of sociolinguistic discourse, carried out a study of bilingualism markers in the language Ukrainian diaspora in the USA; the scientist used the term “metalanguage consciousness”, interpreting it as an individual’s ability to mentally compare the languages they know. Azhniuk’s research proves
that bilinguals who used Ukrainian and English in communication deepened their understanding of various linguistic phenomena, formed appropriate assessments, and had the opportunity to be in two “language worlds” at the same time (cited by: Selihey, 2009: 13).

Modern polydiscourse studies, including psycholinguistic studies, are marked by the interdisciplinary nature of the bilingualism analysis phenomenology; polymodal aspects of the manifestation of bilingualism are the subject of study in psycholinguistics, cognitive psychology, speech psychology, sociolinguistics, and linguistic and cultural studies. Research paradigms for the analysis of bilingualism highlight, first of all, the mechanisms of processing linguistic material in the minds of bilinguals (Schneller, 2013; Marks et al., 2022), linguistic and psycholinguistic patterns of foreign language (L2) acquisition in childhood (Kempert & Hardy, 2015; Creel, Rojo & Paullada, 2016; Garton & Copland, 2019; Cahyati, Parmawati & Atmawidjaja, 2019; Giguere & Hoff, 2023; Oh, Bertone & Luk 2023;) and in adulthood (Forsyth, 2014; Bergmann, Sprenger & Schmid, 2015; Marks, et al., 2022). Sociolinguistic and psycholinguistic markers of the bilingualism landscape began to attract the attention of scientists. In particular, it has been proven that children and adolescents master a foreign language more easily (increase vocabulary, reading speed, speaking skills and reading comprehension) in conditions of natural bilingualism, when mastering two languages occurs in direct contact with both language environments; under such conditions, children and adolescents not only learn a foreign language (L2) at school, but also hear it at home (Creel, Rojo & Paullada, 2016; Aquino-Sterling & Salcedo-Potter, 2019; Persici, Majorano, Bastianello & Hoff, 2022; Oh, Bertone & Luk 2023; Giguere & Hoff, 2023) or actively use in direct communication with peers (Bergmann, Sprenger & Schmid, 2015; Rankin, Grosso & Reiterev, 2016; Frigolé & Tresserras, 2023; Giguere & Hoff, 2023). As a result, in the linguistic consciousness of a naturally bilingual person, there is an adequate replacement of the language and culture constructs of the native mental background with foreign ones. Natural bilingualism reflects the way of thinking and the integrity of the dual world view of an individual. At the same time, in the conditions of artificial bilingualism (formal, which ensures the mastery of a foreign language (L2) during its specialized study (Voronin & Rafikova, 2017)), incomplete learning of foreign speech systems (deficiencies in the speech
structures planning, insufficient articulation skills, defects in tempo and rhythm) were noted, and manifestations negative interlanguage transfer (Forsyth, 2014; Bergmann, Sprenger & Schmid, 2015; Tumbull, 2018; Frigolé & Tresserras, 2023). Similar trends are also observed in the translation of texts (Bergmann, Sprenger & Schmid, 2015; Creel, Rojo & Paullada, 2016; Tumbull, 2018; Zasiekin, 2019; Saienko, Novikova & Sozykina, 2022; Frigolé & Tresserras, 2023). This allows us to assert that a person in the conditions of artificial bilingualism unconsciously translates language structures, modeling the communicative situation within the native culture. At the same time, researchers of bilingualism emphasize that the indicator of conscious (not formal) mastery of a foreign language is language awareness. For this, when learning a foreign language (L2), students are not only introduced to its structural forms (grammar, rules of reading, writing etc.), but also encouraged to understand the system-functional resources of a non-native language; it stimulates students’ interest, actualizes motivation and, as Selihay (2009) emphasizes, strengthens their commitment to language, instills resistance to the policy of linguicide and the phenomena of language manipulation (ibid.: 14). Therefore, artificial bilingualism in the realities of permanent transformations of the wartime creates for an average person, first of all, a formal opportunity to communicate in a foreign language and expand knowledge about the culture of another nation, thus optimizing human adaptive resources. A person’s ability to communicate (in particular, productive text creation) in a foreign language (L2), directing his consciousness to the subject of content, rather than the form of speech activity, is one of the main psychological characteristics of individual bilingual competences formation. At the same time, we consider it expedient to emphasize that the limitations of artificial bilingualism (lack of language environment, insufficient development of metacognitive forms of mental activity, meager practice of text creation etc.) make the ability to independently build the logical and semantic structure of speech expression the most problematic aspect of bilingual personality development (Tokareva, 2018), another problematic aspect is understanding textual constructions of a foreign language (Cahyati, Parmawati & Atmawidjaja, 2019; Tokareva & Tsehelska, 2020).

