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CONTENTS

Articles

The consequences of “New World” colonization on linguistic diversity

A. Fedorinchyk

5

Functional Multilingualism in the Northern Kazakhstan: A Comparative Study (2017–2022)

Zh. Sagyndykova, A. Svinarchuk, A. Sharipova, Brian Baer, B. Gazdiyeva

28

Professional agency and emotional climate in bilingual preschool

E. Protassova, S. Silkin

46

Ethnocultural Components in Academic Discourse: Cognitive Activation of Personal Consciousness

A.E. Agmanova, A.A. Rubas

64

An Interdisciplinary Perspective on the Study of Bilingualism in Kazakhstan: Research Traditions and New Directions

Zh.K. Ibrayeva

79

Lexical Motivation and Metalinguistic Awareness in Children’s Speech: A Cross-Linguistic Study of Bilingual and Monolingual Minds

A. Zhakupova, O. Anichshenko, Zh. Temirova, I. Abisheva

93

ARTICLE

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Lexical Motivation and Metalinguistic Awareness in Children's Speech: A Cross-Linguistic Study of Bilingual and Monolingual Minds

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Abstract

This paper explores motivational reflection as a linguistic and cognitive process in children's speech, grounding the research in three interconnected approaches: psycholinguistic, motivational, and comparative. The aim of the study is to examine motivational reflection and identify both universal and language-specific patterns of its manifestation in monolingual and bilingual children. The study is based on a controlled psycholinguistic experiment and employs a motivational-comparative analytical framework to examine children's interpretation of motivated lexical units in Russian and Kazakh. The empirical corpus consists of metalinguistic responses produced by monolingual and bilingual children aged 5–6, 7–8, and 9–10. To organize the data, motivational passports were created, recording parameters such as the internal structure of words, types of lexical and structural motivation, motivation models, and features reflecting children's conceptualization of lexical meaning. The study primarily focuses on comparing motivational reflection between monolingual and bilingual speakers, with particular attention to age-related development and language dominance patterns. Special emphasis was placed on spontaneous word creation, seen as evidence of deeper cognitive and linguistic processes. Results show that monolinguals generally have higher levels of MR, while bilinguals display more creativity and variability in vocabulary understanding, often bridging gaps through diverse associative strategies. The study advances research on children's speech development and may be applied to teaching Russian and Kazakh in both monolingual and bilingual educational settings.

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Introduction

Over the past decades, the study of children’s language awareness, especially that of bilingual children, has become a priority area in ontolinguistics and psycholinguistics. In the multicultural context of modern Research into the linguistic and cognitive abilities of children growing up in a bilingual environment is particularly relevant in Kazakhstan’s society. This study aims to examine the phenomenon of motivational reflection (MR) as a cognitive mechanism that enables the conscious correlation of a word’s sound form and meaning, understanding of its internal form, and the use of this knowledge in productive speech activity. The aim of this study is to analyze MR as a linguistic-cognitive operational mechanism and to identify the universal and specific features of its manifestation in monolingual and bilingual children.

The study drew on two major theories: 1) Blinova’s (1984) theory of lexical motivation, first presented in the textbook *The Phenomenon of Word Motivation: A Lexicological Aspect* and further developed in the monograph *Motivology and Its Aspects* (Blinova, 2007). Blinova conceptualizes the motivated word as a unit of the lexical-semantic level of the language, characterized by systemic, semantic, and formal features. 2) *The concept of comparative motivology* (Blinova, 1994; Zhakupova, 2009), and the concept of MR developed within this theory (Gridina, 2002; Gridina & Kolyasnikova, 2005; Zhakupova et al., 2024a; Zhakupova et al., 2024b), according to which MR is viewed as “a special form of metalinguistic thinking associated with the awareness (understanding) of the internal form of a word (identification of the motivation of a name)” (Gridina, 2002, p. 20).

The comparative-motivational approach, based on the principles of anthropocentrism, systematicity, and synchrony (Zhakupova, 2009, pp. 63–73), involves analyzing motivated language units from the perspective of the speaker’s awareness at a particular point in time. A word may appear motivated, half-motivated (lexically or structurally), or non-motivated when it becomes the object of metalinguistic reflection (Blinova, 2007, pp. 79–80). For a researcher in lexical

motivation, it is essential that a native speaker correlate a lexical unit by sound and meaning on the basis of their formal-semantic similarity, relying on both everyday linguistic intuition and acquired linguistic knowledge (Blinova, 2007, p. 49).

