

Beata Czechowska-Derkacz

University of Gdansk

ORCID: 0000-0002-9601-1972

The Communicative Challenges of Polish Higher Education Institutions: organisational structures and channels of communication

Abstract

The social responsibility of science and universities imposes particular obligations on higher education institutions. The fundamental ones include contributing to social development and building a knowledge-based economy. The fulfilment of these tasks is made possible through the advancement of scientific research and the enhancement of the quality of education. No less important, however, is the effective and professional conduct of social communication: informing the public about institutional intentions, activities, and achievements, which at the same time constitutes one of the conditions for meeting the criterion of social impact. The aim of this article is to present the ways in which Polish universities communicate with their external environment in terms of the organisational structure of units responsible for public relations, promotion, and marketing. A broad study, which had not previously been conducted in this area, included 35 representative universities affiliated with the Conference of Rectors of Academic Schools in Poland (CRASP), with the participation of 42 representatives of higher education institutions: employees of communication units. The results point to significant communication challenges, among which the most important are: the dispersion of promotional and informational activities across various administrative units within universities, an organisational structure that does not correspond to the needs of effective action, and a lack of trust in external information channels.

Keywords: social communication, public relations, media relations, university image, higher education.

Komunikacyjne wyzwania polskich uczelni: modele organizacyjne i kanały komunikacji

Streszczenie

Społeczna odpowiedzialność nauki i uczelni nakłada na szkoły wyższe szczególne zadania. Podstawowe to wkład w rozwój społeczny oraz budowanie gospodarki opartej na wiedzy. Realizacja tych zadań jest możliwa dzięki doskonaleniu badań naukowych i podnoszeniu jakości kształcenia. Nie mniej istotne jest jednak skuteczne i profesjonalne prowadzenie komunikacji społecznej: informowanie o swoich zamierzeniach, działaniach i osiągnięciach, co jest jednocześnie jednym z warunków realizacji kryterium społecznego wpływu. Celem artykułu jest przedstawienie sposobów komunikacji polskich uczelni z otoczeniem zewnętrznym w zakresie struktury organizacyjnej działów odpowiedzialnych za public relations, promocję i marketing. Do szerokiego,

prowartowanego po raz pierwszy badania wybranych zostało 35 reprezentatywnych uczelni, zrzeszonych w ramach Konferencji Rektorów Akademickich Szkół Polskich (KRASP) i wzięło w nich udział 42 przedstawiciele szkół wyższych: pracowników jednostek komunikacyjnych. Wyniki wskazują na duże wyzwania komunikacyjne, wśród których szczególnie istotne są: rozproszenie działań promocyjno-informacyjnych w ramach różnych jednostek administracyjnych uczelni, nieodpowiadająca potrzebom skutecznego działania struktura organizacyjna oraz brak zaufania do zewnętrznych kanałów informacyjnych.

Słowa kluczowe: komunikacja społeczna, public relations, media relations, wizerunek uczelni, szkolnictwo wyższe.

Introduction

Higher education institutions play a key role in socio-economic development, acting as accelerators of ongoing economic, technological, and social transformations²². At the same time, they are perceived by their environment as initiators of change in socio-economic processes resulting not only from globalisation but also from regional needs²³. In the global context, higher education institutions generate the most advanced knowledge, promote democratic values and human rights, and participate in the creation of cooperation networks that enable the exchange of experience and the transfer of best practices. International scientific cooperation makes it possible to seek solutions to pressing problems, support civilisational development, and, more broadly, enhance social well-being.