In general, the analysis of scientific and scientific-methodological discourses of the specified problem allows us to state that, despite
the wide continuum of theoretical and empirical research presented by the world cohort of scientists, it is too early to talk about a holistic concept of the development of the linguistic consciousness of an individual in the modern polylingual space. Therefore, taking into account the debatable content of the given problem, as well as realizing the importance of understanding the trends of the linguistic consciousness development of an individual in the unstable chronotope of being, we conducted an empirical study of the linguistic consciousness of an individual markers; we consider this study as a pilot project for defining the vectors of the integrative theory of the development of linguistic consciousness of the individual in the modern polylingual space. Psycholinguistic dimensions of the development of linguistic consciousness of an individual were chosen as the object of research. We considered the subject of the study to be the concretization of trends in the development of the linguistic consciousness of an individual in the conditions of artificial bilingualism.

Within the scope of this study, we consider bilingualism as mastery of a foreign language (L2) at a level sufficient for communication and exchange of ideas with speakers of a foreign language; in this context, we consider it important not in which language a person thinks, but whether a person can communicate and exchange thoughts with other subjects of communication using a foreign language.

The purpose of this study was defined by us as the delineation of variable markers of the development of linguistic consciousness of an individual in the conditions of artificial bilingualism. As a research task, we considered the possibility of evaluating the variability of the use of bilingual competences in the foreign language communication system of subjects, taking into account the experience of artificial bilingualism.

Methods

The polymodality of the development of the linguistic consciousness of an individual in the conditions of the instability of the modern sociocultural situation necessitated the use of the evolutionary-synergistic paradigm of scientific rationality, which allows analyzing the phenomenological field of speech development from the standpoint of self-organization of open dissipative systems in the unity of sociocultural, psychological, and psycholinguistic contexts. Taking into account that the
Variability of the Linguistic Consciousness development...

contextuality of the organization of the structural dimensions of speech expression is formed (in the unity of the “language – speech – speech activity” system) and fixed in the process of formatting the linguistic consciousness of an individual, we made a hypothetical assumption about the existence of differences in the detection of markers of the development of the linguistic consciousness of a person with taking into account the experience of artificial bilingualism.

In order to test the hypothesis, we implemented an empirical research program; the main method of the study was the method of selective observation with the fixation of markers of the development of language awareness and qualitative indicators of the respondents' mastery of English as a foreign language in the conditions of artificial bilingualism. Potential standards of artificial bilingualism were used for comparison:

i. passive-mechanical (imitation) model of artificial bilingualism, based on the respondents’ mastery of the grammatical (formal) structure of the non-native language (morphology, word formation rules, syntax);

ii. an active (cognitive-communicative) model of artificial bilingualism, in the educational space of which modeling of the linguistic consciousness of the respondents was implemented by mastering the system-functional resources of a non-native language.

