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Common psychological conceptions of the learning process and neuromyths among students of pedagogical universities, teachers and educational psychologists

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Abstract

Subject of the study. Common psychological conceptions of the learning process, including neuromyths, among students of Pedagogical Universities, teachers and educational psychologists. **Objective.** Comparison of common psychological conceptions of the learning process and neuromyths in various target groups. **Sample.** The study involved 889 respondents from Moscow and the Moscow region: 1st—4th year students and specialists (teachers and educational psychologists) with 1 year or more of work experience. **Methods.** A Questionnaire was developed, and a survey was conducted. "Ideas about Psychological Concepts in Education" (IPCE) Questionnaire included 12 closed statements consisting of common psychological conceptions of the learning process and neuromyths. **Results.** The results showed a high prevalence of common psychological conceptions of the learning process and neuromyths in all groups: up to 90% of the respondents trust false statements. The level of trust in common psychological conceptions and neuromyths does not differ among students either as they move from junior to senior years or for different areas of study. No correlation was found between these conceptions and length of work in the field of education among practicing specialists. When comparing students and practicing specialists (teachers and educational psychologists), significant differences were found only for two statements: students believe less than educational psychologists that school uniforms improve academic performance ($M = 2,26$ vs. $M = 2,95$, $p = 0,0054$); in the myth about using 10% of the brain, students ($M = 2,49$) differ from both teachers ($M = 3,24$, $p < 0,0001$) and educational psychologists ($M = 3,19$, $p < 0,0001$). No significant differences were found between teachers and educational psychologists.

Keywords: common psychological perceptions, neuromyths, teacher training education, students, teachers, educational psychologists, IPCE Questionnaire

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Житейские психологические представления об особенностях процесса обучения и нейромифы у студентов педагогических вузов, педагогов и педагогов-психологов

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Резюме

Предметом исследования являлись житейские психологические представления об особенностях процессов обучения, в том числе нейромифы, у студентов педагогических вузов, педагогов и педагогов-психологов. **Цель.** Сопоставление житейских психологических представлений об особенностях процесса обучения и нейромифов в различных целевых группах. **Выборка.** В исследовании приняли участие 889 респондентов из Москвы и Московской области: обучающиеся 1—4 курсов и специалисты (учителя и педагоги-психологи) со стажем работы от 1 года и более. **Методы.** Разработана анкета и проведен опрос «Представления о психологических понятиях в образовании» (Анкета ПППО), включающий 12 закрытых утверждений, содержащих житейские психологические представления об особенностях обучения и нейромифы. **Результаты.** Результаты показали высокую распространенность житейских психологических представлений о процессе обучения и нейромифов всех групп по выборке в целом — до 90% респондентов доверяют ложным утверждениям. Уровень доверия к житейским психологическим представлениям и нейромифам не различается у студентов как по мере перехода от младших к выпускным курсам, так и для разных направлений подготовки. Связь подобных представлений со стажем работы в сфере образования у практикующих специалистов также не выявлена. При сравнении студентов и практикующих специалистов (педагогов и педагогов-психологов) значимые различия выявлены только по двум утверждениям: студенты меньше верят, что школьная форма повышает успеваемость, чем работающие педагоги-психологи ($M = 2,26$ vs $M = 2,95$) ($p = 0,0054$), и в миф об использовании 10% мозга — студенты ($M = 2,49$) отличаются и от учителей ($M = 3,24$) ($p < 0,0001$), и от педагогов-психологов ($M = 3,19$) ($p < 0,0001$).

Значимых различий между педагогами-психологами и учителями не выявлено.

Ключевые слова: житейские психологические представления, нейромиф, педагогическое образование, студенты, педагоги, педагоги-психологи, Анкета ПППО

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Introduction

The ongoing reform of teacher education in Russia in recent years aims to improve the quality of education at all stages of the pedagogical process. Achieving this goal is directly linked to the level of training and professional qualifications of teachers, psychologists, and other educational practitioners, as well as their readiness to address professional challenges amid increasingly complex demands on the content and organization of instruction. A critical aspect of this effort is the acquisition and application of scientific psychological and pedagogical knowledge in professional practice, along with the ability to distinguish between common, intuitive beliefs about learning and evidence-based approaches that define modern pedagogy (Margolis, 2024).

Russian and international studies on “pseudoscientific psychological knowledge” or “misconceptions in psychology” highlight the role of distorted scientific data in professional practice (Allakhverdov, 2018; Glebkin, 2009; Dorozhkin & Tkachev, 2016; Ermolova et al., 2023). Research shows that a significant portion of educational participants — students, trainee teachers, and educators themselves — hold widespread misconceptions about teaching methods, classroom dynamics, assessment systems, ethically

acceptable disciplinary practices, and, most critically, fundamental psychological principles of learning that have long been established in scientific literature but persist as naive or mythologized beliefs (McAfee & Hoffman, 2021). Notably, one of the key barriers to developing theoretically grounded professional competencies in future teachers is the preconceived pedagogical notions they bring to their training (Margolis, 2024).

A distinct category of misconceptions arises from misinterpretations or oversimplifications of neuroscientific findings, collectively termed “neuromyths” (Howard-Jones, 2014; Dekker et al., 2012). Despite lacking empirical support, neuromyths — such as the idea of hemispheric dominance or learning styles — remain prevalent in educational practice, including among university instructors (Maksimova, Frolova, & Chekalina, 2022).

Another group of definitions characterizing initial ideas reflects the category of intuitive knowledge termed by Vygotsky as “everyday concepts,” which are contrasted with formal scientific knowledge and defined as a necessary stage in the development of thinking. In this sense, everyday concepts do not necessarily act as distorted representations or misconceptions but rather serve as a kind of system of

initial ideas about a phenomenon, which may consist of random, non-essential features and differ from scientific understanding. Everyday concepts can be refined and changed through learning, and the task of education is to allow the everyday concept to “grow into” a scientific one, while the scientific concept must “encompass” its subject area of application (Vygotsky, 1982, pp. 263 — 264). At the same time, a certain portion of everyday concepts may remain fixed in their initial state, persist unchanged for a long time, and complicate the process of acquiring new knowledge.