In the regional dimension, higher education institutions contribute to the development of social capital by educating highly specialised professionals, while also stimulating innovation and the competitiveness of local economies. Their opinion-forming and culture-shaping role is of considerable significance, as is their impact on shaping local communities and improving residents' quality of life. Understood in this way, the role of higher education institutions enables them to fulfil their third mission: the social responsibility of the university, which includes social engagement, knowledge transfer to the economy, and support for sustainable development. This assigns universities responsibility as some of the most important institutions of a culture-forming and innovative character, as well as institutions that foster the development of knowledge not only at the regional or national level²⁴. Universities perceived as transparent,

²² A. Marszałek, *Jagiellonian University: Scientific and Research Potential of the University and Its Role in the Learning Region (the Case of Małopolska)* [in:] *The Role of Universities in the Promotion of Cities and Regions*, ed. T. Domański, Wydawnictwo Uniwersytetu Łódzkiego, Łódź 2011, p. 51.

²³ M. Łosiewicz, B. Czechowska-Derkacz, K. Bałandynowicz-Panfil, *The University of Gdańsk in the Face of the Challenges of the Development Policy of the Pomeranian Region. Forms of Presentation in the Media*, Wydawnictwo Uniwersytetu Gdańskiego, Gdańsk 2020, p. 69.

²⁴ C. Sam, P. van der Sijde, *Understanding the concept of the entrepreneurial university from the perspective of higher education models*, "Higher Education" 2014, Vol. 68, pp. 891–908, <https://doi.org/10.1007/s10734-014-9750-0>, (accessed: 24.04.2026).

innovative, and socially engaged may become more attractive to students, academic staff, and business partners.

An important factor enabling the fulfilment of these tasks is the development of social relations based on dialogue and trust. The quality of these relations is of key importance for building the social position of the university²⁵.

At the same time, communication between universities and their environment currently constitutes a significant challenge. This is influenced by numerous factors. Among the external factors, one may point to dynamic changes taking place in communication processes, beginning with digitalisation, which was probably the most significant technological breakthrough of the past fifty years and a necessary condition for building a knowledge-based society²⁶. The impact of artificial intelligence on the media is becoming the newest challenge. The consequences of AI for the media range from the destructive role of automated journalism to the possibility of strengthening media objectivity, free from framing, gatekeeping, propaganda, and manipulation²⁷.

Digitalisation, the development of artificial intelligence, and the widespread availability of the internet have influenced the ways in which people exchange information, establish relationships, and participate in social life, including the exchange of scientific information. On the one hand, these technologies have enabled rapid access to information and improved communication; on the other hand, they have created new problems related to inclusivity, such as disinformation, isolation in information bubbles, and threats associated with the misuse of artificial intelligence. The phenomenon of denialism is spreading, and in relation to science it manifests itself in the rejection of consensus even on such crucial issues as climate change, vaccinations, and the COVID-19 pandemic²⁸. This hinders the implementation of knowledge-based policies and rational public discourse²⁹.

Internal factors also play an important role, including, among others, the organisation of communication activities, namely the structure of units or departments responsible for communication, the division of tasks, communication tools, and related elements.

²⁵ K. Leja, *Introduction* [in:] *Social Responsibility of the University*, ed. K. Leja, Katedra Zarządzania Wiedzą i Informacją Politechniki Gdańskiej, Gdańsk 2008, p. 5.

²⁶ S. Jędrzejewski, *Digitalisation of Radio and Television in Poland – Course and Social Effects* [in:] *Dynamics of Change in the Media*, eds. A. Hess, M. Nowina Konopka, W. Świerczyńska-Głównia, Instytut Dziennikarstwa, Mediów i Komunikacji Społecznej Uniwersytetu Jagiellońskiego, Kraków 2019, pp. 170.

²⁷ A. Nowosad, *Data Journalism and Automated Journalism in the Era of Big Data and Artificial Intelligence* [in:] *The New Communication Revolution*, eds. M. Nowina Konopka, W. Świerczyńska-Głównia, A. Hess, Instytut Dziennikarstwa, Mediów i Komunikacji Społecznej Uniwersytetu Jagiellońskiego, Kraków 2023, pp. 23.

²⁸ A. Bardon, *The Truth About Denial: Bias and Self-Deception in Science, Politics, and Religion*, Oxford University Press, USA, New York, 2019, pp. 97–113, <https://doi.org/10.1093/oso/9780190062262.003.0002>, (accessed: 27.04.2026).