In the format of the monitoring research project, the markers for detecting the linguistic awareness of the respondents were subject to: knowledge of the language, culture and speaking skills (at a level sufficient for formulating and expressing thoughts in the process of interpersonal communication in a foreign language), manifestations of language socialization (mastering the norms of listening, perceiving and speaking in a foreign language (L2) at a level sufficient for communication and agreement of semantic codes of communication subjects). The obtained data were subjected to content analysis, which made it possible to evaluate the markers of the development of linguistic awareness of the respondents in the given realities of artificial bilingualism and to reveal the level of activity when using a foreign language in communication.

The computer statistical program IBM SPSS Statistics 19 (“Statistical Package for the Social Science” was used for summarizing
and analyzing empirical materials). The variables were checked for the normality of the characteristic distribution. In order to statistically confirm the significance of the obtained data, the method of one-factor variance analysis (Fisher’s φ-criterion) was used.

At the second stage of data processing, a multidimensional procedure of cluster analysis (K-means clustering) was applied, which made it possible to single out subsets of the levels of linguistic awareness development among the respondents of the research project.

**Participants**

The Private Enterprise “Educational Center ‘Interclass’ ” (Kryvyi Rih, Ukraine), certified as an institution of extracurricular humanitarian education, was chosen as the base of the empirical study. The sample population of respondents was formed randomly; it was made up of 38 students of the primary education groups of the “Interclass” Educational Center, whose learning of the English language (L2) took place in the format of an active model of bilingualism with the involvement of the developmental resource of the system-functional learning paradigm. The age of the respondents (6–7 years old) is due to the peculiarities of the age development of younger schoolchildren; it is this age group of children that is most sensitive to the systematic development of metacognitive forms of mental activity, the formatting of the “learned bilingualism” experience (Voronin & Rafikova, 2017) and the constructive modeling of the secondary language personality (Cahyati, Parmawati & Atmawidjaja, 2019; Tokareva & Tsehelska, 2020).

As a control group, a group of the first grade (35 people aged 6–7 years, randomly selected) of the secondary school of the city of Kryvyi Rih (Ukraine) was chosen. Foreign language training of junior high school students in the control group was carried out in the format of a passive model of artificial bilingualism with a focus on speech grammar.

In order to comply with the principles of ethical and professionally adequate behavior accepted in the scientific environment, the authors obtained informed consent from the parents of potential participants of the empirical study regarding the involvement of children of primary school age in learning English in the format of an active model of artificial bilingualism (see: Tokareva & Tsehelska, 2020).
Results

Modeling of the research paradigm of bilingual markers of the primary schoolchildren linguistic personality was carried out taking into account the fact that in the modern coordinates of comprehensive internationalization, the development of human linguistic consciousness in the areas of artificial bilingualism is gaining special relevance. Polylingualism of the students’ life-making determines the need to go beyond “correctly formatted sentences” and direct the development of linguistic consciousness into the range of discourse of foreign language contexts. In response to today’s demands, on the basis of the Educational Center “Interclass” (Kryvyi Rih, Ukraine) in the format of a longitudinal research project, primary school-age children are taught English in the dimensions of a system-functional approach using metacognitive schemes (see: Tokareva, 2022). In this context, the content of the actualization of metacognitive processes in the system of development of reflective and metacognitive forms of mental (and in particular language) activity is recognized as an axiomatic scenario for the development of the resource potential of primary school students. The given conditions of artificial bilingualism (in the format of an active model) determine the schoolchildren’s mastery of the English language world view, the formation of a conscious attitude to a foreign language, which helps to understand the new socio-cultural reality and promotes the development of students’ linguistic awareness.