The key notions used in describing a motivated word include the internal form of the word (IFW), motivational form and motivational meaning, lexical and structural motivators, motivational and nominative features, as well as the types of motivation (phonetic, morphological, and semantic). Lexical processes associated with the dynamics of motivation are also considered, including remotivation, demotivation, and lexicalization (Blinova, 2007, p. 25). While adult native speakers generally have no difficulty understanding motivated vocabulary, studies of children's metalinguistic awareness have shown that not all children are able to identify even the most evident motivational connections between words. This hinders the processes of understanding, interpreting, and explaining meanings, which in turn affects a child's reading literacy and academic performance

Over the past 20–25 years, numerous studies have examined the ontogenesis of language ability, the development of linguistic reflection, and the role of language play in the formation of children's cognitive and speech skills (Doherty, 2014; Jessner, 2006; Jiang, 2007; Tseytlin, 2017; Yelisseyeva, 2014). A number of scholars pay particular attention to metalinguistic abilities as a fundamental element in the development of speech and communicative competence (Dobrova, 2018; Unarova et al., 2019). Contemporary approaches also focus on the mechanisms of metalinguistic activity (Gvozdev, 2007; Hofer & Jessner, 2022; Tulviste, 1991), one of which is “motivational reflection – a universal property of human metalinguistic thinking that determines the orientation of consciousness toward the explainability of the connection between the sound form and meaning” (Zhakupova & Balmagambetova, 2022, p. 80).

In the English-language linguistic tradition, the term “*motivational reflection*” is not used; it corresponds to the broader concept of *metalinguistic awareness*, understood as an individual's ability to reflect consciously on language (Aitchison, 2003; Ben-Zeev, 1977; Bialystok, 1986, 1988; Cromdal, 1999; Cummins, 1978).

In Russian linguistics, the concept of MR describes the strategies by which children comprehend language during its acquisition. Thus, Gridina views MR as a mental dominant of a child's linguistic consciousness, relying on the onomasiological approach and analyzing data from a monolingual (Russian-speaking) child environment (Gridina, 2002, 2015; Gridina & Kolyasnikova, 2005). Kolyasnikova examines MR as a key component of linguistic ontogenesis, drawing on meta-statements from children aged 2 to 7 (Kolyasnikova, 2002, 2004, 2005) and on materials from dictionaries, diary notes, and personal observations. A significant contribution to the methodology for studying MR was made by Garganeyeva, whose “Motivational Dictionary of Children's Speech” documents the linguistic judgments of children aged 1–11 obtained during a psycholinguistic experiment (Garganeyeva, 2007).

In Kazakhstani linguistics, children's speech remains insufficiently explored. The existing research has focused primarily on the impact of early bilingualism on

intellectual development and the formation of a bilingual personality, as well as on issues of interference (Shayakhmet, 2015, 2016), bilingual education in Kazakhstan's schools and language socialization (Smagulova, 2019). Studies of children's speech have largely addressed the syntax of Kazakh, the acquisition of verbal morphology (Akinina et al., 2015) and word-creation. However, the metalinguistic aspects of children's language development – particularly motivational reflection – have not yet been examined in Kazakhstan, either in monolingual or bilingual contexts.

The conceptual novelty of this research lies in its comprehensive comparative-motivational approach to analyzing MR. It encompasses a study of the metalinguistic consciousness of bilingual and monolingual children aged 5–10, the identification of universal and specific features of MR across monolingual and bilingual environments, and the development of algorithms designed to stimulate conscious vocabulary acquisition through motivational reflection.

