



**THE NEED FOR DEVELOPING AN ACTION PLAN FOR ENSURING
COMPLIANCE WITH ETHICS AND ACADEMIC INTEGRITY STANDARDS IN
CONDUCTING RESEARCH ON THE CONCEPT OF METACOGNITION**

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Abstract

The development of an Action Plan for ensuring compliance with ethics and academic integrity standards in writing research on the concept of metacognition, from our perspective, involves considering a series of aspects, primarily focusing on the respect for academic ethical principles regarding the structure and design of the work itself. This research addresses the importance of creating an Action Plan to ensure adherence to ethics and academic integrity standards in metacognition-related research. Its main purpose is to highlight the need for implementing clear strategies that protect the quality and transparency of research in the field of metacognition.

Cuvinte-cheie: *metacognition; meta-learning; research ethics; academic integrity.*

Introduction

In the context where metacognition plays a crucial role in the learning and self-regulation process, research in this field must be conducted in accordance with academic ethical standards. The article emphasizes possible risks, such as data manipulation or conflicts of interest, that may arise in metacognitive studies. Additionally, we consider the idea of research responsibility in ensuring the integrity of the research process, including avoiding plagiarism and falsification of results. The development of an appropriate Action Plan, in our opinion, would contribute to preventing abuses and protecting the scientific value of research. The relevance of such an approach makes it possible to apply concrete strategies for writing a specific doctoral thesis

(Dewia & Alam, 2020, pp. 1228-1237) and avoiding plagiarism through correct citation of the bibliographic sources used (according to Article 21 of the UBB Code of Ethics and Professional Deontology). An important starting point is academic regulation and its adherence in relation to structuring/designing the doctoral thesis. In conclusion, our scientific endeavor emphasizes the need to implement effective mechanisms to guarantee the adherence to academic ethics in metacognitive research.

Secondly, adherence to ethical standards, coupled with conducting innovative and creative research of the same nature, also involves clear responsibilities, both from the researcher (Dumitrașcu, 2021) and the supervisor, concerning the assumption and validity of the initiated and developed research (Socaciu et al., 2018), as well as the final results obtained (Vătăman, 2019). Therefore, the researcher's attitude must be open to critical academic manifestations (Himcinschi, 2021) and issues that may require new approaches, problematizations, and methodological solutions (Tabacu, 2023).

In such an explanatory context, we can consider a series of objectives aimed at ensuring a methodological approach to the development of doctoral research. Among these, the following can be highlighted:

- Promoting ethical dimensions in the initiation, development, and completion of the research thesis.
- Implementing effective strategies to avoid the inappropriate use of bibliographic resources (clearly adhering to citation methods, referencing, and the development and explanation of content according to best research practices).
- Continuous evaluation and self-evaluation of the research process and how it progresses in relation to the academic and methodological dimensions (improving content, research methods, verifying instruments, and shifting paradigms in the approach to research).

Conceptual dimension

The conceptual dimension focuses on a series of measures primarily aimed at clearly and explicitly defining key terms (concepts): meta-learning, academic self-regulation, academic stress, and academic satisfaction. Such an approach, in our view, should be based on a critical analysis of the national and international specialized literature. Additionally, within this conceptual dimension, we believe it is essential to consider the originality of how we relate to the key terms of the doctoral thesis (Stoenescu, 2015). Therefore, the development of a personal/personalized approach that targets an inter-, multi-, and transdisciplinary approach to

the content (based on a clear conceptual apparatus) should, in our opinion, be the first step in validating the idea of academic originality (Licu, 2022). The aspects of such an approach lie precisely in the manner of correctly citing scientific/bibliographic sources (APA Style) in relation to the conceptual definitions found in the existing specialized literature.

The conceptual dimension of metacognitive research focuses on clarifying and defining the main concepts related to metacognition, such as self-reflection, self-monitoring, and self-regulation. Metacognition is, essentially, the process through which a person becomes aware of their own thoughts and cognitive actions, with the ability to analyze and adjust them to improve performance. Self-reflection, as the first component, refers to the ability to assess one's own knowledge and cognitive strategies, while self-monitoring involves overseeing cognitive activities to detect potential deficiencies. Self-regulation, on the other hand, refers to adjusting and optimizing cognitive processes to achieve specific goals. In research related to metacognition, these concepts must be clearly defined to ensure a unified understanding of the studied phenomenon and its application in various educational and psychological contexts.