In our study, we relied on an approach that considers the “common” (“intuitive,” “initial”) psychological representations of future teachers as “observation-based,” poorly formalized, rather superficial, yet highly persistent ideas about the content and specifics of pedagogical activity (Margolis, 2024). Alongside many other factors contributing to successful learning — such as intelligence (Lobanov, Radchikova, 2011; Lobanov et al., 2018; Lobanov et al., 2017), students’ personal characteristics and instructors’ skills (Odintsova, 2018; Frolova et al., 2022), the type of instruction (Sorokova, 2021; Sorokova et al., 2021), the nature of educational interaction and the organization of the learning environment as a space for collaborative activity and communication (Rubtsov, 2024), among others — such representations contribute to the formation of a scientific worldview and the quality of a teacher’s professional practice (Bezrukikh, Ivanov, Orlov, 2021; Thompson, Zamboanga, 2004). Once acquired, misconceptions about the essence of a particular phenomenon become part of a person’s conceptual framework and demonstrate resistance to counter arguments aimed at debunking them (Lilienfeld et al., 2017; Hughes, Lyddy, Lambe, 2013; Menz, Spinath, Seifried, 2021). As a result, all participants in the educational process are at risk at every stage of its implementation, including the teacher’s entry into their professional life with pre existing ideas about the nature of teaching and learning processes. Teachers’ misconceptions about education, rooted in common conceptions, can lead to serious consequences — incorrect

initial assumptions may provoke inappropriate actions toward students, influence the content of curricula, promote ineffective teaching techniques, contribute to emotional burnout, and more (Sibicky, Klein, Embrescia, 2021). This problem is further exacerbated by the observed phenomenon of “washing out” (loss) of accurate psychological knowledge during teachers’ independent work, as noted in several studies. Data indicate that up to 60% of teachers lose touch with current psychological and pedagogical theories within five years of practice (Day, 1999). Such knowledge is forgotten much faster than subject-specific expertise, is not applied in the organization of the learning process, and is easily replaced by scientifically unsubstantiated practices. Thus, by common psychological conceptions of the learning process, we mean persistent, non-formalized, experience-based ideas and beliefs about various aspects of educational activity.

Despite the availability of empirical evidence indicating the influence of common psychological conceptions about learning, including neuro-myths, on the professional attitudes and practices of students in pedagogical fields and practicing educators, it remains insufficiently studied, including the questions of how such beliefs are formed and how they transform in the process of receiving pedagogical education and engaging in professional activities.

Overall, it should be noted that in the Russian context, there is a notable lack of comprehensive studies covering the development of psychological conceptions about learning among educators — from the initial training stage to their professional implementation in practice. The present study aims to fill this gap by focusing on the dynamics of the formation and transformation of common psychological conceptions about learning processes within the context of teacher training and the professional development of teachers and educational psychologists.

Research Questions

This study aims to identify common psychological conceptions about learning processes

and neuromyths among pedagogical university students, teachers, and educational psychologists, as well as to compare the prevalence of these beliefs across these groups.

The following research questions have been formulated within the study:

RQ1: How widespread are common psychological conceptions about learning and neuromyths among pedagogical university students and education professionals (teachers and educational psychologists)?

RQ2: Do common psychological conceptions about learning and neuromyths change among pedagogical university students at different stages of their professional training?

RQ3: Are there differences in common psychological conceptions about learning and neuromyths between pedagogical university students and education professionals (teachers and educational psychologists)?

Materials and Methods

The methodological foundation of the study was based on the research by examining and analyzing misconceptions and myths in the pedagogical and student environment. Based on the research work, the authors' Questionnaire "Ideas about Psychological Concepts in Education" Questionnaire (IPCE-Q) was developed.

The IPCE-Q consists of the following sections:

1. The Sociodemographic Section consists of 10 questions to collect data on gender, age, professional status (students or practicing specialists), level of education, field of study, year of study (for students) and length of professional experience (for specialists).

2. The Section of Closed Statements consists of 12 items (S1-S2) to identify neuromyths and common conceptions. The assessment was conducted using a five-point Likert scale for the participants to express their degree of agreement with each statement. The participants were asked to choose one of the following answer options: 1 — strongly disagree, 2 — rather disagree, 3 — find it difficult to answer, 4 — rather agree, 5 — completely agree. One of the statements contained a scientifically reliable fact. The remaining 11 statements reflected common but

unreliable concepts in the educational environment.

The survey of respondents using the IPCE-Q was conducted online using the AnketologBox platform. Participation in the study was voluntary, anonymous, and did not involve incentive payments.

The analysis of the obtained data was performed using the STATISTICA statistical package. A one-way analysis of variance (ANOVA) was used to compare groups. Due to the sensitivity of this method to sample sizes, the effect size (η^2) was additionally calculated when interpreting the results. In our study, an η^2 value ≥ 0.03 was considered a sufficient basis for discussing the results in terms of practical significance. When searching for differences between specific groups (pairwise comparisons), Tukey's post hoc test was used. This test allows for a large number of pairwise comparisons of group means without a loss of statistical power.

Sample

The total number of respondents was 889 individuals aged 18 years and older (94,9% were women). Overall, the sample was represented by several groups differing in criteria related to teaching activities. The main criterion was affiliation with different stages of a professional career in education: students (235 respondents; 26,4%), working professionals (623 respondents; 70,1%), and participants combining work and study (31 respondents; 3,5%).

The student sample ($N = 235$, 100%) was further divided by:

- field of study: psychologists (64 respondents; 27,2%), educational psychologists (111 respondents; 47,2%), primary school teachers (58 respondents; 24,7%), as well as participants who did not specify their field of study (2 respondents; 0,9%);
- year of study: 1st year — 55 (23,4%) respondents, 2nd year — 69 (29,4%) respondents, 3rd year — 58 (24,7%) respondents, 4th year — 46 (19,6%) respondents, and 7 (3,0%) participants who did not indicate their year of study.

The sample of working professionals ($N = 623$, 100%) was divided according to the following criteria:

• specialization: teachers (113 respondents; 18,1%), educational psychologists (495 respondents; 79,5%), and 15 (2,4%) participants not engaged in teaching activities at the time of the survey;

• work experience: 1-year (93 respondents; 14,9%), 2 years (45 respondents; 7,2%), 3 years (30 respondents; 4,8%), more than 3 years (410 respondents; 65,8%), and 45 (7,2%) participants who did not specify their work experience.

The sample was formed from representatives of educational institutions in Moscow and the Moscow region.

Results

The data obtained during the study allowed for a quantitative analysis of the prevalence of common psychological conceptions about learning and neuromyths among pedagogical university students, teachers, and educational psychologists. The analysis covered both generalized indicators of agreement with the statements and comparisons between groups based on various criteria — educational level, field of

study, work experience, and professional status. The dataset collected during the study and the original IPCE Questionnaire are available in the Russian national repository of psychological research and tools, RusPsyDATA (Margolis et al., 2024).

To answer the first research question (RQ1) regarding the prevalence of common psychological conceptions about learning and neuromyths among students of Pedagogical Universities and specialists in the field of education, the average values of the degree of agreement and the proportion of the respondents agreeing with the statement were calculated. (Table).

The statements in the Table (S1-S12) are arranged in descending order of the average score of the degree of agreement of the respondents with the statement for the entire Sample (i.e. the order of the statements in the Table does not correspond to the order of the statements in the IPCE-Q).