²⁹ D.A. Scheufele, N.M. Krause, *Science audiences, misinformation, and fake news*, "Proceedings of the National Academy of Sciences of the United States of America", Vol. 116, No. 16, pp. 7662–7669, <https://doi.org/10.1073/pnas.1805871115> (2019), (accessed: 27.04.2026).

The aim of this article is to present the modes of communication between Polish higher education institutions and their external environment on the basis of extensive survey research that has not previously been conducted in this form. The findings demonstrate how higher education institutions, which often perform leadership roles within their regions, respond to communication-related challenges. The article advances the hypothesis that professionally managed communication between a higher education institution and its external environment contributes to the development of a positive institutional image and social trust, thereby enabling universities to fulfil their statutory responsibilities, including their social mission.

Research methodology

The study was conducted using both quantitative methods (a survey questionnaire) and qualitative methods (media monitoring and in-depth interviews). It involved 42 representatives of Polish higher education institutions: employees of press, promotion and marketing offices; press officers; public relations specialists; and, above all, directors and heads of units responsible for institutional communication with the external environment. In its initial design, the survey was addressed exclusively to press officers, who perform the function of intermediaries between the university and the media and, more broadly, between the university and its external environment. Preliminary research showed, however, that at Polish higher education institutions tasks which are, by definition, assigned to press officers are carried out by different people occupying different positions. For example, the duties of a press officer are often performed by heads of information and communication centres, while promotional and marketing tasks may also be assigned to the press officer. The necessity of directing the questions to different units and individuals resulted from the highly diversified structure of departments responsible for information, communication and promotion, as well as from the varied distribution of tasks within these structures.

The study sample comprised 35 higher education institutions selected from among those affiliated with the Conference of Rectors of Academic Schools in Poland (KRASP). Responses to the questionnaire were obtained from 34 institutions, which ensured a representative sample for this type of analysis. KRASP is the largest representative body of higher education in Poland. It brings together 110 member institutions, including 10 non-public institutions, and collectively accounts for more than 70% of the student population in Poland³⁰. The member institutions are divided into 11 categories: art academies, universities of economics, medical universities, non-public institutions, pedagogical universities, agricultural universities, technical universities, theological universities, military universities, universities of physical education, and comprehensive universities³¹. In order to construct a representative sample, the smallest, medium-sized,

³⁰ <https://www.krasp.org.pl/o-krasp/o-nas>, (accessed: 19.03.2025).

³¹ <https://www.krasp.org.pl/o-krasp/uczelnie-czlonkowskie> (accessed 19.03.2025).

and largest institutions were selected from each category. The study was conducted in 2024, and institutional size was measured according to the number of students and academic teachers, based on statistical data from Statistics Poland (GUS). In the case of technical universities and comprehensive universities, four institutions were selected from each category. These two categories constitute the largest groups within KRASP: the number of institutions in each is twice as high as in the remaining categories, with the exception of art academies. The guiding assumption was that the largest higher education institutions, due to the scale of their activities, occupy leadership positions and therefore constitute particularly relevant material for analysis. The median was used to identify medium-sized institutions.

The anonymous questionnaire, which comprised 39 questions and generated a total of 1,638 responses, was divided into five sections: the structure of communication units/departments; the tasks and functions of the press officer; communication tools and channels; crisis communication; and science communication³².

It should be clearly emphasised that, due to the very broad scope of the research conducted, the present article discusses only part of the findings, namely those concerning the structure of the units/departments responsible for communication at Polish higher education institutions and the communication channels they use. For the same reason, the article includes only the analysis and conclusions derived from the survey research³³.