Regarding ethics in metacognitive research, the conceptual dimension includes the integration of academic integrity into scientific research. This involves respecting fundamental principles such as transparency, objectivity, and respect for participants, which are essential for ensuring the validity and reliability of research (Suárez & González, 2021). The concept of academic integrity is tied to the responsibility of researchers to report data accurately, avoid any form of fraud, and adhere to ethical standards throughout the research process. In this context, metacognitive research must promote not only an understanding of cognitive mechanisms but also the application of clear ethical principles that safeguard scientific integrity. Thus, the conceptual dimension plays a crucial role in establishing a clear theoretical foundation and supporting a robust ethical framework for research in the field of metacognition.

Theoretical dimension

The theoretical dimension involves the development of an appropriate methodological framework and a solid scientific foundation. In this regard, we must ensure that our approach is based on an analysis of the relevant academic literature, recognized in the academic community, concerning the academic experience of students. In such a context, we can identify a series of theories and scientific correlations between them, explaining them in our own way, using a critical/constructive apparatus, while avoiding as much as possible the direct copying

or transcription of these ideas without permission from the author/editor, as well as paraphrasing the found content.

Such an approach to metacognition is essential for understanding the complexity of this concept and its applicability in various fields of education and psychology. Metacognition refers to the individual's ability to reflect on their own cognitive processes and actively regulate them, playing a crucial role in learning and problem-solving. Metacognitive theories, such as Flavell's model (1979) or the research by Schneider (2010) provide a solid foundation for analyzing the mechanisms by which individuals manage their thinking. In this dimension, various key concepts are discussed, such as cognitive self-awareness, control of learning processes, and the use of cognitive strategies. These theories offer the necessary theoretical framework for understanding the importance of academic integrity in metacognitive research. In parallel, it is important for theoretical research to emphasize the relationship between ethics and the integrity of research in the field of metacognition to ensure the validity of results. Ethical approaches are essential for protecting the rights of participants and preventing the influencing of research outcomes through unconscious biases. In this context, adherence to ethical principles such as transparency and fairness has a direct impact on the credibility of metacognitive research. The theory of research ethics proposes fundamental rules that must be followed to protect scientific integrity, which can prevent fraud and methodological errors. Thus, the theoretical dimension of metacognitive research not only underpins the understanding of the concept but also promotes a robust ethical framework that supports the responsible advancement of knowledge.

Practical dimension

The practical dimension of research involves the actual application and evaluation of the research methodology. In this regard, we must consider the idea of replicability in the studies conducted within the research, and a starting point in this sense could be the clear explanation of the initiated and utilized research methods. Furthermore, the replicability of research, as well as the (validated) generalization of the results, requires the full presentation of the conclusions drawn from the research. Additionally, replicability also entails the complete presentation of research results in order to avoid the fabrication of scientific outcomes.

Moreover, it is essential that the research includes informed consent, which legally protects the rights and personal aspects of the participants/respondents. Along with these considerations, an ethical characteristic is the objective presentation of the results without any falsification,

distortion, or omission. By avoiding data manipulation and result falsification, the principle of research integrity in academia can be validated. Furthermore, personal responsibility in the field of research should demonstrate a validated impact on both the scientific community and society as a whole.

On the other hand, in the context of the Action Plan regarding the respect for ethics and academic integrity in writing works related to metacognition, we consider it relevant to address the personal academic relationship with community members (such as the supervising professor, other faculty members, and colleagues) in accordance with the Code of Ethics and Professional Deontology at universities. In this way, academic freedom can be highlighted by respecting the right to scientific and professional opinions, in line with the principles of integrity, intellectual honesty, responsibility, and academic fairness.

