

## Introduction

*Research integrity is at the very heart of the research enterprise and is intrinsic to the value of research to society, and society's trust in the outcomes of this enterprise.*

(Science Europe Briefing Paper on Research Integrity, 2015)

In order to contribute to the enhancement of a positive, inspiring culture of research integrity, we present here a thematic edition of *Edukacja* devoted to the issues of research integrity (RI), research ethics (RE), and, successful educational practices in RI/RE training, in the hope that such an important topic will find interest among readers and stimulate further research and discussions.

What is research integrity?

There are various terms that define good, valuable research, such as “integrity in research”, “responsible research”, “code of scientific ethics”, “code of research practice” and “good science to practice”. Research integrity is the coherent and consistent adherence to a set of principles that underpin the trustworthiness of research. Responsible behaviour and integrity in research mean that researchers present their work honestly, accurately, efficiently, and objectively. It requires them to use honest and verifiable methods when proposing, conducting and evaluating research, report accurate results in accordance with principles, adhere to generally accepted professional standards, and not allow personal bias to influence research results. The essence of the credibility of science depends on the quality of the results and the ability to reproduce them.

In order for research to be trusted and widely spread, the responsible conduct of research (RCR) is essential to ensure research integrity. This means conducting research at the highest standards of professionalism and rigor in an ethical manner. In order to conduct RCR, it is important to establish a desirable research ecosystem in which researchers, systems supporting the research of researchers, and the culture of the laboratories and scientific communities to which researchers belong can faithfully play their part and cooperate systematically.

We are surrounded by advanced, positive, but also technological and social breakthroughs initiated by research. We depend on the reliability of scientific results. The result and interpretation of the research can be verified by the scientific community, but it cannot be verified by the public – for whom the new knowledge is intended. Therefore, citizens must have confidence in scientists. Even a crisis such as COVID-19 should not weaken research integrity and RCR. The current pandemic has reminded us that science and research are basic for understanding and confronting the numerous challenges we need to address. Good research matters, perhaps more than ever, and it must be aligned with the principles of research integrity: reliability, honesty, respect and accountability. Cases of violating the principles of research integrity and ethics create a lack of public trust in science and scientists, which indirectly results in the spread of fake news and conspiracy theories. Therefore, strengthening the culture of scientific integrity is one of the most important challenges

facing the scientific community today. If science is to remain trustworthy, researchers must adhere to basic moral principles and must acquire integrity and honesty, they must maintain a positive research culture.

The current issue starts with the article **“Research Ethics: A Perspective of Asian Context”** by Bibek Dahal, who presents a perspective from a distant culture, a perspective of a different ethical system, rarely found in Polish scientific journals, concerning the important issue of ethics in research. The author shows the influence of the cultural and philosophical context on the perception of ethics, the understanding of ethical categories and, in consequence, the goals and methods of research. He presents the thesis that the researcher – along with the values he challenges, lived experience, personal and professional beliefs – is an integral part of the research and has a key impact on the process of constructing knowledge, which is already widely acknowledged in the socio-human sciences. Nevertheless, the article brings a fresh perspective to the topic and is important in times when we are increasingly working in teams, not only within the European culture, but also in intercultural collaboration.

Followed this is the article **“Wokół edukacji moralnej w Polsce na tle doświadczeń i tendencji anglosaskich – On Moral Education in Poland Against the Background of Anglo-Saxon Experiences and Tendencies”** by Andrzej Zybala, presenting the Polish perspective on moral, ethical education (article in Polish). The author devoted his work to the issue of the place of moral education in the educational agenda in Poland, including in scientific literature. He describes the dynamics of the debate around this issue, the meanings attached to it, continuity vs. discontinuities in the approach to it. The goals specific to moral education are realised indirectly and to a large extent – in ethics and religion lessons, and in the field of subject teachers’ activities, especially Polish, history, educational hours, as well as in lessons on knowledge about society. In the opinion of Zybala, it is likely that it will be difficult in Poland in the near future to obtain a sufficiently high level of involvement in moral education programmes, because there is a visible lack of political will to give higher priority to issues of moral education.