The results revealed that across the entire sample, the statement receiving the highest level of trust was that “class size affects learn-

Table

Prevalence of lay psychological conceptions about learning processes and neuromyths among students, practicing professionals (teachers and educational psychologists), and the total sample (mean score, % of respondents agreeing with the statement)

Statements (S1 — S12)		Practicing professionals (teachers and educational psychologists) (N = 623, 100%)		Students (N = 235, 100%)		Total sample*** (N = 889, 100%)	
		Mean score	% agreeing*	Mean score	% agreeing	Mean score	% agreeing
1	2	3	4	5	6	7	8
S1	The number of students in a classroom (class size) affects learning efficiency	4,3	90,9%	4,3	89,4%	4,3	90,4%
S2	The key quality of a good teacher is the ability to explain material clearly	4,1	84,3%	4,0	83,4%	4,1	83,8%
S3	There are various learning styles (auditory, visual, or kinesthetic) that allow for more effective teaching of students	4,0	77,4%	4,2	85,1%	4,1	79,4%

1	2	3	4	5	6	7	8
S4	Some people have a dominant left hemisphere, while others have a dominant right hemisphere, which determines their thinking style and personality traits	3,9	81,1%	3,6	65,1%	3,8	75,9%
S5	Repeated (self-)testing leads to a more long-term learning effect than re-reading the material**	3,3	49,9%	3,5	58,7%	3,3	52,8%
S6	In teacher training, practice-related activity is more important than theoretical knowledge	3,2	53,8%	3,4	58,7%	3,3	55,7%
S7	Humans generally use only 10% of their brains	3,2	48,6%	2,5	25,1%	3,0	42,1%
S8	The main challenge in a teacher's work is maintaining classroom discipline	3,1	47,5%	3,0	46,0%	3,1	46,7%
S9	Schools with mandatory uniforms have higher student achievement	2,9	37,6%	2,3	18,3%	2,7	31,6%
Y10 / S10	Мальчики более способны к математике, а девочки — к языкам / Boys are more proficient in mathematics, while girls excel in languages	2,4	22,0%	2,1	15,7%	2,3	19,9%
S11	Autism is a developmental disorder that may be caused by vaccination	1,9	7,9%	1,5	1,7%	1,8	6,0%
S12	Teaching does not necessarily require formal training; any adult can be a teacher	1,5	3,7%	1,6	6,4%	1,5	4,6%

Note: * — agreement with the statement includes the responses “Strongly agree” and “Somewhat agree”; ** — denotes a true statement; *** — the total includes 31 participants who were not classified into any group, as they are simultaneously employed and enrolled in education.

ing effectiveness” (S1) — with 90,4% of participants rather or completely agreeing. However, this seemingly convincing claim lacks scientific support (Hattie, 2009). Interestingly, the scientifically validated statement that “testing and self-testing are more effective than simple material repetition” (S5) received mixed support, with just over half of respondents (52,8%) agreeing.

Trust in the statement that “autism can result from vaccination” (S11) was observed only in 6,0% of respondents. The statement that “anyone can be a teacher” (S12) found the least support among educators (4,6%).

Figure 2 presents a comparison of proportions between students (N=235, 100%) and working professionals (N=623, 100%) who agreed with statements S1 — S12 about learning characteristics and neuromyths (see Table, columns 4 and 6). The order of statements S1-S12 follows the descending sequence of mean agreement levels across the total sample (see Table, columns 1 and 7).

Our findings align with international studies on the prevalence of such misconceptions among

educators (Fig. 1). For instance, belief in the effectiveness of different learning styles (auditory, visual, or kinesthetic) varies across countries from 82,0% to 97,0% (Menz, Spinath, & Seifried, 2021). A systematic review by Newton and Salvi, encompassing 37 studies with over 15000 educators from 18 countries, revealed that 79,7% of teachers not only endorsed the “learning styles” concept but also reported applying corresponding strategies in their practice. Teachers indicated they identify students’ presumed individual learning styles and adapt their teaching methods accordingly (Newton & Salvi, 2020).

These data demonstrate that neuromyths may significantly influence everyday teaching practices, becoming embedded in professional thinking. Similar patterns emerge regarding belief in hemispheric dominance affecting cognitive and personality traits: 72% of educators across countries (2019 international study average); 70% of Russian university instructors (Maksimova, Frolova, & Chekalina, 2022); 85 — 95% of Russian school teachers across disciplines (Bezrukikh, Ivanov, & Orlov, 2021).

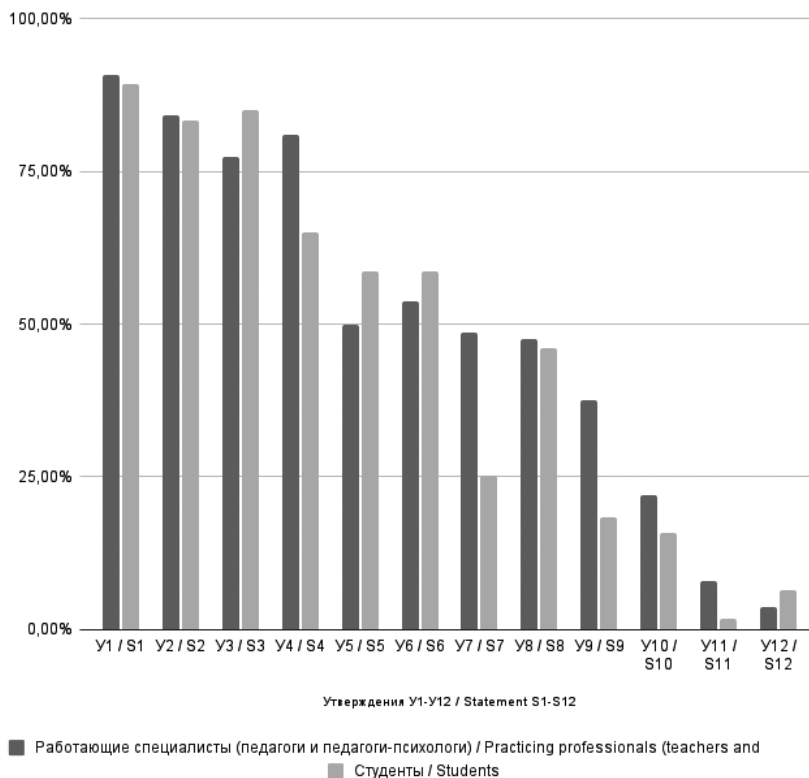


Fig. 1. Comparison of the proportions of respondents agreeing with statements S1 — S12 about the learning processes characteristics and neuromyths in students (N = 235, 100%) and practicing professionals (N = 623, 100%): statements S1 — S12 are presented in descending order based on the mean level of agreement among respondents in the overall sample

Analysis of the second research question (RQ2) — whether common psychological conceptions about learning and trust in neuromyths change during university education — revealed that among students across different years (1st to 4th year), statistically significant differences were observed for only one statement: “Humans use only 10% of their brain” (S7) ($F(3,224) = 4.07$; $p = 0.0077$; $\eta^2 = 0.05$). Notably, significant differences for this statement were found only between 2nd-year ($M = 2.81$) and 3rd-year ($M = 2.12$) students (Tukey’s post hoc test, $p = 0.0085$). As seen in the agreement scores with 95% confidence intervals for statements S4, S6, S7, and S9 across different years,

non-overlapping confidence intervals occurred solely between 2nd- and 3rd-year students for statement S7 (Fig. 2). Thus, the prevalence of the vast majority of common psychological conceptions about learning and trust in neuromyths remains nearly identical across different academic years. This suggests that university education does not significantly alter students’ initial conceptions in this domain — whether they are future psychologists, educational psychologists, or teachers.