In the context of the above, the results of this pilot project were elaborated on the identification of markers of the development of linguistic awareness of the individual (in particular, children of primary school age) in the conditions of artificial bilingualism (the cut was made based on the results of work during 6 months, the 1st semester). The following were subject to analysis: representation of knowledge of a foreign language (denotative representation of content units, adequacy of ordering syntactic constructions, ability to produce formal (grammatical, lexical, syntactic) constructions), skills in perceiving and understanding messages in a foreign language, competent text creation in the given conditions of artificial bilingualism. In the process of the research, normative language and speech constructs of the corresponding semantic and/or grammatical series, the repetition of lexemes and
syntactic constructions in the speech of the respondents, the frequency of typical speech reactions among the respondents were recorded (the absolute frequency of the method of meaning creation, adequate text creation, congruent dialogue was calculated); this made it possible to reconstruct to a certain extent the vectors of the respondents’ linguistic awareness and to reveal the level of activity of younger schoolchildren in the use of a foreign language in the conditions of artificial bilingualism.

The generalized results of measuring quantitative indicators of the absolute frequency (absolute frequency) of the demonstration of polymodal markers of the development of linguistic awareness of primary schoolchildren in the conditions of artificial bilingualism (in the educational space of mastering the English language) in the compared groups of the sample population are shown in Table 1.

**Table 1**
*Parameters of Statistical Reliability of Differences in Indicators of Linguistic Awareness Between Groups of Respondents*

<table>
<thead>
<tr>
<th>Analysis criteria</th>
<th>Distribution of respondents in groups of the empirical project</th>
<th>The value of the univariate dispersion analysis</th>
</tr>
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<tbody>
<tr>
<td><strong>Markers of linguistic awareness</strong></td>
<td><strong>Experiment. group (N=38)</strong></td>
<td><strong>Control group (N=35)</strong></td>
</tr>
<tr>
<td>Knowledge of a foreign language (L 2) and the culture of language constructs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The ability to choose the necessary lexemes, grammatical forms</td>
<td>0.85</td>
<td>0.58</td>
</tr>
<tr>
<td>Adequacy of the format of syntactic constructions</td>
<td>0.34</td>
<td>0.28</td>
</tr>
<tr>
<td>Logic and consistency of linguistic expressions</td>
<td>0.24</td>
<td>0.18</td>
</tr>
<tr>
<td>Perception of information expressed in a foreign language in the conditions of direct and indirect intercultural communication (listening)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adequate response to perceived information verbally and/or non-verbally</td>
<td>0.42</td>
<td>0.12</td>
</tr>
<tr>
<td>Drawing/ selection of illustrations based on what is heard; transfer of information graphically</td>
<td>0.62</td>
<td>0.35</td>
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Variability of the Linguistic Consciousness development...

<table>
<thead>
<tr>
<th>Comprehension of foreign language texts of various types for obtaining information and its critical evaluation</th>
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<tbody>
<tr>
<td>Understanding the content of oral expression in a familiar everyday context</td>
</tr>
<tr>
<td>Critical assessment of information (analysis, interpretation)</td>
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<table>
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<tr>
<th>Communicating with others orally and in real time using a foreign language (speaking)</th>
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<tbody>
<tr>
<td>Correct pronunciation and emphasis of commonly used words in statements</td>
</tr>
<tr>
<td>The ability to create real-time simple messages using a few short sentences</td>
</tr>
<tr>
<td>The ability to interact with other people in various communicative situations</td>
</tr>
</tbody>
</table>

The results of the statistical stage of data analysis of the research project proved that the differences between the experimental and control groups of primary school students in identifying markers of linguistic awareness are reliably significant relative to individual predictors of the logical ordering of speech-thinking dimensions of language awareness (at $p \leq 0.05$). The respondents of the experimental group demonstrate statistically better listening results ($0.038 = p \leq 0.05$ and $0.001 = p \leq 0.05$), understanding the content of oral expression in a familiar everyday context ($0.041 = p \leq 0.05$) and in identifying communicative competences: abilities to create real-time simple messages using a few short sentences ($0.017 = p \leq 0.05$) and the ability to interact with other individuals in different communication situations ($0.005 = p \leq 0.05$). At the same time, the results of the empirical research allow us to state that there are no differences between the respondents in knowledge of a foreign language and in the skills of critical evaluation of information; the indicators of pronunciation and accentuation of commonly used words by primary schoolchildren of the experimental and control groups do not differ statistically.