The next two articles are rooted in the international cooperation of the Path2Integrity project: “Rotatory role-playing and role models to enhance the research integrity culture” funded by the European Union’s Horizon 2020 research and innovation programme under grant agreement No. 824488.

The first **“The Perception of Research Integrity and Ethical Training in the Academic Community”** written by Katarzyna Kalinowska, Agnieszka Koterwas and Agnieszka Dwojak-Matras focuses on building a positive culture of research integrity through education and the promotion of good scientific practices. The authors present the results of a study on the scientific community’s perception of research integrity and refer to how teachers of integrity and ethics imagine the process of ethical training at university.

Next, Julia Priess-Buchheit in **“Path2Integrity Learning Cards: First Year Experiences of an Educational Programme to Foster Research Integrity in Europe”** presents an innovative, teaching programme to foster research integrity among not only the academic

community, but also within secondary schools, and provides valuable details about its concept and successful implementation. The subject of the paper is crucial for modern education. Learning how to construct and conduct reliable research, and then how to present results responsibly is very important in every country today. The author describes using learning cards in a discussion with students and young researchers that could improve current educational methods, raise the awareness of students and early career researchers, and contribute to the establishment of a culture of research integrity.

In addition, Anna Błaszczak shares her perspective on teaching ethics in the article **“Teaching Academic Honesty in General and Ethical Standards in Psychological Research within the International Baccalaureate Diploma Programme with Reference to the Examples of Good Practices from Międzynarodowe Liceum Paderewski in Lublin, Poland”**, presenting how the regulations of the International Baccalaureate Programme relate to academic honesty based on the examples of good practices from one of the IB schools. The text describes interesting practices used in the school to ensure and promote scientific integrity and academic honesty as well as to shape an attitude of respect for intellectual property in high school students preparing for the international baccalaureate. The author argues that the IB programme builds awareness of the importance of scientific integrity and the moral aspects relating to gathering and using data.

On a different note, the article **“Cheating in Higher Education: Between Habit, Resourcefulness and Pressure to Help”** by Beata Bielska and Mateusz Rutkowski analyses one of the elements of academic misconduct. The article is an interesting starting point for discussion and further research on the problem of dishonesty – “cheating” among students in Poland. Based on a study using a survey conducted in 2019 at a Polish university, the authors try to explain such behaviour, with an emphasis on group processes, educational habits and the focus of academic teachers on research rather than on the teaching process. They show the pitfalls of mass higher education and explain that the climate of competitiveness and the corporate style of university functioning are conducive to profit-oriented behaviours – through various paths (including unfair ones).

Then the article **“Students’ Attitudes towards School Subjects with A Special Focus on Physics: The Case of Poland”** shows how young people, secondary school students recognise and value the usefulness of science to society. This is extremely important as a starting point in the campaign for positive integrity and raising the awareness of scientific principles. Władysław Błasiak and Paweł Kazubowski discuss the issues of students’ attitudes towards science subjects. By exploring an interestingly designed study, they examine the correlates of these views, which are important for educational research and understanding the motivational mechanisms behind teaching and learning. The text covers important aspects of the teaching process – learning physics, mainly the perception of this area of knowledge and its various elements (by students aged 14–15), and places them in the broader perspective of other school subjects. The research results are presented against the background of current studies and constitute a continuation of activities undertaken by the authors in the past.

The issue ends with the report: **“Od inspiracji do plagiatu – o przejawach i problemach postawy odtwórczej. Refleksje jurorów konkursu uczniowskiego – From**

**Inspiration to Plagiarism – On the Symptoms and Problems of the Copycat Approach. Reflections of the Jury of a Student Competition” (report in Polish).** “The Footpaths of Physics” is a nationwide physics competition organised since 2005 by the National Centre for Nuclear Research and the Institute of Physics of the Polish Academy of Sciences in Warsaw. The competition is aimed at 7th and 8th grade primary school students and secondary school students. In the text, the jurors (Artur Skwarek, Łukasz Adamowski and Katarzyna Deja) of this competition present their views on the copycat approach manifested among the contestants. The discussed cases, such as the lack of one’s own ideas, problems with citations and bibliographies or struggles with collaboration are analysed in order to discover the reasons and results of such an attitude – connected to both the competition itself, and more general psychological and social phenomena.

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