



## Developing Research Skills of Students

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### Abstract

The study aimed to understand FPSE students' perceptions of their own research skills, areas of interest, and difficulties encountered in educational research, as well as to identify opportunities for capitalizing on the results of the research conducted during university studies. Using a questionnaire with closed items, the investigation included 300 undergraduate (second year) and master's students (first and second years), who reported participating in educational research primarily within the Research Methodology course (75.6%), addressing topics such as curriculum, instruction and assessment theory, the education of children with SEN, and other areas, generally without further valorization of their work. The findings show that 75.6% of students capitalized on their research results exclusively within the Research Methodology course, while only 12.2% presented their results within methodological committees in schools or at conferences (4.9%). The main benefit perceived was preparation for the completion of bachelor's or dissertation theses (63.4%), followed by the consolidation of theoretical training (14.6%) and, to a lesser extent (9.8%), the identification of scientific solutions to professional problems. The major difficulties reported included balancing work responsibilities with research activities (61%) and challenges in identifying research participants (24%).

**Keywords:** research skills, innovative initiatives in education, academic visibility



## 1. Introduction

One way to transform the student into the main actor of his own academic development is the process of training research skills. This involves the transition from a receptive, teacher-centered learning to an active and reflective one. Research becomes not just a theoretically taught discipline, but a concrete experience of learning through action (Zuber-Skerritt, 1993).

In the context of current university education, the development of research skills is an important objective of students' professional and academic training. These skills reflect the student's ability to understand, analyze and investigate relevant educational problems, thus contributing to the scientific substantiation of educational practice and the development of reflective and critical thinking.

Carrying out a research approach by students can be considered a form of experiential learning, as they have the opportunity to observe and investigate the concrete educational reality, practicing a series of interrelated skills, such as: formulating a research problem or question, developing objectives and hypotheses, selecting appropriate investigation methods and techniques, collecting and interpreting data, using scientific sources, developing an academic paper and communicating results in a rigorous and ethical manner (Mertens, 2019; Robson & McCartan, 2016). The formative process is not limited to the theoretical transmission of methodological content, but involves the integration of students in concrete research experiences, such as applied projects, case studies, "learning by doing" activities or participation in student scientific sessions.

The training profile of the graduate in the field of Educational Sciences includes a range of skills, among which, research skills in education occupy an important place. According to the National Framework of Qualifications in Higher Education (CNCIS) and the ARACIS guides, graduates of bachelor's programs in this field must acquire the following relevant learning outcomes, embodied in the following skills/aptitudes:

- apply appropriate methods and techniques for systematic investigation and self-evaluation of their own professional practices;



- apply scientific methods specific to educational sciences in conducting empirical research on educational problems;
- adapt/apply innovations and capitalize on scientific discoveries in the field of activity - recent developments in educational sciences, legal regulations concerning the education system, new technologies etc. - for the optimization of educational activity;
- participate in collaborative professional development activities, educational research and communities of good practices (ARACIS, 2025).

In addition to the previously specified skills, master's programs also aim to develop skills in scientific communication of results, in formal contexts (conferences, publications, interdisciplinary projects), in this way the benefits are both personal, such as the opportunity to present one's work to diverse audiences, to interact with other researchers and to expand one's professional network (Mertens, 2020), and institutional, contributing to increasing the visibility of the institution.

Developing research skills in students is not a challenging process. Multiple studies indicate that most of them face significant difficulties in the process of conducting research, both cognitive and motivational:

- poor understanding of the stages of scientific research. The concepts of "hypothesis", "variable", "method", "validity" or "relevance of results" are often perceived as abstract and difficult to apply, especially by students in their first years of studies (Leech & Onwuegbuzie, 2009);
- problems in choosing the research methodology, in terms of choosing the right strategy and applying the methods of data collection and analysis (quantitative/qualitative).
- lack of institutional opportunities, limited resources (libraries, internet etc.) and therefore limited access to relevant scientific resources;
- disinterest or unfavorable beliefs towards research (perception that it is difficult, that it is not relevant) (Gómez-Delgado et al., 2017);
- lack of interest or intrinsic motivation for research activity, often perceived as a formal obligation, related to the development of the bachelor's thesis or dissertation. The attitude is



influenced by the institutional academic culture, in which student research is not visible, appreciated or supported through recognition mechanisms;

- lack of a coherent mentoring system (Otoluwa et al., 2021);
- lack of academic writing skills, scientific editing. Students often encounter problems in structuring articles, correct use of scientific language, organization of ideas and argumentative coherence (Wakerkwa et al., 2019).