Models of Units Responsible for Communication with the External Environment

Tasks related to higher education institutions' communication with the external environment and to their promotion are highly dispersed across Polish higher education institutions. The main burden of transmitting and exchanging information rests with departments, divisions, offices, and sections operating within central administration. However, communication and promotional tasks also fall within the remit of units responsible for recruitment, research, and the internationalisation of the institution. Technology transfer centres, career offices, university media, libraries, publishing houses, international research centres, as well as individual faculties, institutes, and departments that conduct their own information and promotional policies should also be added to this list. Departments/centres/divisions located within the structure of central administration perform not only a creative function but also a coordinating one. The respondents were therefore asked about the organisation of work in these

³² The survey questions were prepared after preliminary interviews and surveys concerning the issues under study had been conducted, in order to obtain an image reflecting the actual situation of Polish universities in the field of communication.

³³ The comprehensive research results, including qualitative analyses such as in-depth interviews and the media visibility of universities, will be published in subsequent articles in this series.

units, the number of people employed in them, formal reporting lines, and communication tools and channels – as factors influencing the effectiveness and quality of communication.

When asked how information and promotional activity is organised at their institution, 13 respondents (31%) answered that it is carried out by one integrated unit: a communication and promotion centre whose structure includes offices/teams dealing with media relations, public relations, marketing, and promotion. The same number of respondents indicated that these are two separate units: one responsible for promotion/marketing and the other for communication/media/PR. Ten respondents (23.8%) indicated that it is one unit: a promotion or marketing office/team to which media relations is subordinated, while five respondents (11.9%) indicated that it is one unit: a PR or press office/team to which marketing and promotion are subordinated. One person selected the answer “other” (2.4%), specifying that these are two separate units: promotion and marketing, and a press office. This response, however, also falls within the model of two separate units.

The responses point to two organisational models that are most common in Polish higher education institutions with regard to communication activities: one large communication and information centre (these are centres whose names include communication and information, but also promotion and marketing) and two separate units: one covering press and information activities, the other promotional and marketing activities (in this case, the names are also highly diverse, although most often these are a press office and a promotion office). In the remaining two models, units operate with a specified subordination of tasks: public relations encompass promotional, informational, and marketing activities, or, conversely, marketing/promotion encompasses PR activities, including the press office.

Comparative analyses showed that the organisation of work in units responsible for communication with the external environment is influenced not only by the size of the higher education institution, which is self-evident given the scope of activities undertaken, but also by its type. Thus, for example, at non-public higher education institutions, the largest number of respondents indicated two separate units, whereas at public institutions they indicated one integrated unit. The models differ between technical universities (polytechnics) and universities of comparable size. At technical universities, respondents most often indicated one integrated unit, while at universities an almost equal number of respondents indicated two separate units and one integrated unit. At smaller institutions, such as military, pedagogical, art, physical education, and theological institutions, the organisational model of one integrated communication and information centre did not appear in any response.

Formal Reporting Lines and the Decision-Making Process

With regard to higher education institutions, the formal reporting lines of heads/directors of units responsible for communication are important primarily because of the need for a rapid flow of information in contacts with university authorities. Those responsible for communication are on the “front line” in crisis situations, and their effectiveness determines whether, and in what form, messages concerning the institution’s activities – its successes, plans, and actions – will reach public opinion, including the media. Access to information is therefore important, as it is linked to the possibility of unobstructed contact with the authorities, bypassing unnecessary additional organisational levels. Direct subordination to the rector therefore appears to be the most effective arrangement, since the rector, together with the group of vice-rectors, is responsible for implementing the institution’s mission and making strategic decisions. However, as the study shows, the formal reporting lines of the units examined are diverse and, at times, distant from the main decision-making centre.

Most frequently, in 17 cases (40.5%), respondents indicated that the unit responsible for communication at the institution reports to the rector; 14 respondents (33.3%) indicated vice-rectors; five respondents selected the answer “depending on the tasks performed, to different persons”: the rector, a vice-rector, the chancellor, or the deputy chancellor (11.9%); while individual respondents (2.4% each) indicated the chancellor or their deputy. Four respondents (9.5%) selected the answer “other”, locating their units within the rector’s administrative division but as subordinate to the “director of the rector’s office”.

