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PROFESSIONAL-RESEARCH THINKING OF THE FUTURE EDUCATIONAL PSYCHOLOGIST: CONCEPT AND STRUCTURE

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Abstract. The article theoretically substantiates and empirically analyzes the professional-research thinking of future educational psychologists as a key condition for their successful preparation. The aim of the study is to identify the structural components of this type of thinking - cognitive, analytical, prognostic, creative, and value-motivational and to assess the degree of their manifestation among first- and second-year students majoring in “Pedagogy and Psychology”. The empirical base comprises a survey of 56 students of the Kazakh National Women’s Pedagogical University aimed at diagnosing cognitive motivation, readiness for independent inquiry, group interaction, resilience to failure, and research initiative. The results indicate high cognitive motivation (82% enjoy learning new things), a pronounced orientation toward active forms of learning (about 76% prefer independent analytical and research activities; 79% choose independent research over passive listening), the formation of the communicative component (68% feel comfortable working in groups), and a focus on solution quality (over 70% prefer seeking the optimal solution rather than completing tasks as quickly as possible; 61% declare a preference for the “best way”). A total of 72% demonstrate reflexivity and perseverance (making repeated attempts after failure); however, 28–30% report difficulties in formulating and presenting

their own ideas, which indicates a deficit in research initiative and in problem-posing skills. The scientific novelty of the work lies in refining the conceptual-structural model of professional-research thinking as applied to the training of educational psychologists at the early stages of study, as well as in the empirical description of students' profiles of research qualities. The practical significance is in substantiating a set of pedagogical conditions and methods (project-based research tasks, work in academic groups, problem-based and case-based learning, pedagogical modeling, and reflective practices) aimed at the purposeful development of a research culture - above all, the ability to formulate questions, propose hypotheses, and present results with sound argumentation.

Keywords: professional research thinking, educational psychologist, students, cognitive activity, research potential, independent inquiry

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БОЛАШАҚ ПЕДАГОГ-ПСИХОЛОГТЫҢ КӘСІБИ-ЗЕРТТЕУШІЛІК ОЙЛАУЫ: ҰҒЫМЫ ЖӘНЕ ҚҰРЫЛЫМЫ

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Аннотация. Мақалада болашақ педагог-психологтардың кәсіби-зерттеушілік ойлауы олардың табысты даярлануының негізгі шарты ретінде теориялық тұрғыдан негізделіп, эмпириялық тұрғыдан талданады. Зерттеудің мақсаты – осы ойлау түрінің құрылымдық компоненттерін анықтау (танымдық, аналитикалық, прогностикалық, креативті және құндылық-мотивациялық) және «Педагогика және психология» мамандығының 1-2 курс студенттерінде олардың көріну деңгейін бағалау. Эмпириялық база Қазақ ұлттық қыздар

педагогикалық университетінің 56 студентіне жүргізілген сауалнамадан тұрады; ол танымдық мотивацияны, дербес ізденіске даярлықты, топтық өзара әрекеттесуді, сәтсіздікке төзімділік пен зерттеушілік бастаманы диагностиалауға бағытталды. Нәтижелер жоғары танымдық мотивацияны (82% жаңа нәрсені үйренуді ұнатады), белсенді оқыту түрлеріне айқын бағдарды (шамамен 76% дербес аналитикалық және зерттеу әрекеттерін қалайды; 79% тыңдауға қарағанда дербес зерттеуді тандайды), коммуникативтік компоненттің қалыптасуын (68% топта жұмыс істеуге ыңғайлы) және шешім сапасына бағытталуды көрсетеді (70%-дан астамы тапсырманы тез орындаудан гөрі оңтайлы шешімді іздеуді жөн көреді; 61% «ең дұрыс тәсілді» тандауды мәлімдейді). Сонымен қатар, 72% рефлексивтілік пен табандылық танытады (сәтсіздіктен кейін қайта әрекет жасау), алайда 28–30% өз ойларын тұжырымдап, ұсынуда қиындық көретінін айтты, бұл зерттеушілік бастаманың және мәселе қою дағдыларының жеткіліксіздігін білдіреді. Зерттеудің ғылыми жаңалығы – кәсіби-зерттеушілік ойлаудың ұғымдық-құрылымдық моделін болашақ педагог-психологтарды даярлаудың ерте кезеңдеріне бейімдеп нақтылау және студенттердің зерттеушілік сапаларының эмпириялық сипаттамасын беру. Практикалық маңыздылығы – зерттеушілік мәдениетті нысаналы дамытуға бағытталған педагогикалық шарттар мен әдістер кешенін (жобалық-зерттеушілік тапсырмалар, академиялық топтардағы жұмыс, проблемалық және кейс-оқыту, педагогикалық модельдеу, рефлексивтік практикалар) негіздеуде, ең алдымен, сұрақ қою, гипотеза ұсыну және нәтижелерді дәйекті түрде баяндау құзыреттерін қалыптастыруда.