The results of these studies indicate directions for improving the process of training students' research skills, therefore, a research approach was taken to this issue.

## **2. Purpose and Objectives of the Research**

The purpose of this research was to analyze the perceptions of students of the Faculty of Psychology and Educational Sciences, Buzău and Focșani Branches, regarding the level of training of their research skills, the areas of scientific interest, the difficulties encountered in carrying out educational research, as well as to identify concrete opportunities for capitalizing on the results of student research in the academic and professional environment. Thus, the following specific objectives were formulated:

1. investigating the opinion of students and master's students regarding their own level of training of research skills;
2. identifying the main areas of scientific interest of students for research;
3. analyzing the difficulties encountered by students in the process of initiating and conducting educational research;
4. exploring opportunities to capitalize on student research results, in an academic and professional context;
5. identifying directions for optimizing the process of developing research skills through curricular and extracurricular activities.

### 3. Analyses

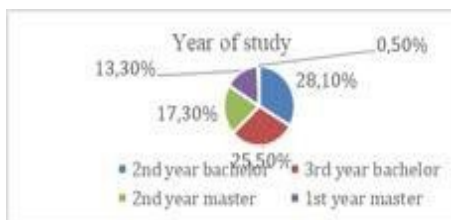
Taking into account the results of these studies and the professional experience acquired over the years, an investigation was carried out among the students of the two branches to find out the most appropriate ways to support them in this training activity, which they must carry out.

The investigation consisted of applying a structured questionnaire with closed, semi-closed, open questions and Likert scale grids, made in Google Forms. It was distributed online to a number of 200 students and master's students, being completed by 189 subjects.

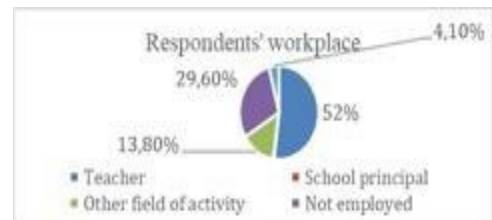
A non-probabilistic sample (N=200) was formed from students and master's students who took research methodology courses from the study programs of Primary and Preschool Pedagogy (bachelor's degree) and Educational Management (master's degree).

The sample is distributed, from the perspective of years of study, as follows (**Figure 1**): 103 students from the 2nd and 3rd years, 55 master's students from the 1st and 2nd years, as well as 29 master's graduates from the last promotion, one bachelor's graduate.

In terms of employment, 97 respondents are teachers, 56 are not employed, 27 work in other fields, one is a school principal and 7 of the subjects are in another situation (see **Figure 2**).



**Figure 1.** Distribution of research subjects by years of study



**Figure 2.** Respondents' workplace

### 4. Results

The data obtained using the questionnaire were analyzed, processed and interpreted in relation to the research objectives.

*1. Investigating the opinion of students and master's students regarding their own level of training in the field of research skills*

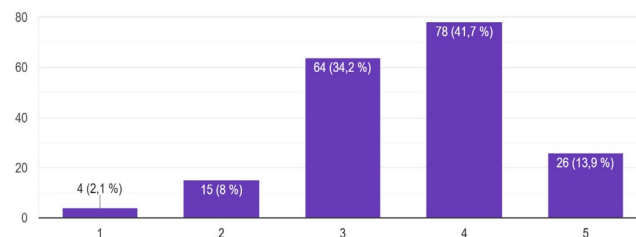


Questioned on the importance of research for the teaching profession, the student respondents consider in a large proportion (79.8%) that research activity is very important for a future teacher, suggesting a positive perception of the link between research and the quality of education.

Regarding the involvement of students in research activities during their bachelor's or master's studies, 72.7% of the respondents participated in conducting research during their years of study, 23.5% did not participate, and 3.7% chose the option DON'T KNOW/DO NOT ANSWER.