The “other” responses also recorded the dependence of formal reporting lines on the type of communication. Some respondents stated that external communication reports to the rector, whereas internal communication reports to the chancellor, as well as to the “deputy director general – organisational and business division”. This is a consequence of the broad range of tasks assigned to communication and promotion units, as internal communication very often also falls within their remit. In response to the question of which offices/teams are responsible for internal communication, a clear majority – 28 respondents, representing 66.7% – answered that these are various offices/teams/units, depending on the scope of their activities. Seven respondents (16.7%) indicated, however, that this is a “unit responsible for promotion or marketing”; three respondents selected the answer “unit responsible for communication/media/press” (7.1%); and two respondents each (4.8%) indicated a “communication and promotion centre” or “other”. Among the other responses, an “internal communication unit” and a “spokesperson and promotion office” were indicated.

Factors Hindering Communication Activities

Internal communication was also identified as the main factor hindering the effective conduct of communication activities with the external environment. Respondents assessed the importance of individual factors on a scale from 1 to 5, where 1 meant that a factor was entirely unimportant and 5 meant that it was very important. As many as 20 respondents (40.6%) indicated that the lack of well-organised internal communication is very important, and only two respondents indicated that it is entirely unimportant (the mean assessment of the importance of this factor was 3.98). In second place was the dispersion of communication activities among different units (mean importance rating: 3.93), and in third place an insufficient budget (3.9). Organisational structure ranked fourth, which indicates that, in the respondents' assessment, it does not constitute a significant obstacle (the mean importance rating for this factor was 3.57). In fifth place was a lack of support from the university authorities (3.4). The least significant factor proved to be insufficient competencies among persons responsible for communication at the institution (the mean importance rating for this factor was 3.17), which at the same time indicates the respondents' positive assessment of the professionalism of communication services.

Among the open-ended responses concerning other factors that hinder communication activities, respondents mentioned: a lack of trust among the authorities towards new promotional proposals, an unclear division of tasks, a lack of openness to information exchange between units, and even the weak reputation and limited achievements of the institution. However, the most frequently recurring answer in this category was that the number of people employed in units responsible for communication is too low in relation to the tasks assigned to them. It is therefore worth examining these numbers.

In response to the question concerning the number of people employed in units responsible for communication, respondents could choose from the following numerical ranges: one person, 2–3 people, 3–10 people, 10–15 people, 15–20 people, and more than 30 people. The largest number of responses – 21 cases (50%) – indicated the range of 3 to 10 people; 12 responses indicated 2 to 3 people. Three respondents answered that the number of employees was one person, and three answered that it was more than 30 people. Two respondents indicated the range of 10–15 employees, and one respondent indicated the range of 15–20.

The number of people employed in communication units is, of course, dependent on the size of the higher education institution. The largest institution in the sample had more than 40,637 students, while the smallest had 330; the range of employment should therefore not be surprising. A broader picture is provided by the context of cooperation with external media agencies. Institutions that use their assistance are unable to carry out all the tasks assigned to communication and promotion units independently. As the study showed, as many as 27 respondents (58.7%) stated that they cooperate with advertising agencies occasionally; seven respondents (15.2%) indicated the answer “yes, on a permanent basis”; and only 12 respondents (26.1%) stated that no such cooperation exists.

Internal Media as the Main Communication Channels

When asked which communication channels are used most frequently, a clear majority of respondents indicated the institution's websites and the institution's social media. In this case, respondents also answered on a scale from 1 to 5, where 1 meant "very rarely/not at all" and 5 meant "very often". In the case of university websites, no respondent selected the answer "very rarely/not at all", while 37 respondents (81.1%) selected the answer "very often". Similarly, in the case of the institution's social media, no respondent selected the answer "very rarely/not at all", and 39 respondents (92.9%) selected the answer "very often". External media, such as online portals, the press, radio, and television, ranked third (the mean importance rating for this answer was 3.86), and university media ranked fourth (mean: 3.29). The difference in the latter two cases is therefore small, which indicates the considerable popularity of university media as communication channels of higher education institutions.