Түйін сөздер: кәсіби-зерттеушілік ойлау, педагог-психолог, студенттер, танымдық белсенділік, зерттеу әлеуеті, өзіндік ізденіс

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ПРОФЕССИОНАЛЬНО-ИССЛЕДОВАТЕЛЬСКОЕ МЫШЛЕНИЕ БУДУЩЕГО ПЕДАГОГА-ПСИХОЛОГА: ПОНЯТИЕ И СТРУКТУРА

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Аннотация. В статье теоретически обосновано и эмпирически исследовано профессионально-исследовательское мышление будущих педагогов-психологов как важное условие их профессиональной подготовки. Цель исследования заключается в выявлении структурных компонентов данного типа мышления - когнитивного, аналитического, прогностического, креативного и ценностно-мотивационного - и оценке степени их сформированности у студентов 1–2 курсов образовательной программы «Педагогика и психология». Эмпирическая база исследования представлена результатами анкетирования 56 студентов Казахского национального женского педагогического университета. Опрос был направлен на диагностику познавательной мотивации, готовности к самостоятельному поиску, особенностей группового взаимодействия, устойчивости к неудачам и исследовательской инициативы. Полученные результаты свидетельствуют о высоком уровне познавательной мотивации (82 % студентов отмечают интерес к получению новых знаний), выраженной ориентации на активные формы обучения (около 76 % предпочитают самостоятельную аналитико-исследовательскую деятельность, а 79 % выбирают самостоятельное исследование вместо пассивного восприятия информации), а также о сформированности коммуникативной составляющей исследовательской деятельности (68 % комфортно работают в группе). Более 70 % респондентов ориентированы на поиск оптимального способа решения задачи, а 61 % считают приоритетным достижение наиболее качественного результата. Установлено, что 72 % студентов демонстрируют развитые рефлексивные качества и настойчивость при возникновении трудностей. Вместе с тем у 28–30 % обучающихся выявлены затруднения, связанные с формулированием и представлением собственных идей, что свидетельствует о недостаточном уровне исследовательской инициативы и навыков постановки проблемы. Научная новизна исследования заключается в уточнении понятийно-структурной модели профессионально-исследовательского мышления применительно к подготовке педагогов-психологов на ранних этапах обучения, а также в эмпирическом описании профиля исследовательских качеств студентов. Практическая значимость работы состоит в обосновании комплекса педагогических условий и методов (проектно-исследовательские задания, работа в академических группах, проблемное и кейс-обучение, педагогическое моделирование, рефлексивные практики), направленных на развитие исследовательской культуры, умений формулировать вопросы, выдвигать гипотезы и аргументированно представлять результаты исследования.

Ключевые слова: профессионально-исследовательское мышление, педагог-психолог, студенты, познавательная активность, исследовательский потенциал, самостоятельный поиск, исследовательская культура

Introduction. In modern society, the role of a teacher-psychologist is of particular importance, since it is this specialist who helps not only to form a harmonious personality in children and adolescents, but also to create conditions for their successful socialization, adaptation and development. However, the work of a teacher-psychologist goes far beyond the usual pedagogical and advisory functions. It requires him to be able to think deeper, to see patterns in people's behavior, to compare facts and draw conclusions based on analysis. That is why professional research thinking is becoming one of the key professional qualities of a future teacher-psychologist. Without this quality, it is impossible to build competent diagnostic and correctional programs, develop author's methods and approaches, and critically evaluate existing pedagogical and psychological technologies.