An additional assessment was conducted to evaluate the differences between the responses of students from various fields of study: future psychologists, educational psychologists, and

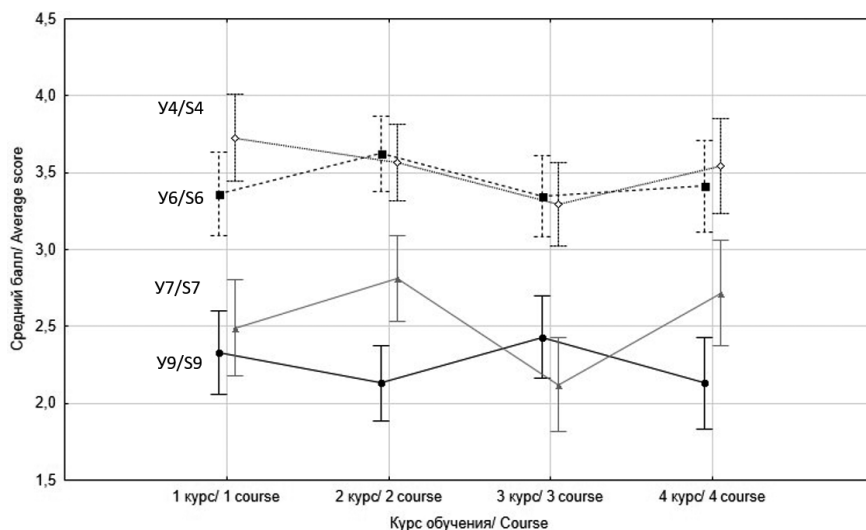


Fig. 2. Mean values of the degree of agreement for the statements S4, S6, S7, S9 with 95% confidence intervals in students from different years (1st—4th year)

primary school teachers (see Fig. 3). The results of the variance analysis showed that differences between the groups were observed only for the statement “In teacher training, practical activities are more important than theory” (S6) ($F(2,230) = 3,93$; $p = 0,0210$; $\eta^2 = 0,033$). Future primary school teachers ($M = 3,76$) believed in this statement significantly more than future psychologists ($M = 3,25$) (post hoc Tukey test, $p = 0,0231$). For all other statements, no significant differences were found between the groups. Accordingly, belief in common psychological conceptions about learning and trust in neuromyths is not related to the field of study of future specialists.

Our findings are consistent with research by M.V. Khramova and colleagues, which demonstrated that educational level has minimal impact on the prevalence of neuromyths among students across various disciplines — including future teachers. Notably, even upper-year students-maintained belief in neuromyths (Khramova et al., 2023).

Similar conclusions were drawn in a study of Austrian psychology students. Although 95% of participants reported that neuroscience topics

were covered in their university curriculum, and 87% had attended introductory cognitive neuroscience lectures, belief in neuromyths remained prevalent (e.g., 91% endorsed the learning styles myth) (Novak-Geiger, 2023).

An additional question we considered was whether common psychological conceptions of the learning process and neuromyths about education change during professional work at school. To answer this question, groups of respondents with different lengths of work experience were identified: “1 year,” “2 years,” “3 years,” and “more than 3 years.” Statistically significant differences among these groups were found only for two statements (see Figure 5): “Schools with mandatory uniforms have higher student achievement” (S9) ($F(3,574) = 7,22$; $p = 0,0001$; $\eta^2 = 0,04$) and “Some people are left-brain dominant while others are right-brain dominant that determines their thinking style and personality traits” (S4) ($F(3,574) = 6,21$; $p = 0,0004$; $\eta^2 = 0,03$). The post hoc Tukey test revealed differences only between the most extreme groups: “1 year” ($M9 = 2,62$ and $M4 = 3,62$) and “more than 3 years” ($M9 = 3,05$ and $M4 = 4,02$) ($p = 0,0392$ and $p = 0,0246$ for

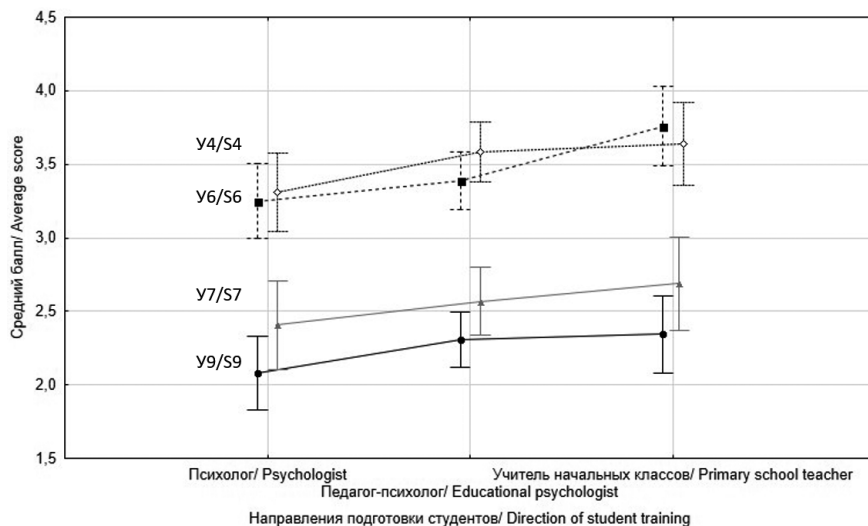


Fig. 3. Mean values of the degree of agreement for the statements S4, S6, S7, S9 with 95% confidence intervals in students of different fields of study

the two statements, respectively). That is, both indicators significantly increase with more than three years of experience. Overall, it can be concluded that there are no substantial changes in

common psychological conceptions of the learning process depending on work experience.