From **Figure 3** it can be seen that students consider the level of research skills training as good in a proportion of 41.7%, average level - 34.2% of the subjects and 13.9% of them consider that they have very well-formed research skills. Approximately 10% consider that the level of research skills is satisfactory/unsatisfactory. More than half of the respondents have a positive perception of the level of research skills development. At the same time, the results obtained "invite" to reflection regarding the ways of improving the process of training these skills.

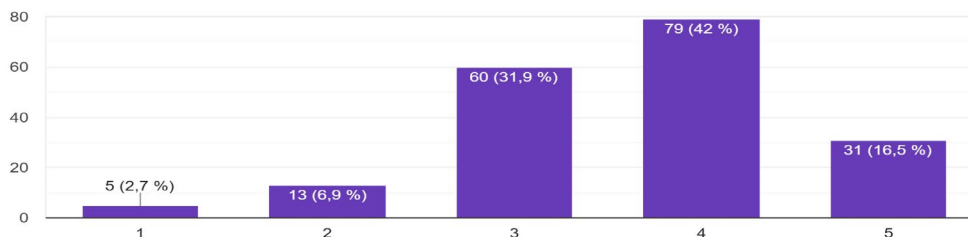
11. Cum/care apreciați că este nivelul de dezvoltare a propriei competențe de cercetare?  
187 de răspunsuri



**Figure 3.** Self-assessment of the level of research skills development

Regarding the ability of students to design and carry out effective educational research, the results obtained correlate with those from the previous question, which reinforces the idea that students may be able to effectively engage in activities to improve educational practices based on research approaches.

10. În ce măsură considerați că ați putea proiecta și realiza o cercetare educațională eficientă?  
188 de răspunsuri



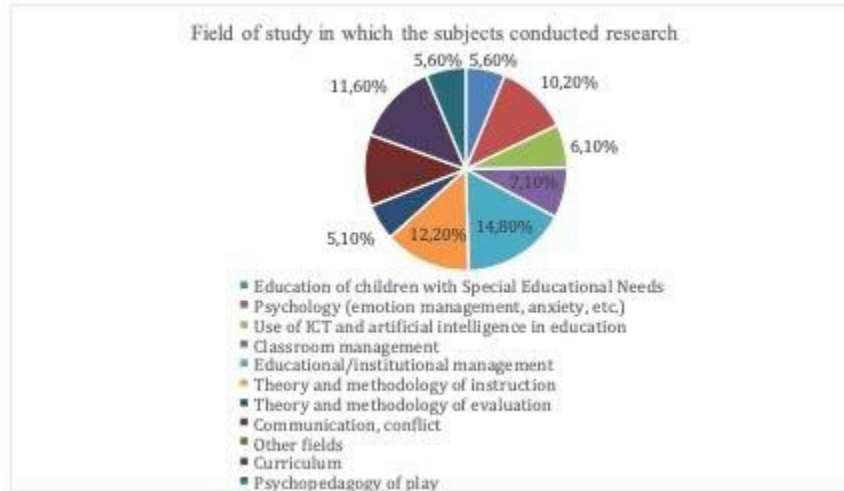
**Figure 4.** Self-assessment of research design and implementation skills

Therefore, the investigated students recognize the value of research skills training in professional development and generally perceive their training in this area as adequate. However, the data indicate the need for additional measures to strengthen these skills, by deeper integration of research activities into university curricula and by providing more coherent and differentiated methodological support.

## *2. Identification of the main areas of scientific interest of students for research*

Innovation in education should also take into account the prospective interests of youth, therefore the answers obtained to question 3 suggest directions for planning a coherent research strategy. Analyzing the respondents' answers, a variety of research areas / topics addressed by them is noted (**Figure 5**), and regarding the desire to conduct research, the respondents' interests are directed towards Classroom Management and Educational Management (**Figure 6**).