Literary review. The high professional level of specialists is largely due to the development of professional thinking and is the result of the purposeful organization of a system for the formation of professional thinking of future teachers on a scientific basis, carried out during all years of study at a pedagogical university (Korthagen, 2017; Lyaudis, 2020; Khalilova, 2015). However, the formation of modern professional thinking during the period of study at a pedagogical university among students does not occur purposefully and is not scientifically organized. Moreover, according to the research of scientists (O.A. Abdullina, S.I. Gilmanishina, Yu.N. Kulyutkin, M.M. Kashapov et al.), the professional thinking of most teachers is far from creative, replete with stereotypes and methodological clichés (Khutorskoy, 2019). Systematic, specially organized work is needed to form this type of thinking among future teachers using the content, forms and methods of psychological, pedagogical and subject block disciplines.

Currently, in a number of pedagogical universities, certain work is being carried out in classes in the disciplines of the psychological and pedagogical cycle and with the help of private methods to form students' professional thinking. Professional research thinking can be considered as a special form of intellectual activity aimed at solving professional problems through the search, analysis, interpretation and comprehension of information. Unlike everyday thinking, it is based on scientific methods and principles, which allows the future specialist to avoid subjective mistakes and act more objectively. For a teacher-psychologist, such thinking becomes a kind of tool that allows for a deeper understanding of the personality of a student, to identify the hidden causes of his behavior and to suggest the most effective ways of helping (Bruner, 2016).

During the senior years, future educational psychologists gradually move from simple assimilation of knowledge to their independent comprehension, analysis and application. This transition marks the beginning of their ability to reflect, introspect, and critically reflect on their own activities. During the writing of course, thesis and research projects, students master methods of data collection and processing, learn to build logical reasoning, interpret results and draw conclusions that meet scientific criteria of objectivity and evidence (Markova, 2014).

The structure of this phenomenon is quite complex and multilayered. It includes

a cognitive component (knowledge and the ability to use concepts and theories of psychology and pedagogy), an analytical component (the ability to identify key points and find cause-and-effect relationships), a prognostic component (the ability to anticipate the consequences of certain pedagogical decisions), and a creative component (a willingness to seek new ways and methods for solving professional problems). The value-motivational aspect must also be considered: without an internal need for knowledge and research, any thinking will be formal in nature. The definition of new vectors of professional thinking research and their directions not only does not negate, but also assumes wider use of the scientific experience of leading psychological students and traditions, attraction of the results of fundamental theoretical and practical developments of the problem, their integration (Kalinina, 2019; Schraw and Robinson, 2022). Professionalization serves as the basis of professional thinking. On the one hand, professionalization generates modifications of thinking according to the type of occupation, i.e. it forms professional types of thinking. On the other hand, with the separation of mental and physical labor, mental activity itself becomes professional (Vygotsky, 2016). Thus, professional thinking is found in two varieties.: as thinking that has become a professional occupation, and as thinking modified by other professional pursuits.

The development of a future educational psychologist's professional and research thinking is impossible without the educational process. At university, it is faculty who create the environment where students encounter research challenges, explore project-based activities, and learn to critically interpret scientific texts and empirical data. In their senior years, students gradually move from simply absorbing knowledge to independently understanding, analysing, and applying it. It is crucial that they develop a mindset of constantly updating their knowledge, as pedagogical and psychological practice is constantly changing, with new methods, research, and technologies emerging (Kuzmina et al., 2018).

An important role in this process is played by the teacher, who guides the cognitive activity of students, forms their research position and stimulates their interest in scientific research (Kalinina, 2019).

Interactive lectures, project and problem seminars, participation in scientific discussions and practical research become effective means of developing research thinking. In the process of such work, not only analytical abilities are formed, but also responsibility for decisions, the ability to reflect and self-esteem (Schraw and Robinson, 2022). All this creates the basis for the formation of a mature professional consciousness of the future teacher-psychologist, ready for independent research and practical activities.

At the same time, it should be noted that professional research thinking is not an innate skill, but the result of long and purposeful training. It is formed in the process of solving educational and practical tasks, writing term papers and theses, participating in scientific conferences and research. At the same time, the student's personal activity is of great importance: the more he is ready to independently search for answers, compare facts and draw conclusions, the higher the level of his research thinking (Yudina and Dagbaeva, 2024).