The obtained data are supported by research showing that work experience in the field of edu-

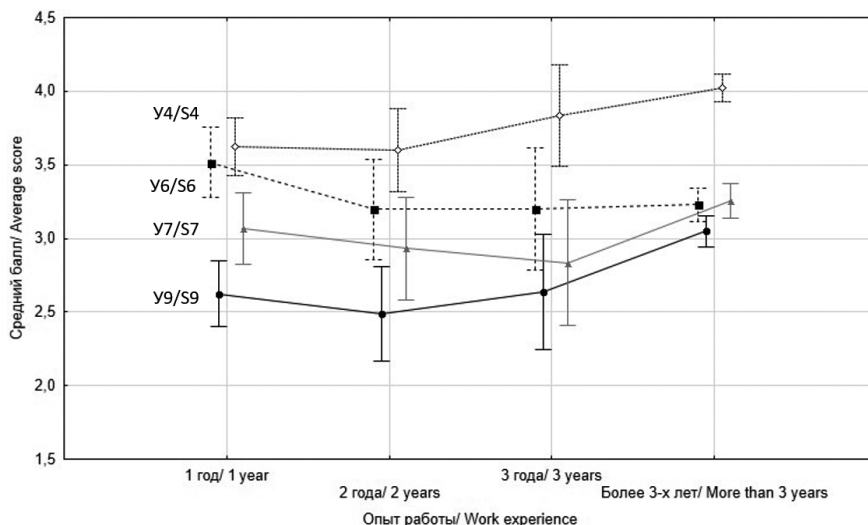


Fig. 4. Mean values of the degree of agreement for the statements S4, S6, S7, S9 with 95% confidence intervals in respondents with different lengths of professional experience

cation does not contribute to reducing teachers' belief in neuromyths. For instance, a study by S. Dekker and colleagues demonstrated that teachers in the United Kingdom and the Netherlands, on average, agreed with 49% of neuromyths, with no significant differences found between the two countries. The most widespread beliefs were in the existence of "learning styles" and "brain hemisphere dominance," which were used by over 80% of the surveyed educators (Dekker et al., 2012). A systematic review of 24 qualitative studies on the persistence of neuromyths among current and future educators over time, involving 13 767 teachers and students from 20 countries (2012 — 2020), also revealed that, despite advancements in neuroscience and the availability of knowledge, misconceptions about brain functioning remain widespread in the educational community. The most persistent myths include "A person uses only 10% of his brains"; "every individual learns better through their preferred sensory channel (auditory/visual/kinesthetic)"; and the division of people into "left-brained" and "right-brained" (Torrijos-Muelas et al., 2021).

Another key question we addressed was whether differences exist in common psycho-

logical perceptions of learning process and neuromyths between students and working professionals from two categories: educational psychologists versus teachers (RQ3). Statistically significant differences with acceptable effect sizes were found for two statements: (S9) "Schools with mandatory uniforms have higher student achievement" ($F(2,810) = 29,26$; $p < 0,0001$; $\eta^2 = 0,07$) and (S7) "A person uses only 10% of his brain" ($F(2,810) = 27,69$; $p < 0,0001$; $\eta^2 = 0,06$). For statement S7 about the 10% brain myth, students ($M = 2,49$) differed significantly from both teachers ($M = 3,24$; Tukey's post hoc test; $p < 0,0001$) and educational psychologists ($M = 3,19$; Tukey's post hoc test; $p < 0,0001$). However, for the school uniform statement (S9), differences were only found between students ($M = 2,26$) and practicing educational psychologists ($M = 2,95$; Tukey's post hoc test; $p = 0,0054$). These results are presented in Fig. 5. Importantly, for both statements, students showed lower average agreement compared to the other two respondent groups, while no significant differences were found between educational psychologists and teachers.

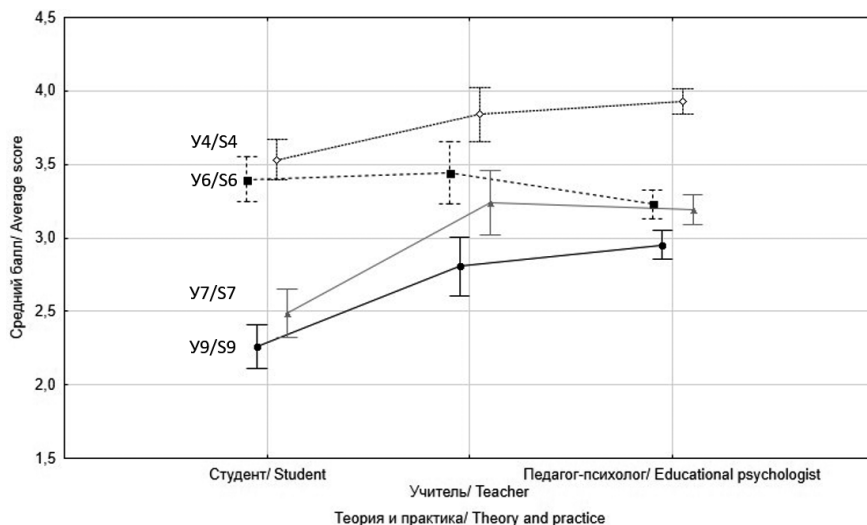


Fig. 5. Mean values of the degree of agreement for the statements S4, S6, S7, S9 with 95% confidence intervals among students and practicing specialists — educational psychologists and teachers

It is noteworthy that according to nationwide surveys of Russian adults (2018), a significant majority of respondents (82%) support the introduction of school uniforms. This suggests that the belief in the importance and necessity of school uniforms appears widespread in contemporary society, including among teachers and educational psychologists. The observed differences in attitudes toward school uniforms between students and practicing specialists may also be explained by workplace norms. In schools with dress codes, uniforms are perceived as part of institutional order and academic culture, leading professionals to attribute positive effects on student discipline and achievement to them (Shahr, Yazdani, & Afshar, 2019). Research consistently shows that teachers tend to support strict uniform policies for their perceived disciplinary benefits, while most students oppose uniforms and fail to recognize their advantages (Woo et al., 2020).

The persistence of such misconceptions aligns with findings from Grospietsch and Lins' comprehensive review on the prevalence and endurance of neuromyths among educators, students, and other education professionals. Their study demonstrates that neuromyths remain pervasive across all examined groups. While neuroscience education reduces belief in neuromyths, it doesn't eliminate them — even students in specialized programs continue to endorse some misconceptions. This remarkable persistence occurs because neuromyths are rooted in intuitive beliefs and socially reinforced assumptions that resist contradictory evidence (Grospietsch & Lins, 2021).

Our findings demonstrate the persistence of common psychological conceptions and neuromyths across all examined groups — students at different academic levels, teachers, and educational psychologists. The minimal differences observed between academic years suggest that standard pedagogical university curricula prove ineffective in challenging entrenched common psychological conceptions of the learning process. Even when educational programs include psychology, pedagogy, and neuroscience courses, without specifically designed interven-

tions they fail to impact these deeply rooted misconceptions. Students continue to rely on common-sense experience and popular explanatory models (Rousseau, 2021). Moreover, research shows that even targeted educational interventions (such as explanatory texts) yield limited success in reducing belief in inaccurate concepts unless accompanied by structured reflective activities (Ferrero, Konstantinidis, & Vadillo, 2020).