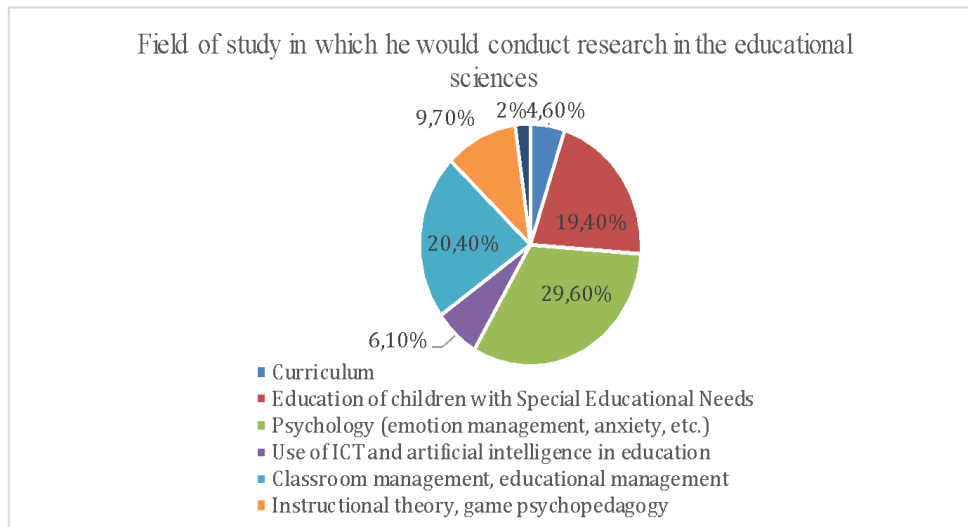
The research experience of the respondents is varied, they participated in research in the following areas, represented in similar percentages: 14.8% educational management, 12.2% theory and methodology of instruction, 11.6% curriculum, 10.1% communication, conflict and psychological research.



**Figure 5.** Research areas explored by students

The areas of scientific interest for research are better outlined by the answers to the following question:

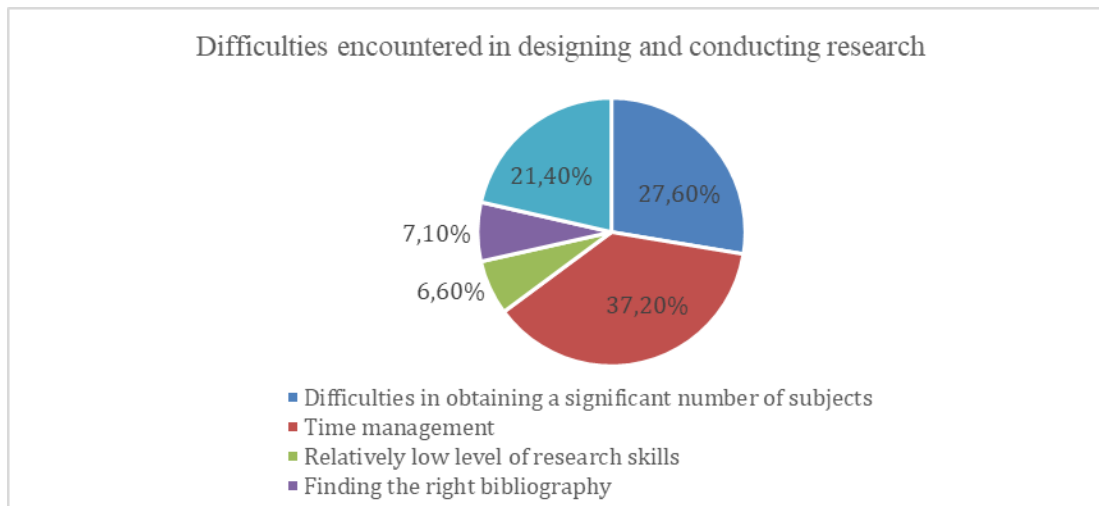
- 30.7% psychology (emotion management, anxiety, student discipline),
- 19.6% education of children with SEN
- 19% classroom management, educational management
- around 9% mentioned areas such as instructional theory and game psychopedagogy, use of ICT and artificial intelligence, curriculum.



**Figure 6.** Field of study in which students would conduct research

### *3. Analysis of the difficulties encountered by students in the process of initiating and conducting educational research*

37% of respondents experience difficulties in time management, dividing their time between work and academic activity. In second place are the difficulties related to the establishment of a relevant sample (large enough), facing the refusal of potential subjects to get involved in a research. Finding the right bibliography and the relatively low level of research competence represent 6.9% of difficulties in conducting research.