To substantiate the theoretical basis of the research, an analysis of modern scientific publications presented in the international indexed databases Scopus and Web of Science was carried out. The studied works indicate the increased interest of the scientific community in the problem of the formation of professional research thinking in the context of the training of future teachers and psychologists. So, in the study of J. Willison presents the concept of research thinking - the research thinking of a teacher, which includes structural components of analysis, goal setting, critical reflection and independent search for solutions in the educational environment (Creswell and Creswell, 2018).

In addition, the article by M. Landa-Blanco and A. Cortés-Ramos emphasizes the importance of critical thinking, epistemological orientation and students' attitude to research activities as key factors in the formation of research competencies of future specialists (Cochran-Smith and Villegas, 2021). The analysis of these sources made it possible to clarify the concept and structure of professional research thinking, as well as to identify significant areas of its formation among students of pedagogical specialties in a university educational environment. The works of the Russian researcher Sh.T. Taubayeva are of great importance for the theoretical substantiation of the formation of professional research thinking of the future teacher-psychologist. In the textbook "Methodology and methods of pedagogical Research", the author reveals the methodological foundations of scientific knowledge in pedagogy, defining research activity as a process of purposeful search, analysis and interpretation of pedagogical phenomena. Taubaeva S.T. He emphasizes that mastering methodological culture and understanding the logic of scientific research are necessary conditions for the professional development of a modern teacher (Alipkhanova et al., 2024; Mackenzie, 2021).

The work focuses on the formation of students' skills to formulate scientific problems, put forward hypotheses, select research methods and critically analyze the results. According to the author, it is through the systematic development of research methodology that future teachers develop the ability to reflect, rationalize their own judgments and scientific thinking in general. These provisions serve as the basis for highlighting the structural components of professional research thinking, such as analytical, predictive, critical and reflective.

Materials and methods. The study was conducted among students of 1-2 courses studying in the field of education «Pedagogy and Psychology» at the Women's Pedagogical University. A total of 56 students participated in the study. The purpose of the study was to identify the features of the formation of elements of professional research thinking among future psychology teachers in a university educational environment.

Based on the analysis of theoretical sources and preliminary observations, the following hypotheses were put forward:

It is assumed that students who are actively involved in research activities and use problem-based research teaching methods have a higher level of professional research thinking than students who limit themselves to completing standard academic assignments.

In addition, it is suggested that the formation of elements of professional research thinking directly depends on the level of independence of students in the search, analysis and interpretation of information.

The research method is an oral and written questionnaire. The questionnaire was developed taking into account the level of students' education and included questions aimed at identifying their attitude to educational and research activities, readiness for independent information search, analysis and the promotion of their own hypotheses.

The questions were formulated in a simple and accessible form, with multiple choice answers, which made it possible to ensure the reliability of the data obtained and focus on key aspects of research thinking.

Survey Questions:

1. Do you enjoy learning new things in class?
2. Do you like to ask the teacher questions if you don't understand something?
3. What do you find more interesting: simply listening to the teacher or trying things out and exploring?
4. Do you enjoy working in a group with classmates, or do you prefer to do everything alone?
5. Do you enjoy coming up with your own ideas and sharing them with others?
6. What is more important to you: completing a task quickly or finding the best way to solve it?
7. If you don't succeed at something the first time, do you try again or give up?

A1. Do you enjoy learning new things:

- o Yes - 82%
- o Sometimes - 14%
- o No - 4%

B1. Do you like asking questions?

- o Yes - 65%
- o Sometimes - 28%
- o No - 7%

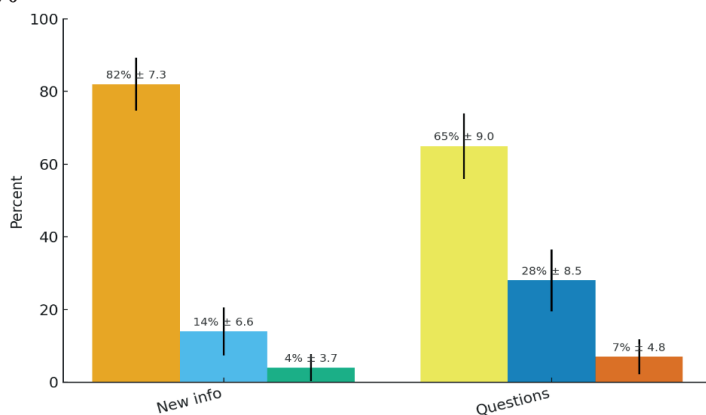


Figure 1 — A) New information; B) Questions

C1. What is more interesting:

o Listening to the teacher - 21%

o independent exploration and experimentation - 79%

D1. Work format:

o Group - 57%

o Alone - 43%

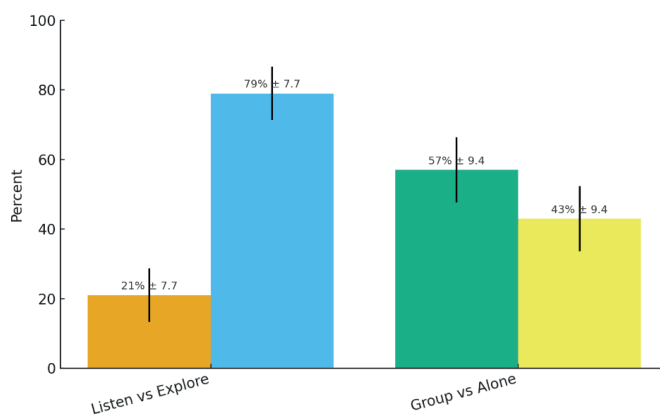


Figure 2 — C) Interest; D) Work format

E1. Generating and sharing ideas:

o Yes - 68%

o Sometimes - 25%

o No - 7%

G1. What's more important in a task:

o Completing it quickly - 39%

o Finding the best solution - 61%

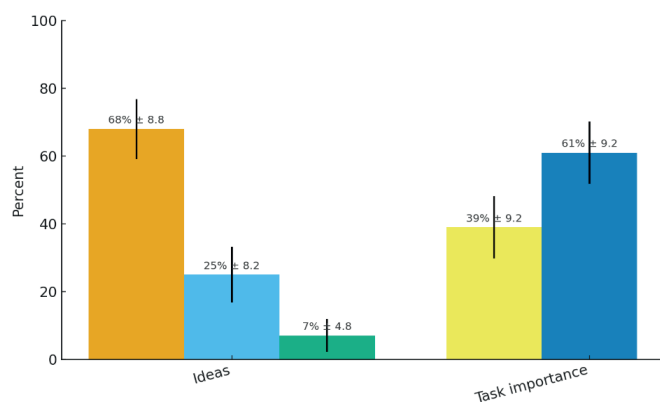


Figure 3 — E) Ideas; G) Importance in the Task

F1. Reaction to Failure:

- o Try again - 72%
- o Sometimes I try, sometimes I give up - 18%
- o Quit immediately - 10%

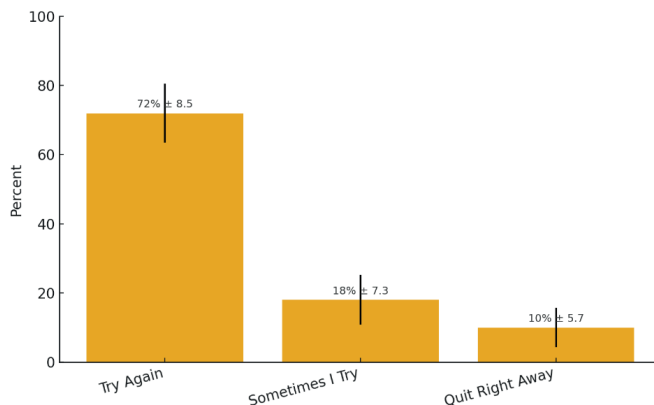


Figure 4 — Reaction to Failure

Table 1 — Summary table of survey results

№	Survey question	Answer options	%
1	Do you enjoy learning new things in class?	Yes / Sometimes / No	82 / 14 / 4
2	Do you often ask the teacher questions if something isn't clear?	Yes / Sometimes / No	65 / 28 / 7
3	What's more interesting to you: listening to explanations or exploring on your own?	Listen / Explore	21 / 79
4	Do you prefer working in a group or individually?	In a Group / Alone	57 / 43
5	Do you enjoy putting forward your ideas and discussing them with others?	Yes / Sometimes / No	68 / 25 / 7
6	What's more important to you in an assignment: speed or the quality of the solution?	Quickly / Best Way	39 / 61
7	What do you do if you don't get it right the first time?	Try Again / Sometimes I Try / Quit Right Away	72 / 18 / 10

Results. The results obtained make it possible to describe the profile of professional-research thinking among first- and second-year students majoring in “Pedagogy and Psychology” and to discuss its key components. First of all, a pronounced cognitive motivation is observed: 82% of participants responded that they enjoy learning new things in class, another 14% selected “sometimes,” and only 4% reported no such interest. These data confirm the presence of a strong cognitive foundation for the development of research thinking already at the early stages of study, when stable learning-cognitive attitudes are being formed.