However, our comparison between students and practitioners revealed significant differences regarding two specific statements — the impact of school uniforms on academic performance and the 10% brain myth. In both cases, students showed lower agreement with these false statements, potentially indicating greater critical thinking during early professional development. These results suggest that professional immersion may reinforce rather than reduce common psychological conceptions. This aligns with international research on cognitive biases — new information tends to be ignored or distorted in favor of pre-existing beliefs (Deligiannidi & Howard-Jones, 2015; Weisberg et al., 2021).

The absence of differences between educational psychologists and teachers suggests that neither the type of professional training nor specific institutional roles significantly affect the prevalence of these misconceptions. The stability of such beliefs across different educational levels indicates that the educational environment itself plays a crucial role in perpetuating them. Rather than resulting from critical engagement with academic knowledge or professional practice, these persistent beliefs likely emerge through observational learning or generalizations drawn from personal schooling experiences and interactions with teachers. Common psychological conceptions of learning and trust in neuromyths continue to be reproduced and transmitted within the educational community despite contradicting scientific evidence (Blackmore, 1999). As Grospietsch and Lins argue, neuromyths may be viewed as elements of teachers' professional subculture that persistently recur in educational practice (Grospietsch & Lins, 2021).

These misconceptions persist despite exposure to scientific concepts for several key reasons. First, they are rarely targeted explicitly by educators or subjected to structured critical reflection, creating no opportunity for transforming common psychological conceptions into scientifically grounded knowledge. Second, mere recognition and verbalization of these naive beliefs about learning proves insufficient — deliberate, systematic efforts to facilitate conceptual change are required. However, current psychology and education curricula lack such transformative components. Third, when academic knowledge remains disconnected from practical application, professional understanding fails to fully develop. True knowledge formation requires using concepts as tools for solving real-world problems — a fundamental distinction between passive information and active knowledge. In practice, both students and professionals continue addressing challenges through pre-existing intuitive beliefs rather than scientific frameworks, leaving academic concepts as memorized facts rather than thinking tools. Fourth, even properly formed psychological knowledge becomes oversimplified over time. Bridging this theory-practice gap demands early and sustained immersion in practical contexts from the first year of study. Field experience should serve as a transformative laboratory for refining psychological perspectives rather than brief skill-acquisition episodes (Margolis, 2024). Equally crucial are: continuous teachers' education ensuring regular updating of psychological knowledge (Kulyutkin, 1989); systematic supervision for novice educators; regular case-based coaching using authentic school scenarios (Shulman, 1987; Hattie, 2009).

Thus, the core mission of teacher education must become developing educators' capacity to critically examine their practice through scientific lenses — cultivating pedagogical reflection as the bridge from naive beliefs about the learning process to theoretically informed professional reasoning (Margolis, 2021).

Conclusions

The study revealed a high prevalence of common psychological conceptions of the learning

process and neuromyths among pedagogical university students and education professionals (RQ1), with the strongest endorsement given to statements about class size effects on learning effectiveness (90,4% agreement), explanation clarity as a key teacher quality (83,8%), and prevalent neuromyths concerning learning styles (79,4%) and hemispheric dominance (75,9%). These findings demonstrate the persistent circulation of scientifically unsupported beliefs within the educational community. The research further showed that students' belief in these misconceptions does not decrease as they progress through their academic years (RQ2), indicating such attitudes form prior to professional training and remain stable throughout university education. The absence of significant differences across academic years and specializations suggests standard curricula have limited impact on developing scientific perspectives among future educators, with no correlation found between misconception prevalence and professionals' work experience either.

While comparing students and practitioners (teachers versus educational psychologists) revealed no significant differences for most statements (RQ3), two exceptions emerged regarding school uniforms' impact on academic performance and the 10% brain myth, with students showing lower agreement that may indicate greater critical thinking during early professional development. However, this doesn't negate the overarching pattern of misconception reinforcement in educational practice. The persistence of naive beliefs throughout professional training and into teaching practice underscores the urgent need for curriculum reforms, particularly through incorporating dedicated modules for conceptual change regarding learning misconceptions, enhancing pedagogical reflection training, and systematically integrating evidence-based approaches with practical experience.

In conclusion, our study is the first in Russia to simultaneously examine the nature of common psychological perceptions of learning process and neuromyths among student teachers, in-service teachers, and educational

psychologists. The findings reveal that these intuitive perceptions emerge before future specialists begin their professional training and persist unchanged throughout university education and even after entering teaching practice.

This compelling evidence calls for a fundamental restructuring of teacher and educational psychologist training programs. The core of this reform should be a systematic effort to cultivate evidence-based professional thinking, anchored in empirical approaches and real-world challenges. The current system must shift toward actively

replacing naive assumptions with scientifically grounded pedagogical reasoning — ensuring that training, from its earliest stages, integrates rigorous practice-oriented methodologies.

Limitations. The sample was limited to a single region (Moscow and the Moscow Region), which may reduce the generalizability of the findings. The list of neuromyths and lay psychological beliefs about education included 12 statements, which provides a limited view of the prevalence of these phenomena in the educational environment.