Materials and methods of research

The material for this study consisted of children's meta-statements recorded during a specially organized psycholinguistic experiment. Given the specific language situation in the northern regions of Kazakhstan, four experimental groups were formed, each comprising 36 participants (144 children in total). The respondents were grouped based on parental questionnaire data, taking into account language dominance (Kazakh/Russian), the language of instruction at school, and the language of everyday communication both within and outside the family:

- Group 1 – monolingual respondents fluent in Kazakh (RMK) who attend preschool and primary school classes with Kazakh as the language of instruction in Kokshetau and the Akmola region.
- Group 2 – bilingual respondents with Kazakh as their dominant language (RBK). Russian is acquired at a conversational level, while Kazakh remains the language of everyday communication.
- Group 3 – monolingual respondents who speak only Russian (RMR); Kazakh is studied as a school subject.
- Group 4 – bilingual respondents with Russian as their dominant language (RBR); Kazakh is understood but not used in everyday speech.

Each group was divided into three age subgroups: 5–6 years, 7–8 years, and 9–10 years (12 respondents per subgroup), allowing for a differentiated analysis of the age-related dynamics of motivational reflection.

The methodological basis of the study relies on three complementary approaches: psycholinguistic, motivational, and comparative.

Psycholinguistic approach

To record and analyze MR, a comprehensive psycholinguistic experiment (PLE) methodology was developed, enabling the registration of metastatements – evidence of the respondents' metalinguistic awareness. The experiment was conducted in three stages:

1. Free Associative Experiment (FAE) – designed to identify the nature of associative thinking and the structure of respondents' lexicon without externally limiting the scope of their responses.
2. The directed associative experiment (DAE) was based on a series of targeted questions: *Who? What? Which? Where is it found? What does it look like?* etc., encouraging respondents to engage in a deeper semantic analysis of stimulus words. The DAE made it possible to document how children formulate definitions, justify their answers, and draw on their life experience. According to Dobrova, such experiment provides the researcher with “a lot of useful information not only about what the child knows regarding the meaning of a given word, but also about the respondent's picture of the world” (Dobrova, 2018, p. 13).
3. The Linguistic Stage (LS) was aimed at identifying manifestations of MR in children's interpretation of the internal form of the word and the connections between its sound form and meaning. For example, when children from the RBK group were asked: “*Nege toqyldaq dep atalğan?*” (Why is the woodpecker called that?), the following responses were given: “*tūmsyǵı ūshkir*” (‘its beak is sharp’), “*tūmsyǵı ötkir, qysqa*” (‘its beak is sharp and short’), “*tūmsyǵı ūzyn*” (‘its beak is long’); “*aǵaşty tesedi*” (‘it pecks through the tree’), “*aǵaşty şūqyp, toqyldatatype jatyr*” (‘it pecks the tree and makes a knocking sound’), “*aǵaşty sindyrady*” (‘it breaks the tree’), “*aǵaştardy jep jatyr*” (‘it feeds on wood’). When children from the RBR group were asked: “*Pochemu podsolnukh tak nazyvayetsya?*” (‘Why is the sunflower called that?’), the following responses were given: “*rastyot na solntse, pokhozh na solntse*” (‘it grows in the sun, it looks like the sun’), “*pokhozh na solntse*” (‘looks like the sun’), “*rastyot v polye, rastyot pod solntsem*” (‘it grows in the field, grows under the sun’), “*rastyot pod solntsem*” (‘grows under the sun’), “*pokhozh na solnyshko*” (‘looks like a little sun’), “*pokhozh na solntse, kogda ne vyspel*” (‘looks like the sun when it is not ripe yet’), “*zhyoltyy, pokhozh na solntse*” (‘yellow, looks like the sun’). Stimulus words were classified according to their degree of motivation into: motivated (e.g., Kazakh: *ayazata, qaraqat* (frost, blackcurrant)); Russian: *skoriy poyezd* (fast train), half-motivated (e.g., Kazakh: *ushaq* (plane); Russian *karapuz* (toddler)); non-motivated (e.g., Kazakh *tereze* (window); Russian *zont* (umbrella)). All metastatements were systematized according to the presence of lexical and/or structural motivators, as well as by the type of motivation (phonetic, morphological, or semantic). For each word, a motivational passport was created that incorporated the full range of children's interpretations.