The included observation of the work in the study groups of “Interclass” also proves that the children of the experimental group in the situations of artificial bilingualism behave more confidently, meaningfully solve complex tasks (listening, perception, understanding)
taking into account the given conditions of bilingual culture; mastering the grammatical structure of a foreign language, use personal intellectual resources and adequately format logical-semantic and system-functional predictors of text messages in a foreign language. In the context of the above, the efficiency of using a foreign language (L2) should be considered as one of the main indicators of the formation of bilingual competences of respondents.

Further use of the multidimensional procedure of cluster analysis of the average indicators of the isolated markers of linguistic awareness (K-means clustering) made it possible to record clusters (groups of respondents), which are characterized by the compatibility of the features of the dominant indicators. Three groups of respondents with different levels of crystallization of markers of individual development of linguistic awareness were identified: initial, medium and high, the gradation of which differs in the experimental and control groups (Fig. 1).

**Figure 1**
*Levels of Development of Respondents’ Linguistic Awareness*

In the study of the phenomenology of linguistic consciousness and its level, we share the opinion of Selihey (2009), who emphasized that the level of linguistic consciousness is not so much an ontological concept as a heuristic one, which “helps to study and typologize
Variability of the Linguistic Consciousness development... (ibid.: 17). We consider the identification of three levels of development of the linguistic consciousness of an individual to be evident, the detection markers of which are combined into three clusters.

The first cluster marked the initial level of identifying markers of the respondents’ linguistic awareness, which is characterized by unstructured knowledge of a foreign language, the absence of regulators of the linguistic behavior of the individual, and the axiological infantilism of the respondents’ foreign language worldview (16.0% of the younger schoolchildren of the experimental group and 63.0% of the respondents of the control group).

The second cluster records markers of the detection of an average level of linguistic awareness development; in children of this group (74.0% of respondents of the experimental group and 34.0% of the control group) the bilingual indicators of language activity are more organized, the role of intellectual operations in speech activity is strengthened (understanding of the chronotope of events, elementary skills of categorization and comparison of objects and phenomena are formed). At the same time, schoolchildren perceive a foreign language (L2) only as a pragmatic (utilitarian) means of communication, their ideas about the foreign language world view are contradictory and subjective.

The third cluster indicates a relatively high level of development of the respondents' linguistic awareness; it is characterized by a more meaningful linguistic world view, the expression of all structural and functional components of a foreign language (formation of valuable ideas about a foreign language (L2), conscious assimilation of norms of linguistic behavior etc.), a fairly high level of foreign culture generalization. At this level of linguistic consciousness development, a person does not need special motivation, mastering the language moves to the stage of conscious perception. And although the high level of linguistic awareness development among primary schoolchildren is just beginning to take shape (tendencies to identify markers of this level of linguistic awareness are traced only in 10.0% of respondents of the experimental group and in 3.0% of respondents of the control group), it attests to the prospect of the individual’s linguistic development in the format of bilingual education.

In general, the generalization of the empirical study data proves that the primary schoolchildren of the experimental group in
the conditions of artificial bilingualism achieved higher quality results in the linguistic awareness development. The positive results of introducing an active (cognitive-communicative) model of artificial bilingualism into the English language learning process of primary school students and, in particular, a systemic-functional program with extensive use of the resources of metacognitive schemes (Tokareva, 2022) confirm the possibility of purposeful addition and ordering of competence scenarios for mastering a foreign language by schoolchildren (listening, perception, understanding, speaking) in the schemas of the internalized experience of artificial bilingualism. Systematic use of metacognitive schemes of bilingual order (see, for example: Tokareva, 2023) turns students into active creators of personal bilingual experience; in this context, the productive acquisition of bilingual competences can be interpreted as an open evolutionary process of modeling the linguistic consciousness of an individual.