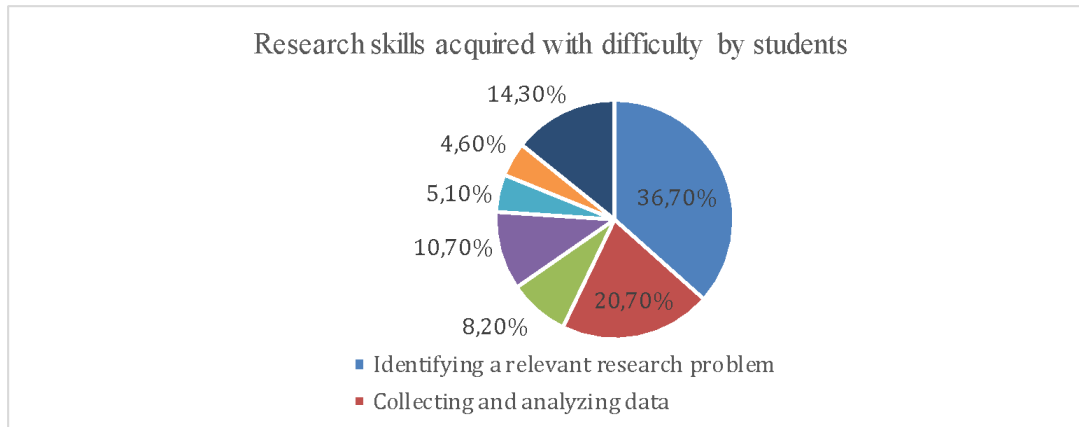
**Figure 7.** Ways to overcome obstacles/difficulties

The ways of overcoming obstacles were varied, highlighting several trends:

- a) better time organization (25 responses),
- b) thorough documentation, including in other languages (25 responses),
- c) motivating respondents through various methods (20 responses)
- d) study leave, less rest (10 responses)
- e) did not participate in a research (20 subjects),
- f) did not answer the question (8 subjects),
- g) other situations: help from the supervisor, consultation with colleagues ... etc.

The analysis of these responses shows the pressure of some respondents (who we assume are teachers) who have to divide their time between teaching tasks, academic work and research work. At the same time, their desire for responsible involvement in research work and perseverance in finding solutions to the problems they encounter is observed.

Seen from another perspective, the difficulties in designing and conducting research also arise from the existence of poorly defined research skills, such as (**Figure 8**): identifying a relevant research problem (36.7%), collecting and analyzing data (20.7), critical thinking and choosing appropriate methods.



**Figure 8.** Research skills perceived as underdeveloped

This statistic indicates the opportunity to integrate ways to develop underdeveloped skills into academic work.

#### *4. Exploring opportunities to capitalize on student research results, in an academic and professional context*

45% of respondents capitalized on research results in their professional courses. Another way highlighted by the responses obtained was to present the results in methodological committees, pedagogical circles or other events organized in the schools where they work (20.1%) and only 7.9% of them participated in symposia and conferences. The presentation of research results in pedagogical circles may have as a possible explanation the desire to share with school colleagues examples of good practices discovered through research. It is noted again, the reluctance of respondents to present their research results in conferences and symposia, although these have a significant potential to recognize the involvement and effort made, as well as to motivate them to continue this endeavor.

Regarding the benefits of carrying out research projects and actual research, respondents appreciate in a proportion of 48.1% the preparation for completing bachelor's/dissertation papers, the consolidation of theoretical preparation through the documentation carried out (14.3%), the



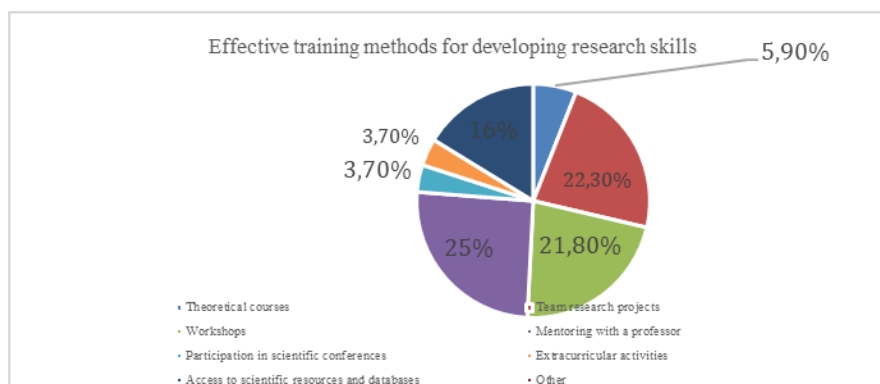
improvement of the way to approach and solve various didactic/managerial problems (13.2%) and 5.8% the identification of scientific solutions for professional problems.