A summary comparison of key indicators (see Fig. 5) shows: enjoy learning new things - 82% (95% CI: 67.8–96.2), prefer independent exploration - 79% (95% CI:

63.9–94.1), try again after failure - 72% (95% CI: 55.4–88.6). Preference for group work is moderate - 57% (95% CI: 38.7–75.3) - as is prioritizing the “best way” - 61% (95% CI: 42.9–79.1); asking questions stands at 65% (95% CI: 47.3–82.7). This configuration underscores the leading role of the motivational and activity-based core while pointing to the need to further cultivate problematization and public argumentation skills.

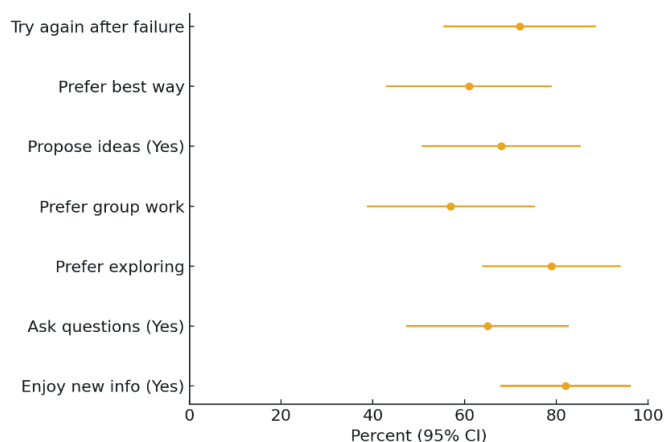


Figure 5 — Proportions of “positive” responses with 95% confidence intervals for key indicators (n = 56).

Research initiative manifests itself not only in an interest in new knowledge, but also in patterns of learning activity. Most students prefer independent exploration and experimentation over the teacher’s explanations (79% versus 21%), which indicates an orientation toward active forms of cognition and a readiness to take responsibility for seeking solutions and testing hypotheses. This choice is consistent with the view of research thinking as a striving to create knowledge rather than merely reproduce it.

The communicative aspect of research activity is also sufficiently expressed: 57% prefer group work (43% individual), and 68% note that they like to propose their own ideas and discuss them with others (25% “sometimes,” 7% “no”). These indicators point to students’ readiness to engage in joint problem analysis, exchange arguments, and build collective strategies for solving tasks—skills that are crucial for future educational psychologists.

Normalized distributions (see Fig. 6) confirm the dominance of Yes for interest in new knowledge (82% Yes; 14% Sometimes; 4% No) and for proposing ideas (68% Yes; 25% Sometimes; 7% No). A sizeable Sometimes segment in the ideas block signals partially formed skills in formulating and presenting ideas—a target for pedagogical support (case analysis, structured debates, reflective reports). For reactions to failure, Try again dominates (72%), consistent with developing reflexivity and resilience to cognitive challenges.

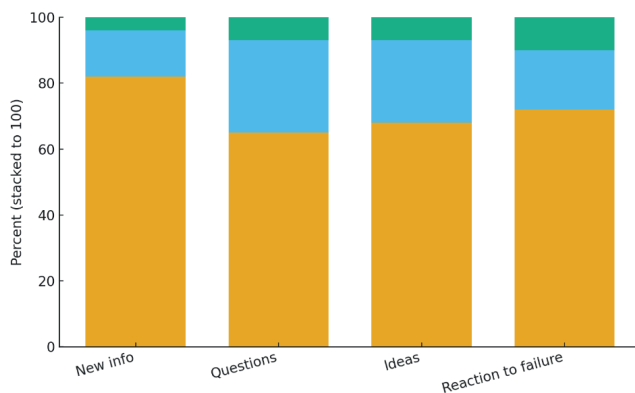


Figure 6 — 100% stacked bars for three-category items (Yes/Sometimes/No; n = 56).