Motivological approach

The key instrument of motivological analysis is the motivational passport of a word – an analytical model that reflects the evidence of a child's metalinguistic

consciousness. Each passport includes information about the internal form of the word (IFW) and its types, the motivational form (MF) – a segment of the sound shell that determines motivation; the motivational meaning (MM), i.e., the meaning perceived by the speaker and associated with the MF; lexical and structural motivators; the type of motivation (phonetic, morphological, semantic); motivational, nominative, and classificatory features. Motivational Passport for the Russian word RYABINA (*rowan berry*):

“*ryabaya*” (‘speckled’) (3), “*ryabit*” (‘it flickers’), “*ryabit v glazakh*” (‘it makes your eyes flicker’) (3), “*krasniy tsvet*” (‘red color’), “*krasniy*” (‘red’) (2), “*potomu chto yarkaya*” (‘because it’s bright’) (2), “*ryzhaya*” (‘ginger-colored’) (1), “*ot togo chto yeyo kushayut ryabchiki*” (‘because hazel hens eat it’) (1).

MF: RYAB/ina

IFW₁ <

MM: ‘<a plant> of a speckled (Rus. *ryaboy*) <color>’

LM₁: ryaboy

SM₁: kalINA, malINA (En. *arrowwood*, *raspberry*)

MF: RYAB/ina

IFW₂ <

MM: ‘<a plant that> flickers (Rus. *ryabit*)’

LM₂: ryabit’

SM₂: SM₁

MF: RYAB/ina

IFW₃ <

MM: ‘<a plant that> hazel hens (Rus. *ryabchiki*) <feed on>’

LM₃: ryabchik

SM₃: SM₂: SM₁

IFW_{12,3} non-lexicalized, non-metaphorical, having variants.

MS: ryaboy, ryabit’, ryabchik (NS: a tree with orange-red fruit)

Type of motivation: morphological.

Particular attention was given to the method for identifying the MF and MM. For example, when analyzing the word SNEZHINKA (‘*snowflake*’), children actualized only the left part of the word (*snezh*/), correlating it with the word *sneg* (‘snow’), whereas the formative component *-inka* was not interpreted (potentially, SNEZHINKA belongs to a chain of one-structural formations such as l’dINKA ‘a piece of ice’, krupINKA ‘a grain’, yet no such motivational-structural associations were found in the children’s metalinguistic data). The following motivational meanings (MMs) were suggested: “*sdelana iz snega*” (‘made of snow’), “*pokhozha na sneg*” (‘looks like snow’), “*svyazana so snegom*” (‘related to snow’), “*belaya kak sneg*” (‘white as snow’). As a result, the following four IFWs were identified:

MF: SNEZH/inka

IFW₁ <

MM: ‘<made of> snow (Rus. *sneg*)’

MF: SNEZH/inka

IFW₂<

MM: '<related to> snow (Rus. *sneg*)'

MF: SNEZH/inka

IFW₃<

MM: '<looks like> snow (Rus. *sneg*)'

MF: SNEZH/inka

IFW₄<

MM: '<as white as> snow (Rus. *sneg*)'

Comparative approach

The comparative analysis was conducted in two directions: by respondents' age and by language dominance (Russian/Kazakh). The developed methodology of motivational-comparative analysis (MCA) involves comparing the structural and semantic characteristics of words in order to identify common and specific features in monolingual and bilingual children's understanding of motivated vocabulary. MCA was carried out in stages, following a specially designed program that includes a sequence of specific tasks (MCA of words by i-m; MCA of the IFW and its types; MCA of the types of motivation). Thus, the MCA enabled the identification of age-related and language-related dynamics in the formation of MR, which represents the main empirical contribution of this study.

Results and discussion

During the PLE, a corpus of 4,500 children's metastatements was collected, reflecting their comprehension of motivated, half-motivated, and non-motivated vocabulary. The experiment involved children from three age groups (5–6, 7–8, 9–10 years) and two types of language environments – monolingual (RMR) and bilingual (RBR). The number of language units presented for comprehension was 24 for the 5-6 age group, 29 for the 7-8 age group, and 37 for the 9-10 age group, totaling 90 language units. On average, each word elicited 8-12 metastatements.