Discussions

Recognizing that language is a certain socio-cultural relay of the polylingual experience of humanity, we are fully aware that one of the predictors of optimizing the development of a person’s linguistic consciousness is the formation of a person’s foreign language competence (and in particular – in the process of mastering a foreign language). At the same time, it should be taken into account that in the conditions of a modern multilingual society, bilingualism appears as an interdisciplinary phenomenon that illuminates the linguistic situation, implicitly affects the development of the linguistic consciousness of subjects of linguistic activity, structures the vectors of the architecture of the language worldview, and therefore requires the attention of related sciences.

Linguistic, psycholinguistic, sociolinguistic, and cognitive studies of recent years convincingly prove the productivity of artificial bilingualism as a system of “the functioning of two linguistic and cultural codes in the linguistic consciousness of an individual and an effective tool that promotes the acquisition of a foreign language” (Saenko, Novikova & Sozykina, 2022: 279). The scientific community recognizes that the language codes of a person's native and foreign (L2) languages interact
with each other (in particular, at the level of language interference), the
native language conditions the formation and formulation of thought in
a foreign language, implementing a program of co-activation (parallel
activation) of languages and weakening the barrier of cognitive load
on the individual in the conditions of artificial bilingualism (Rankin,
Grosso & Reiterev, 2016; Saienko, Novikova & Sozykina, 2022:
280–281). Sharing the stated statements, we at the same time consider
it expedient to more clearly differentiate the resource potential of the
active (cognitive-communicative) model of artificial bilingualism,
focused on the systematic development of the linguistic consciousness
of the individual in the context of learning a foreign language.

We also consider it necessary to emphasize that the optimization
of the multilingual dimensions of the modern educational space requires
decent state support (complex programs for the bilingual development of
the linguistic consciousness of the individual, the creation of bilingual
infrastructure in educational institutions, the variability of modeling
standards of the linguistic didactic bilingual language space etc.).

Conclusions

The generalization of the results of the theoretical-empirical
study of the psycholinguistic continuum of the development of the
linguistic consciousness of the individual in the dimensions of artificial
bilingualism provided the basis for the following conclusions:

in the realities of the modern information society permanent
transformations, bilingualism appears as a predictor of a foreign
language mastery at a level sufficient for communication and exchange
of ideas with other subjects of linguistic activity;

(1) language (and foreign language in particular) is not only
a communication tool, but also a way of perceiving, organizing
and encoding (or decoding) the surrounding reality. In this
context, linguistic consciousness is interpreted as an invariant
of possible schemes of mastering reality, which is most
suitable for the purposes of communication between people;

(2) the analysis of the markers of the development of
linguistic awareness of primary school students proved
that in the conditions of the implementation of the active
(cognitive-communicative) model of artificial bilingualism, the respondents demonstrate statistically better results in listening, understanding the content of oral expression in a familiar everyday context and in identifying communicative competences: the ability to create in real lifetime simple messages using a few short sentences and the ability to interact with other people in different communication situations;

(3) cluster analysis indicated the dominance of markers of the medium level of linguistic awareness development among the respondents of the experimental group: the bilingual indicators of the linguistic activity of the respondents are more organized, the detection of intellectual operations is more pronounced (understanding of the chronotope of events, categorization and comparison of objects and phenomena).

In this context, we believe that the optimal developmental effect of the implementation of an active model of artificial bilingualism has been proven, which determines the effectiveness of the mental modeling of the global linguistic worldview as an element of the language consciousness of students of education (in particular, primary schoolchildren) and ensures the variability of the development of schoolchildren linguistic consciousness markers.

The conducted research does not exhaust all aspects of the problem field of the development of linguistic awareness of students in the dimensions of artificial bilingualism, but it opens up prospects for its further study, in particular - the study of cognitive-affective mechanisms of the development of linguistic awareness teenage schoolchildren. In addition, the results of the research project, in our opinion, can contribute to the solution of a wide range of psycholinguistic practical problems related to the understanding of the dynamic context of the variable development of an individual's linguistic consciousness.