## *5. Formulating proposals for optimizing the process of training research skills through curricular and extracurricular activities*

Knowing the main aspects that can be improved in education can start initiating studies, projects, research to find solutions. As expected, the instructional-educational process represented the main direction of improving education among respondents (37%), followed by class/group management (23.8%), 16.9% teaching staff training, 12.2% educational management and 9.5% extracurricular activities. This results in the focus on educational activity, the main activity of the 97 respondents who are both teachers and students/masters.

Specialized studies propose inquiry-based learning (Healey, Flint & Harrington, 2014), problem-based learning, case studies (Bocoş, 2013), applied projects, participation in student scientific sessions or research projects coordinated by teaching staff as ways to train research skills. Feedback received at all stages of the scientific approach and the provision of a support infrastructure are other ways to support student research (Mertens, 2020; Robson & McCartan, 2016).

In the case of students from FPSE, Buzău and Focşani Branches, through the answers to question 12, concrete ways of developing research skills were identified: mentoring with a professor (25%), team research projects (22.3%), practical workshops (21.8%), access to scientific resources and databases (16%), theoretical courses (5.9%). The low percentages (3.7%) obtained from participation in scientific conferences and extracurricular activities contradict the idea of encouraging students to get involved in such events in order to develop their research skills. The explanation of these results may reflect the students' belief that such events assume a high level of academic training, difficult for them to achieve, as well as a reduced capacity for communication and presentation of a research report.



**Figure 9.** Effective ways to develop research skills

We observe several common ways of training/developing research skills, such as mentoring or coordination of research projects by teachers, practical workshops or applied projects, support infrastructure or access to scientific resources and databases.

## 5. Conclusions

Encouraging and supporting students to participate in conferences with their own research, involving them in research that demonstrates their importance in didactic innovation, increasing their confidence in their research skills and in disseminating good results obtained in the classroom, as well as developing a positive attitude towards extended professional roles (researcher, innovator) are some ways to support students in their research activity.

Student research represents a valuable potential not only for the personal and academic development of students, but also for the academic community and practitioners in the field of education. Capitalizing on the results obtained in student research involves identifying concrete ways in which these contributions can have a real and visible impact:

a) publishing scientific papers in student or specialized journals and magazines. This offers students the opportunity to experience the editorial process, receive feedback from the scientific community and consolidate their status as emerging researchers (Kumar & Stracke, 2025). Moreover, publication contributes to increasing the visibility of the university and strengthening the research-oriented academic culture.



b) presenting results at scientific conferences and symposia, where students have the opportunity to present their work to diverse audiences, interact with other researchers and expand their professional network (Mertens, 2020). Participation in such events is associated with increased motivation for research and the development of scientific communication skills.

c) integrating student research into interdisciplinary or collaborative projects with teaching staff or external partners (schools, non-governmental organizations, public institutions) can contribute to the practical applicability of the results and stimulate a positive social impact (Healey et al., 2014). This allows students to understand the relevance of their work and participate in solving concrete problems in the field of education.

d) the digital environment offers new opportunities for the dissemination and valorization of student research. Publishing on online platforms, academic blogs, podcasts or creating multimedia materials can facilitate access to a wide audience and contribute to the democratization of scientific knowledge.

A positive perception of students on the importance of research in teaching provides a solid foundation for implementing strategies aimed at developing students' research skills. If the university environment manages to provide them with real contexts and support for such activities, the development of these skills can become a natural, efficient and valuable process both for the professional training of students and for the higher education institution as a whole.

A direction for further research is to measure the impact of student research on the prestige of university institutions and their transformation (Kinzie & Larson, 2024).

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