To assess the degree of word motivation, a Motivation Scale (Zhakupova et al., 2024a) was developed, based on the principle of frequency, which measures the proportion of motivating interpretations relative to the total number of words interpreted. Each word was assigned a motivation index (tentatively designated i-m) depending on the number of motivational interpretations provided. Four levels of i-m were distinguished:

- Zero i-m – less than 10% (none of the respondents gave a motivating explanation of the word; therefore, the word is classified as non-motivated (Nm: n – not, m – motivated);
- Low i-m – 10%–39% of the respondents gave a motivating explanation of the word; the word has a low degree of motivation (Lm – low motivation);

- Medium i-m – 40%–60% of the respondents provided a motivating interpretation of the word; the word has a medium degree of motivation (Mm – medium level of motivation);
- High i-m – more than 70% of the respondents provided a motivating interpretation of the word; the word is characterized by a high degree of motivation (Hm – high motivation).

This classification provides insight into the research model of children's linguistic-cognitive (linguistic-creative) experience in language acquisition and cognition, as it allows for the ranking of MR levels: a higher number of words with medium or high motivation indices corresponds to a higher level of MR in children, whereas a greater number of words with zero or low motivation indices indicates a lower level of MR. The developed Motivation Scale (i-m) complements existing models for assessing metalinguistic awareness by providing a novel quantitative tool for measuring the degree of word motivation in children's perception. This approach is currently unparalleled in international research, which is largely dominated by qualitative descriptions (Ben-Zeev, 1977). Our results suggest that such a quantitative scale can serve as an effective instrument for diagnosing the level of metalinguistic competence in children across different language groups.

The results of a motivational-comparative analysis of vocabulary based on i-m have been obtained from the perspective of its comprehension by bilingual and monolingual children.

Table 1 – Distribution of words by i-m index (in %)

Index of motivation	5-6 years old		7-8 years old		9-10 years old	
	RMR	RBR	RMR	RBR	RMR	RBR
Hm	10 (42%)	0	19 (65%)	10 (35%)	31 (84%)	7 (20%)
Mm	10 (42%)	4 (17%)	6 (21%)	9 (30%)	4 (11%)	19 (51%)
Lm	4 (17%)	14 (58%)	4 (14%)	10 (35%)	2 (5%)	9 (24%)
Nm	0	6 (25%)	0	0	0	2 (5 %)

As shown in the table, in a group of children 5-6 years old, from the RMR perspective, all words are classified as motivated, with varying indices: an equal number of words with Hm and Mm, 4 words with Lm, and no words with Nm. From the RBR perspective, there are no words with Hm, the largest number of words have Lm (14), and 6 words have Nm. In the 7–8 age group, all words are motivated from both monolingual and bilingual perspectives, with no words classified as Nm. Notably, from the RMR perspective, 65% of words have Hm and 4 words have Lm, whereas from the RBR perspective, words are distributed almost evenly across indices. In the 9–10 age group, Hm words dominate (84%), compared with 65% and 42% in the 7–8 and 5–6 monolingual groups, respectively, indicating a doubling of Hm words. Consequently, the number of Lm words decreases significantly. In the RBR group,

changes are also observed compared with younger age groups: the proportion of Mm words increases substantially (54%) compared with 30% at 7–8 years and 17% at 5–6 years, while Lm words decrease (58% → 35% → 24%). Interestingly, in the 9–10-year-old RBR group, the proportion of Hm words decreases compared with the 7–8-year-old RBR group (35% → 16%).

Statistical data show that the process of comprehending motivated vocabulary in bilinguals exhibits positive age-related dynamics; however, compared to the monolingual group, there is a quantitative lag (cf. the proportion of words with high i-m: RMR – 84%, RBR – 20%). The experimental data confirmed Bialystok's (1986) findings that the level of *metalinguistic awareness* increases with age, although the progress of monolinguals and bilinguals differs in nature. Monolinguals show a steady increase in the proportion of words with a high motivation index (Hm), reaching 84% by ages 9–10, whereas bilinguals show growth primarily in words with a medium motivation (Mm), indicating the gradual formation of a conscious vocabulary.