Список источников / References

1. Аллахвердов, В.М. (2018). Психология как наука и проблема демаркации (статья первая). *Методология и история психологии*, 1, 46—57. <https://doi.org/10.7868/S1819265318010041>
Allakhverdov, V.M. (2018). Psychology as a science and the problem of demarcation (article one). *Methodology and History of Psychology*, 1, 46—57. (In Russ.). <https://doi.org/10.7868/S1819265318010041>
2. Безруких, М.М., Иванов, В.В., Орлов, К.В. (2021). Диссонанс между представлениями о развитии мозга в современной нейробиологии и знаниями педагогов. *Science for Education Today*, 11(1), 125—150. <https://doi.org/10.15293/2658-6762.2101.08>
Bezrukikh, M.M., Ivanov, V.V., Orlov, K.V. (2021). Differences between concepts of brain development in modern neurobiology and teachers' knowledge. *Science for Education Today*, 11(1), 125—150. (In Russ.). <https://doi.org/10.15293/2658-6762.2101.08>
3. Выготский, Л.С. (1982). Мышление и речь. *Собрание сочинений: В 6 т.: Т. 2: Проблемы общей психологии* (с. 35—496). М.: Педагогика.
Vygotsky, L.S. (1982). Thinking and speech. *Collected Works: In 6 vol.: Vol. 2: Problems of general psychology* (pp. 35—496). Moscow: Pedagogy. (In Russ.).
4. Глебкин, В.В. (2009). Наука и псевдонаука: методологические поиски Карла Поппера. *Исследователь*, 2(2), 61—62. URL: <https://elibrary.ru/item.asp?id=46383016> (дата обращения: 13.04.2025).
Glebkin, V.V. (2009). Science and pseudoscience: Karl Popper's methodological quest. *Researcher*, 2(2), 61—62. (In Russ.). URL: <https://elibrary.ru/item.asp?id=46383016> (viewed: 13.04.2025).
5. Дорожкин, А.М., Ткачев, А.Н. (2016). Заблуждение как проявление мифа в науке. *Ценности и смыслы*, 6(46), 53—61. URL: <https://www.elibrary.ru/item.asp?id=27545489> (дата обращения: 13.04.2025).
Dorozhkin, A.M., Tkachev, A.N. (2016). Fallacy as a manifestation of myth in science. *Values and Meanings*, 6(46), 53—61. (In Russ.). Available at: <https://www.elibrary.ru/item.asp?id=27545489> (viewed: 13.04.2025).
6. Ермолова, Т.В., Литвинов, А.В., Чернова, О.Е., Гузова, А.В. (2023). Мисконцепции в психологии как негативный фактор формирования профессиональной компетенции психологов. *Современная зарубежная психология*, 12(2), 104—115. <https://doi.org/10.17759/jmfp.2023120210>
Ermolova, T.V., Litvinov, A.V., Chernova, O.E., Guzova, A.V. (2023). Misconceptions in Psychology as a Negative Factor in the Formation of Professional Competence of Psychologists. *Journal of Modern Foreign Psychology*, 12(2), 104—115. (In Russ.). <https://doi.org/10.17759/jmfp.2023120210>
7. Kuznetsova, O.I., Maslennikova, E.G. (2015). National doctrines and education systems of different countries. *Lichnost', sem'ya i obshchestvo: voprosy pedagogiki i psikhologii [Personality, family and society: issues of pedagogy and psychology]*, 49, 44—45. (In Russ.). URL: <https://www.elibrary.ru/item.asp?id=23104081> (viewed: 13.04.2025).
8. Кулюткин, Ю.Н. (1989). Социальная обусловленность непрерывного образования. *Вопросы психологии*, 2, 5—13. URL: <http://voppsy.ru/issues/1989/892/892005.htm> (дата обращения: 13.04.2025).
Kulutkin, Y.N. (1989). Social conditionality of continuous education. *Voprosy psikhologii*, 2, 5—13. (In Russ.). URL: <http://voppsy.ru/issues/1989/892/892005.htm> (viewed: 13.04.2025).

9. Лобанов, А.П., Радчикова, Н.П. (2011). Формирование ментальных репрезентаций в контексте прототипов. *Вестник Томского государственного университета*, 343, 180—183. URL: <https://elibrary.ru/item.asp?id=15640309> (дата обращения: 13.04.2025).
10. Лобанов, А.П., Радчикова, Н.П., Айсмонтас, Б.Б., Воронова, А.В. (2017). Эмоциональный интеллект: к проблеме операционализации понятия в контексте эмпирического исследования. *Вестник Полоцкого государственного университета. Серия Е. Педагогические науки*, 7, 69—74. URL: <https://elibrary.ru/item.asp?id=30024273> (дата обращения: 13.04.2025).
11. Лобанов, А.П., Радчикова, Н.П., Дроздова, Н.В., Воронова, А.В. (2018). Влияние академических и неакадемических видов интеллекта на учебные достижения студентов. *Известия Саратовского университета. Новая серия. Серия: Акмеология образования. Психология развития*, 7(4), 304—312. <https://doi.org/10.18500/2304-9790-2018-7-4-304-312>
12. Максимова, М.В., Фролова, О.В., Чекалина, Т.А. (2022). Нейромифы в образовании: анализ распространенности среди преподавателей вузов. *Вопросы образования*, 2, 190—215. <https://doi.org/10.17323/1814-9545-2022-2-190-215>
13. Марголис, А.А. (2021). Новая научная грамотность: проблемы и трудности формирования. *Психологическая наука и образование*, 26(6), 5—24. <https://doi.org/10.17759/pse.2021260601>
14. Марголис, А.А. (2024). Педагогическое образование как развитие исходных педагогических представлений. *Психологическая наука и образование*, 29(6), 5—20. <https://doi.org/10.17759/pse.2024290601>
15. Марголис, А.А., Шведовская, А.А., Адаскина, А.А., Ермолова, Т.В., Земскова, Т.В., Коновалова, И.В., Пономарева, В.В., Прокопьева, Л.М., Семилетова, А.Н., Сорокова, М.Г. (2024). Распространенность нейромифов и житейских представлений о психологических понятиях среди студентов педагогических вузов и учителей: Набор данных 2024 год. RusPsyData: репозиторий психологических исследований и инструментов. М. <https://doi.org/10.48612/MSUPE/bfwb-z8v8-4pv1>
16. Одинова, М.А., Радчикова, Н.П. (2018). Самоактивация как личностный ресурс студентов в инклюзивной образовательной среде вуза. *Современная зарубежная психология*, 7(1), 62—70. <https://doi.org/10.17759/jmfp.2018070107>
17. Рубцов, В.В. (2024). Социально-генетическая психология учебных взаимодействий:

- избранные статьи, выступления, проекты: Том 2. М.: Городец. URL: <https://psyjournals.ru/nonserialpublications/sgpli2024b2/contents> (дата обращения: 13.04.2025).
- Rubtsov, V.V. (2024). Social-genetic psychology of learning interactions: Selected articles, speeches, projects: Vol. 2. Moscow: Gorodets. (In Russ.). URL: <https://psyjournals.ru/nonserialpublications/sgpli2024b2/contents> (viewed: 13.04.2025).
18. Сорокова, М.Г. (2021). Предметные результаты студентов в цифровой среде университета на разных уровнях высшего образования: Так кто же более успешен? *Психологическая наука и образование*, 26(1), 76—91. <https://doi.org/10.17759/pse.2021260105>
 - Sorokova, M.G. (2021). Academic outcomes of students in university digital environment at different levels of higher education: Who is more successful? *Psychological Science and Education*, 26(1), 76—91. (In Russ.). <https://doi.org/10.17759/pse.2021260105>
 19. Сорокова, М.Г., Одицова, М.А., Радчикова, Н.П. (2021). Образовательные результаты студентов в электронных курсах при смешанном и онлайн-обучении. *Моделирование и анализ данных*, 11(1), 61—77. <https://doi.org/10.17759/mda.2021110105>
 - Sorokova, M.G., Odintsova, M.A., Radchikova, N.P. (2021). Students Educational Results in Blended and Online E-Courses. *Modelling and Data Analysis*, 11(1), 61—77. (In Russ.). <https://doi.org/10.17759/mda.2021110105>
 20. Blackmore, S.J. (1999). The meme machine: Vol. 25. New York: Oxford Paperbacks. Доступно по ссылке: <https://books.google.ru/books?id=hpU0FOqr2YEC&lpq=PP1&hl=ru&pg=PP1#v=onepage&q&f=false> (дата обращения: 13.04.2025).
 21. Day, C. (1999). Professional Development and Reflective Practice: Purposes, Processes and Partnerships. *Pedagogy, Culture & Society*, 7(2), 221—233. Доступно по ссылке: <https://www.tandfonline.com/doi/abs/10.1080/14681366.1999.11090864> (дата обращения: 13.04.2025).
 22. Dekker, S., Lee, N.C., Howard-Jones, P., Jolles, J. (2012). Neuromyths in education: Prevalence and predictors of misconceptions among teachers. *Frontiers in psychology*, 3, Article 33784. <https://doi.org/10.3389/fpsyg.2012.00429>
 23. Deligiannidi, K., Howard-Jones, P.A. (2015). The neuroscience literacy of teachers in Greece. *Procedia-Social and Behavioral Sciences*, 174, 3909—3915. <https://doi.org/10.1016/j.sbspro.2015.01.1133>
 24. Ferrero, M., Konstantinidis, E., Vadillo, M.A. (2020). An attempt to correct erroneous ideas among teacher education students: the effectiveness of refutation texts. *Frontiers in Psychology*, 11, Article 577738. <https://doi.org/10.3389/fpsyg.2020.577738>
 25. Grospietsch, F., Lins, I. (2021). Review on the prevalence and persistence of neuromyths in education — where we stand and what is still needed. *Frontiers in Education*, 6, Article 665752. <https://doi.org/10.3389/feduc.2021.665752>
 26. Hattie, J. (2009). Visible learning: a synthesis of over 800 meta-analyses relating to achievement. London, New York: Routledge.
 27. Howard-Jones, P.A. (2014). Neuroscience and education: myths and messages. *Nature reviews neuroscience*, 15(12), 817—824. Доступно по ссылке: <https://www.nature.com/articles/nrn3817> (дата обращения: 13.04.2025).
 28. Hughes, S., Lyddy, F., Lambe, S. (2013). Misconceptions about Psychological Science: A review. *Psychology Learning and Teaching*, 12(1), 20—31. <https://doi.org/10.2304/plat.2013.12.1.20>
 29. Khramova, M.V., Bukina, T.V., Smirnov, N.M., Kurkin, S.A., Khramov, A.E. (2023). Prevalence of neuromyths among students and future teachers. *Humanities and Social Sciences Communications*, 10, Article 950. <https://doi.org/10.1057/s41599-023-02412-4>
 30. Lilienfeld, S.O., Lynn, S.J., Ruscio, J., Beyerstein, B. (2010). *50 great myths of popular psychology: shattering widespread misconceptions about human behavior*. Chichester: John Wiley & Sons.
 31. McAfee, M., Hoffman, B. (2021). The morass of misconceptions: how unjustified beliefs influence pedagogy and learning. *International Journal for the Scholarship of Teaching and Learning*, 1(1), Article 4. <https://doi.org/10.20429/ijstl.2021.150104>
 32. Menz, C., Spinath, B., Seifried, E. (2021). Misconceptions die hard: prevalence and reduction of wrong beliefs in topics from educational psychology among preservice teachers. *European Journal of Psychology of Education*, 36, 477—494. <https://doi.org/10.1007/s10212-020-00474-5>
 33. Newton, P.M., Salvi, A. (2020). How common is belief in the learning styles neuromyth, and does it matter? A pragmatic systematic review. *Frontiers in Education*, 5, Article 602451. <https://doi.org/10.3389/feduc.2020.602451>
 34. Novak-Geiger, V. (2023). Prevalence of neuromyths among psychology students: small differences to pre-service teachers. *Frontiers in Psychology*, 14, Article 1139911. <https://doi.org/10.3389/fpsyg.2023.1139911>

35. Rousseau, L. (2021). Interventions to dispel neuromyths in educational settings — a review. *Frontiers in Psychology*, 12, Article 719692. <https://doi.org/10.3389/fpsyg.2021.719692>
36. Shahr, H.S.A., Yazdani, S., Afshar, L. (2019). Professional socialization: an analytical definition. *Journal of Medical Ethics and History of Medicine*, 12(17), 1—14. <https://doi.org/10.18502/jmehm.v12i17.2016>
37. Shulman, L.S. (1987). Knowledge and teaching: foundations of the new reform. *Harvard Educational Review*, 57(1), 1—22. <https://doi.org/10.17763/haer.57.1.j463w79r56455411>
38. Sibicky, M., Klein, C.L., Embrescia, E. (2021). Psychological misconceptions and their relation to students' lay beliefs of mind. *Teaching of Psychology*, 48(2), 103—109. <https://doi.org/10.1177/0098628320959925>
39. Thompson, R., Zamboanga, B. (2004). Academic aptitude and prior knowledge as predictors of student achievement in introduction to psychology. *Journal of Educational Psychology*, 96(4), 778—784. <https://doi.org/10.1037/0022-0663.96.4.778>
40. Torrijos-Muelas, S., Peropadre, C., Quiles, C., Sanchez-Morcillo, S. (2021). The persistence of neuromyths in the educational settings: a systematic review. *Frontiers in Psychology*, 11, Article no. 591923. <https://doi.org/10.3389/fpsyg.2020.591923>
41. Weisberg, D.S., Landrum, A.R., Hamilton, J., Weisberg, M. (2021). Knowledge about the nature of science increases public acceptance of science regardless of identity factors. *Public Understanding of Science*, 30(2), 120—138. <https://doi.org/10.1177/0963662520977700>
42. Woo, J.M., Tam, C.L., Bonn, G.B., Tagg, B. (2020). Student, teacher, and school counselor perceptions of national school uniforms in Malaysia. *Frontiers in Psychology*, 11, Article 1871. <https://doi.org/10.3389/fpsyg.2020.01871>

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Contribution of the authors

Arkady A. Margolis — developed the overall research concept and provided scientific supervision for the project.

Anna A. Shvedovskaya, Anna A. Adaskina, and Anna N. Semiletova — developed methodological approaches and conducted analysis and interpretation of the obtained results.

Tatiana V. Ermolova, Victoria V. Ponomareva — participated in developing research tools and preparing an analytical review of literature.

Marina G. Sorokova, Andrew S. Radchikov — statistical processing and quantitative analysis of the data, preparing the database for placement in the Psychological Research Data and Tools Repository RusPsyDATA.

Вклад авторов

Марголис А.А. — осуществил разработку общей концепции исследования и научное руководство проектом.

Шведовская А.А., Адаскина А.А. и Семилетова А.Н. — разработали методологические подходы, а также провели анализ и интерпретацию полученных результатов.

Ермолова Т.В., Пономарева В.В. — участвовали в разработке исследовательских инструментов и подготовке аналитического обзора литературы.

Сорокова М.Г., Радчиков А.С. — выполнили статистическую обработку данных и их количественный анализ, подготовили базу данных для размещения в Репозитории психологических исследований и инструментов RusPsyDATA.

Все авторы внесли значимый вклад в подготовку рукописи, одобрили ее финальную версию и несут ответственность за содержание публикации.

Conflict of interest

The authors declare no conflict of interest.

Конфликт интересов

Авторы заявляют об отсутствии конфликта интересов.

Ethics statement

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