In relation to the theoretical and applied research directions of the thesis, the normative coordinates of ethics and academic integrity can be outlined in accordance with the specific research focus:

a. Meta-analysis Studies

In the context of meta-analysis, studies can be initiated with the preparation of the protocol to ensure procedural integrity. Clear inclusion/exclusion criteria of studies will be specified based on the thematic relevance of the relationships studied (meta-learning, academic stress, self-efficacy, well-being in academia). A detailed strategy for reviewing the specialized literature and documenting the consulted databases will be developed to ensure methodological transparency. In accordance with research ethics principles, validated tools (e.g., the Jadad scale) will be used, and the extracted data will be analyzed in a secure environment. Sensitive information about participants from the studies included in the meta-analysis will be anonymized when necessary. Regarding the reporting of results, statistical analysis, limitations, and potential sources of bias will be reported without omissions. The discussion of the implications of results and their relevance to educational practice will be approached cautiously, especially when generalizing, to respect the interpretation protocol.

b. Correlational-Cross-sectional Studies

For conducting correlational-cross-sectional studies, the research protocol can be submitted to the Ethics Committee for ethical approval before starting the research process. In designing research instruments, validated scales for measuring meta-learning strategies will be used (with adaptations, if necessary, at the linguistic and cultural level), with the permission of the authors (in the case of copyrighted instruments). To determine the study sample, we will ensure

representativeness (e.g., approximately 400 respondents, with gender parity) and voluntary participation. Respondents will be informed about their rights stemming from participation (right to data confidentiality, the right to withdraw from the study at any time), the purpose of the research, and potential benefits/risks (informed consent). Since the respondents are students, we will ensure that participation does not affect their academic activity (e.g., the research schedule does not overlap with the university program). Since some items refer to variables such as “stress” or “academic performance” (e.g., in researching the relationship between meta-learning strategies and academic performance, motivation, and self-confidence), evaluating the potential emotional impact of these items is necessary. A disclaimer regarding potentially sensitive content will be attached to the informed consent, along with resources for support. Recording, storing, and processing data will follow protocols for data protection and security.

c. Potential Quasi-experimental Study

Regarding the development of a potential quasi-experimental study, we consider it imperative to design the ethical framework of the pilot plan, obtain approval from the university's Ethics Committee, and develop a detailed intervention protocol in line with current industry standards. Participant selection will be voluntary, with random distribution in experimental/control groups, ensuring that no student is disadvantaged by non-participation (non-mandatory, non-obligatory). It will be ensured that participation or non-participation does not affect regular academic evaluation. Protection of participants will be ensured through the delivery of informed consent and research participation agreement, implementation of GDPR policies, evaluation of potential psychological risks associated with the intervention and measurements, development of a protocol for managing unforeseen adverse effects, and ensuring access to psychological support for participants if necessary.

Conclusions

The development of a plan of action to ensure adherence to ethical standards and academic integrity in research on metacognition is essential for establishing a scientifically rigorous and transparent framework. (Vizitiu, Costea, A.-I., Silișteanu & Constantinescu, 2023). The first step in this regard should be the formation of an interdisciplinary working group responsible for developing and implementing a clear set of rules regarding research ethics. Furthermore, universities and research institutions should periodically organize training and awareness sessions for researchers to familiarize them with best practices in academic ethics. Another

suggestion would be to create a transparent online platform where researchers can report irregularities or conflicts of interest without fear of repercussions. Additionally, a periodic ethical audit procedure should be introduced to assess the compliance of research projects with integrity standards. It is crucial that researchers are encouraged to adopt a proactive, rather than reactive, approach to ethical challenges. By implementing these measures, we will contribute to enhancing public trust in metacognition research and its results.

In conclusion, the importance of adhering to ethical principles is evident in the correct structuring of the work and the use of proper citation practices to avoid plagiarism. The researcher and the supervisor share the responsibility for ensuring the validity and originality of the scientific endeavor, fostering an open attitude toward academic critique and methodological innovation. Moreover, we emphasize the necessity of using validated tools, ensuring the anonymization of sensitive data, and obtaining informed consent from participants. The reporting of results must be carried out without omissions or manipulations, thus guaranteeing the integrity of the research process. In this way, the application of ethical principles ensures a tangible impact of the research on the scientific community and society, while maintaining academic standards and intellectual freedom.

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