The results indicate that the level of MR increases with age in both groups, but the progression is more pronounced among monolinguals: Hm = 42% (5–6 years) → 65% (7–8 years) → 84% (9–10 years). Among bilinguals, the proportion of Hm does not exceed 35% and declines to 20% in the oldest group, while the number of moderately motivated explanations rises (Mm = 51% at 9–10 years). This pattern confirms the gradual development of an active Russian vocabulary in bilinguals and reflects a more complex trajectory of their metalinguistic development (Galambos & Goldin-Meadow, 1990).

A quantitative analysis of words using the i-m indicator allows the creation of a database of motivated and non-motivated words in the analyzed RMR and RBR groups and reveals a clear trend: a tendency for linguistic signs to be perceived as motivated by mono- and bilingual children. The analysis leads to the following conclusion: in the RMR group, words with Hm predominate and no words with Nm are present; in the RBR group, words with Mm and Lm outnumber those with Hm, and words with Nm are present. These findings provide a general picture of children's MR, which is more developed in monolinguals than in bilinguals. However, they do not provide information about the quality of MR or its specific characteristics in monolingual versus bilingual children.

An important outcome of the study was the compilation of a motivational passport for each word, based on PLE data. A total of 90 motivational passports were created, enabling an MCA of IFW and its types, motivators, characteristics, and types of motivation, with respect to comprehension by bilingual and monolingual children. Analysis of the corpus of children's metastatements revealed both universal and language-specific features of MR in monolingual and bilingual children:

Universal features of MR. All children demonstrated typified patterns of motivating explanations grounded in associative links, confirming a shared mechanism of vocabulary perception that relies on relating words to the “world of objects” and to the child's personal experience. According to the experimental data, motivating interpretations make up more than 70% of responses in both bilingual and monolingual

groups. Metastatements are often constructed according to the patterns: “it comes from the word...” or “it is related to the word...” (for example, Kazakh: AQŞA QAR (white and fluffy snow) – “qarmen baylanıstı” (related to ‘snow’), BURABAY – “bay sözimen baylanıstı (related to the word ‘rich’); Russian: ZVEZDOCHYOT – “related to the word ‘star’”, MOROZHENOYE – “comes from the word ‘freeze’”), which indicates the children’s ability to identify a meaningful segment of a word without relying on its interpretation. In both groups, there is a tendency towards weakening of motivational connections and a partial loss of the word’s ability to actualize lexical motivation.

The universal features of MR established in the study (typified by motivating explanations, reliance on visual and sensory features, and a direct correlation of words with the “world of things”) align with the general patterns of metalinguistic awareness identified in a number of international studies (Bialystok, 1986, 1988; Cromdal, 1999). A consistent tendency is observed: regardless of their linguistic environment, children tend to establish semantic connections between the form and meaning of words, confirming the anthropocentric nature of linguistic perception (Aitchison, 2003). In Western linguistics, MR correlates with the concept of metalinguistic awareness, which includes the ability to consciously analyze the structure of a word, its morphemes, and its meaning (Bialystok, 1988). Our results show that monolinguals develop metalinguistic awareness more quickly, while bilinguals demonstrate a more complex but less uniform system of word perception, which requires additional support in the educational environment. However, our research has identified several features that have not been described in previous international studies. For example, we observed a gradual weakening of motivational connections in younger children, suggesting the emergence of a “non-motivated” layer of vocabulary in their mental lexicon. This process has received little attention in Western linguistic research, where the primary focus is on the cognitive mechanisms of word comprehension (Galambos & Goldin-Meadow, 1990) rather than on the dynamics of lexical motivation.

Specific features of the MR of monolinguals. Monolingual respondents across all age groups provide more accurate and unambiguous interpretations of IFW, rarely expressing doubt or hypothetical reasoning. This group is characterized by the emergence of a single “correct” motivation, commonly shared by the majority of participants. The age dynamics shows a considerable increase in the proportion of words with a high motivation index (Hm): 42% (5–6 years) → 65% (7–8 years) → 84% (9–10 years). For example, five out of twelve children aged 5–6, when explaining the Russian set phrase MOLOCHNIYE ZUBY (milk teeth), gave such motivational interpretations as “comes from the word ‘milk’,” “made of milk,” “consist of milk” (4 responses), and “white teeth – white milk” (1 responses). Eight children aged 7–8 interpreted the internal form of verb LAIKAT’ (to give a like), currently “fashionable” in the Russian language, as “to put a like” (3), “a like,” “likes,” and “from the word ‘like’” (5 responses). When interpreting the Russian verb SLEDIT’ (to trace), ten out of twelve monolinguals aged 9–10 offered motivating explanations, correlating it with

various words and expressions: “to look for a trace” (5 responses), “a trace” (Rus. sled) (3), and “to follow with your eyes” (Rus. smotret' vsled) (1 responses).