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**ADHERENCE TO ETHICAL STANDARDS**

*Ethics declarations.* The study complies with the ethical standards of the Helsinki Declaration of 1964 and its later amendments. The research examination was conducted and approved by the Scientific and Methodological Council (Committee on Scientific Research Ethics) of the Kryvyi Rih State Pedagogical University.
Data availability statement. Extended results of the research project presented in this article are available in the Mendeley Data Search system at https://data.mendeley.com/datasets/7bgswcgm28 (Tokareva, 2022; 2023).

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АНОТАЦІЯ

Мета. Дослідження мало за мету окреслення варіативних маркерів розвитку мовної свідомості особистості в умовах штучного білінгвізму.

Методи. Основним методом дослідження було обрано метод вибіркового спостереження із фіксацією маркерів розвитку мовної свідомості та якісних показників оволодіння респондентами англійською мовою як іноземною в умовах штучного білінгвізму. Для співставлення були використані потенційні стандарти пасивно-механічної (імітаційної) та активної (когнітивно-комунікативної) моделей штучного білінгвізму. Моніторингу підлягали марери виявлення мовної свідомості респондентів: знання мови, культура...
та вправність мовлення (на рівні достатньому для формулювання та висловлювання думок у процесі міжособистісної комунікації іноземною мовою), прояв мовної соціалізації (опанування норм аудіювання, сприймання та говоріння іноземною мовою на рівні достатньому для спілкування та узгодження смислових кодів суб’єктів комунікації). Отримані дані піддавалися контент-аналізу, що дозволив оцінити маркери розвитку мовної свідомості респондентів у заданих реаліях штучного білінгвізму і виявити рівень активності при використанні іноземної мови у комунікації. Задля статистичного підтвердження значимості отриманих даних був задіяний метод однофакторного дисперсійного аналізу (ф-критерій Фішера). Також була використана багатовимірна процедура кластерного аналізу (K-means clustering), що дозволило виокремити підмножини рівнів розвитку мовної свідомості серед респондентів дослідницького проекту.

Результати. Результати аналізу даних дослідницького проекту засвідчили, що відмінності між експериментальною та контрольною групами молодших школярів у виявленні маркерів мовної свідомості є достовірно значущими відносно окремих предикторів логічного упорядкування мовленнево-мисленневих вимірів мовної свідомості (при р ≤ 0,05). Респонденти експериментальної групи демонструють кращі результати аудіювання, розуміння змісту усного висловлювання у знайомому повсякденному контексті та у виявлени комунікативних компетентностей. Зафіксовано також домінування серед молодших школярів маркерів середнього рівня розвитку мовної свідомості.

Висновки. В реаліях перманентних трансформацій сучасного інформаційного суспільства білінгвізм постає як предиктор володіння іноземною мовою на рівні достатньому для спілкування і обміну думками з іншими суб’єктами мовної діяльності. Мова (і зокрема іноземна) є не лише інструментом комунікації, але й способом сприймання, упорядковування і кодування (або декодування) навколишньої дійсності. У даному контексті мовна свідомість інтерпретується як інваріант можливих схем освоєння реальності, який найбільш пристосований для цілей комунікації між людьми. Аналіз маркерів розвитку мовної свідомості молодших школярів засвідчив, що в умовах реалізації активної (когнітивно-комунікативної) моделі штучного білінгвізму респонденти демонструють статистично кращі результати аудіювання, розуміння змісту усного висловлювання у знайомому повсякденному контексті та у виявленні комунікативних компетентностей.

Ключові слова: мовна свідомість, мовна картина світу, білінгвізм, штучний білінгвізм, білінгвальний розвиток особистості, іншомовна комунікація, молодший шкільний вік.