Discussion. Value-regulatory preferences in learning are shifted toward solution quality: 61% choose “finding the best way” instead of “doing it faster” (39%). This corresponds to an orientation toward criticality, thoroughness, and reasoned choice of methods, which is fundamentally important for a professional-research style of thinking that presupposes an analytical evaluation of alternatives.

Reactions to failure demonstrate resilience to cognitive difficulties and the formation of reflexivity: 72% are ready to try again, 18% try sometimes, and 10% stop attempting immediately. The high proportion of repeated attempts reflects a willingness for self-correction and for analyzing the causes of errors - central elements of the reflective component of research thinking.

At the same time, about one third of the sample encounters difficulties in formulating and presenting their own ideas (a total of 32% choose “sometimes” or “no”), which defines a growth area for skills in posing research questions and building arguments. This is consistent with the need for specially organized assignments that stimulate independent problematization and public presentation of solutions.

Taken together, the quantitative results summarized in the final table (see Table 1) show: (1) a well-formed cognitive foundation (interest in new things), (2) a pronounced orientation toward independent inquiry and group discussion, (3) a preference for solution quality over speed, and (4) adequate resilience to failure. At the same time, (5) there is a need to develop skills for clearly formulating and presenting one’s own research ideas. These findings support the thesis that, at the early stages of study, professional-research thinking already possesses a “framework” (motivational, activity-based, and communicative components), yet it requires targeted pedagogical support to strengthen problematization, hypothesis formulation, and well-argued presentation of results.

A practically significant implication is the need to embed the following didactic solutions into course modules: assignments for proposing alternative hypotheses and selecting criteria for testing them; group expert evaluation of solution options

(with arguments and counterarguments); written reflective reports after failures (with analysis of causes and a correction plan); and mini-studies in a “case analysis” format with public defense. These formats are purposefully aimed at the identified gaps (problem posing, argumentation, presentation) while preserving and reinforcing the existing strengths of the sample (motivation, activity, cooperation).

Conclusion. The results of a study conducted among students of the 1st-2nd courses of a pedagogical university showed a steady interest in independent cognitive activity, a willingness to ask questions, look for non-standard solutions and overcome difficulties in completing tasks. These characteristics are important indicators of the formation of the initial components of professional research thinking.

Data analysis has shown that the majority of students already possess the basics of professional research thinking. Thus, 82% are interested in new material, which indicates a high cognitive motivation, while 76% prefer active forms of learning and independent information search. About 68% of respondents feel comfortable in group work, which reflects their developed communication skills. More than 70% of students strive to find optimal ways to complete tasks, demonstrating criticality and perseverance. At the same time, 64% are capable of introspection and repeated attempts after mistakes, which indicates the formation of reflexive skills. At the same time, 28-30% of students have difficulty formulating their own ideas, which indicates the need to develop a research initiative. In general, the quantitative results confirm that the majority of students have key components of professional research thinking while maintaining a growth zone in terms of independent formulation and argumentation of research questions.

At the same time, differences in preferences in the form of work (individual or group) were revealed, as well as some uncertainty in putting forward their own ideas, which indicates the need for support and development of research initiatives on the part of the teacher.

A quantitative analysis of the questionnaire data showed that 82% of the students demonstrated a pronounced openness to new knowledge, which indicates the formation of the cognitive component of professional research thinking. This result confirms that future psychological educators have cognitive motivation and a desire to develop research skills. At the same time, some students still have difficulties in formulating their own hypotheses, which indicates the need for further methodological support in developing the skills of independent scientific analysis.

For the purposeful development of research thinking among future educational psychologists, it is recommended to introduce the following methods and forms of work:

Project activity - the implementation of educational mini-studies on topical issues of pedagogy and psychology contributes to the development of independence, analytical skills and the ability to work with information.

Problem - based learning - the inclusion of problematic situations in classes that require analysis and decision-making, stimulates the formation of critical thinking.

Reflective practices (portfolios, observation diaries, introspection) contribute to the development of self-reflection and awareness of one's own research position.

Thus, the conducted research confirms that the development of professional research thinking requires an integrated approach, including the organization of active forms of learning, support from teachers and the creation of a motivational and developing educational environment.

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