Overall, the results of the experiment showed that monolingual children demonstrate a higher level of MR, which is particularly evident in the age-related dynamics. This result is quite natural, since with age the child's acquisition of language as a “system of codes” (Luria, 1979, pp. 25 – 26) becomes more fully developed. Mastery of the lexical structure of the language, awareness of speech and its arbitrariness, as well as the ability to select appropriate linguistic means, are generally achieved by the end of preschool age and become well established by the end of elementary school. The development of language ability – defined as the capacity to use language “within the system of rules accepted in a given language for expressing thoughts” (Ushakova, 1996, p. 28) – also plays a crucial role. RMR representatives demonstrate the ability to provide more accurate motivational interpretations, a stronger command of the system of linguistic signs, and a more nuanced understanding of the nature of their native language. The more precise and unambiguous comprehension of the internal form of words demonstrated by monolingual children is consistent with Gridina's conclusion regarding the greater stability of MR in a monolingual environment (Gridina, 2002, 2015; Gridina & Kolyasnikova, 2005).

Specific features of MR in bilinguals. Bilingual children more frequently provide non-motivated interpretations and “I don't know” responses, especially in the younger groups (Nm = 25% at the age of 5–6). The results of the experiment showed that a considerable number of bilinguals across all age groups experienced difficulties in interpreting words due to not knowing the word or not understanding its meaning (for example, such Russian words as MAYATNIK (pendulum), CHERNOSLIV (prune), PODKIDYSH (foundling), YEGOZA (a fidgety child), GORIZONT (horizon), etc.).

There is also evidence of polymotivation – a multiplicity of interpretations of the IFW – along with a high degree of creativity in the explanations. The MR of bilingual children is marked by fragmentation, iconicity of the named object, and a broad range of associations. Among 7-8-year-old bilinguals, the proportion of words with medium motivation (Mm) reaches 30%, which is connected to the diversity of associative strategies they employ. This aligns with Sullivan et al's (2018) observation that bilinguals more often rely on non-standard interpretations and construct their own motivational models.

A distinctive feature of the MR of bilingual children aged 9–10 is the way they explain Russian words, where illogical motivational connections emerge between items that are neither semantically nor structurally related (a “paradoxical” internal form of the word). The reasons for this may include insufficient knowledge of the correct spelling of Russian words, as well as the respondent's attempt to associate the target word with the lexical units of the Kazakh language. For example, for the Russian word KARAPUZ (a toddler), children produced interpretations such as: “Ya slyshu puzo” (Rus. puzo – En. belly); “kara – karma”; “kara – korotkiy” (Rus. korotkiy – En. short) (2); “kora na dereviah i puziko” (bark on trees and a belly, Rus. kora – En. bark) (1); “malen'kiy rebyonok, kotoriy pukhlen'kiy, or it is from the Kazakh word ‘qara’”

(a small chubby child or from the Kazakh word qara – black) (1). It is evident that the mistaken association of KARAPUZ with KARA – ‘korotkiy’ (short) results from the child’s incorrect assumption about the spelling of KOROTKIY, which they believed to be written as KAROTKIY. The link between KARA and KARMA is based solely on phonetic similarity, while the association with the Kazakh word QARA (‘black’) is also sound-based, with no further explanation provided. Such interlingual interference, not described in Blinova’s theory but mentioned in the works on interlingual awareness (Cromdal, 1999), represents an important area for further research.

There were also described the word-creation abilities of children from monolingual and bilingual environments. Examples of word creation found in the metastatements of 5–6-year-old monolingual respondents include the following Russian formations: PYLESOSKA – a blended contamination of pyl’ (dust) + soska (pacifier)’; UMNASHKA (umnica) – the addition of the diminutive-affectionate suffix -yashk- to the root umnica (a clever person); DVUKHDOMOVIY (two-house/two-building) – a combination of words built on the analogy with ‘dvukhetazhniy’ (two-storey); MYAUKA (meower) – naming an animal through root clipping; TANTSEVAYU (a playful re-formation of tantsevat’ - ‘to dance’); ULYBOCHNIY, from ulybka (‘smile’) – a child’s occasional adjective derived from the noun.

In the course of our research and experimental work, we concluded that children conceptualize words in very different ways: some explain the meaning of a word quickly and effortlessly, some refuse to answer at all, while others, not wanting to “disappoint” the adult asking the question, begin to invent and fantasize. In doing so, they play with words, engaging their imagination and creativity. There were instances in which respondents produced words that, from an adult’s perspective, sounded “incorrect.” However, as scholars note, children do not produce “incorrect words”; rather, they play with language, linking objects, word forms, and meanings in a childlike manner. Chukovsky (1963) famously described these processes in his book *“From Two to Five”*: children are capable of creating new (their own) words – for example, mazelin instead of vaselin, tseplya instead of petlya, kusarik instead of sukharik, peskovator instead of ekskavator, and so on. The attempt to interpret a word often leads to wordplay. A child perceives an object in terms of what can be done with it, hence the tendency to name it by “bringing it into motion”: not lopatka (spade) but kopatka (“a digging thing,” because one digs with it; from Russian kopat’ – ‘to dig’); not molotok (hammer) but kolotok (“a knocking instrument,” from kolotit’ – ‘to hit/knock’); not yazyk (tongue) but lizyk (“a licking thing,” because one licks with it; from lizat’ – ‘to lick’).

The identified word-creation units demonstrate that children not only understand the internal form of words, but also actively use word-formation mechanisms (suffixation, contamination, analogy). The predominance of creative occasionalisms among bilinguals may indicate flexibility and variability in thinking, which is consistent with research data on the cognitive advantages of bilingualism (Sullivan et al., 2018).

Observations of word-creation processes (pylesoska, umnyashka, ulybochniy) support Chukovsky's view of children's language play as a natural mechanism of cognition (Chukovsky, 1963). The results indicate that monolinguals exhibit higher MR, whereas bilinguals demonstrate greater creativity and variability in their vocabulary understanding, often compensating for knowledge gaps through diverse associative strategies.

Conclusion

Our study was the first in Kazakhstan to implement a comprehensive approach to examining the motivational reflection of bilingual and monolingual children. The empirical and informational base of comparative motivology has been substantially broadened by incorporating metastatements from children across three age groups (5–6, 7–8, and 9–10 years) who speak one or two languages. In addition, the conceptual and terminological apparatus of the metalanguage of comparative motivology has been enriched through the introduction of terms such as motivating/non-motivating interpretation, motivation index and others. The study identified both universal and specific features of motivational reflection in monolingual and bilingual children. Regardless of language status, children tend to interpret words by establishing connections between their form and meaning, relying on associative links and personal experience. At the same time, monolingual children demonstrate a higher level of motivational reflection, manifested in the accuracy and stability of motivating interpretations, whereas bilingual children are characterized by greater variability of interpretations, polymotivation, cross-linguistic associations, and higher creativity. Of particular interest is the observed tendency toward the gradual weakening of motivational links and the emergence of a layer of lexicon with a non-transparent internal form in children's linguistic consciousness. The findings contribute to a better understanding of word interpretation mechanisms in mono- and bilingual contexts and confirm the relationship between motivational reflection and the development of children's metalinguistic awareness. Naturally, the reliability of these conclusions needs further verification through additional research using a larger empirical dataset.

The results of the study are important for the development of cognitive linguistics, which examines the relationship between language and cognition, and communicative linguistics, which focuses on the correct use of language in various communicative situations. They will contribute to research on children's word-creation, language ability, and language acquisition strategies (particularly the lexical system) in ontogenesis, and will also be useful for educators developing methods for teaching children languages, literacy, speech development, and verbal skills. The conducted study has wide-ranging prospects, including expanding the age range of participants, adapting the methodology for other languages, and developing digital platforms to support motivational learning.

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