This means that higher education institutions prefer internal communication channels for promoting their activities. At the same time, these are channels over which the organisation has full control. The positive aspect is that the institution has complete influence over the form of the message by eliminating mass media as an intermediary. However, the information primarily reaches academic and university communities, thereby limiting its dissemination among the broadly understood public opinion.

In this context, it is not surprising that eight respondents (19%) answered negatively to the question concerning the employment of a press spokesperson at the institution, while respondents indicated various arrangements for performing these tasks. The responses included: a press office, a promotion office, the rector's office, a marketing manager, the head of the promotion department, a vice-rector, a non-staff spokesperson, and a person delegated to these tasks.

Conclusion

Communication has always constituted the foundation of science³⁴. Universities that achieve success and gain prestige owe this not only to their academic excellence, but also to their ability to conduct effective communication activities with their environment.

At the same time, the results of the survey research conducted on communication among Polish universities revealed significant communication challenges facing higher education institutions, as well as directions for change. The main problems to be addressed include: the dispersion of communication activities across several, and sometimes more than a dozen, units; an excessively broad scope of responsibilities, which does not always reflect the actual issues that fall within the areas of public relations, media relations, promotion, and marketing; an inadequate number of employees

³⁴ *Communication of Science*, eds. E. Żyrek-Horodyska, M. Hodalska, Wydawnictwo Uniwersytetu Jagiellońskiego, Kraków 2016, p. 7.

in communication units, offices, or departments in relation to the number of assigned tasks; and the absence of well-functioning internal communication and an effective, non-conflicting flow of information between units.

Cooperation with the media constitutes an important aspect of this issue. The dynamic changes that have taken place in the media, particularly over the last decade, often discourage institutions such as universities from engaging in broader cooperation. This is due, among other things, to negative phenomena in the media, such as tabloidization, denialism, fake news, sensationalist narratives, politicisation, and infotainment. In such a media environment, it is difficult to disseminate scientific achievements and university activities effectively. Universities therefore focus on developing their own media and communication channels in order to retain influence over the form and content of the messages being disseminated. However, this is not an entirely effective solution, given the risk of becoming enclosed within the information bubble of academic communities. Academic media, including often very well-organised and professionally managed websites, portals, or news sections featuring current information and scientific articles, primarily reach the academic community itself.

A positive aspect is the direction of change, which indicates the professionalisation of university communication activities. This is visible in the tendency to establish central units encompassing public relations, media relations, marketing, and promotion, with the aim of coordinating communication activities. Specialised offices operating within large communication centres have the potential to build a coherent message and image of a university that is open to social problems and civilisational challenges.

Improving the above-mentioned areas of communication has a direct impact on the quality and effectiveness of communication between Polish universities and their environment.

The most important aspects include the development of a communication model that meets the requirements of a given university, depending on its type and size, as well as well-organised internal communication. However, the most crucial issue is a change in the way communication is understood: it is reductive to perceive it merely as the transmission of specific content. Instead, communication should constitute a coherent strategy embedded in the mission and development directions of the university. In summary, it would be disadvantageous for the academic community and its environment if the opportunity to build the prestige of Polish science, innovation, and academic and research staff through available public relations tools were not used³⁵.

Finally, it should be emphasised that the analyses and findings presented in this article constitute only part of the broader research that has been conducted. Subsequent analyses will focus on the ways in which science is popularised, how universities

³⁵ I.A. Duś, *Higher Education – Should the Image of the University Be Shaped?* [in:] *Social Responsibility of the University*, ed. K. Leja, Katedra Zarządzania Wiedzą i Informacją Politechniki Gdańskiej, Gdańsk 2008, p. 114.

cope with communication crises, the role of press officers, and the media visibility of universities. The overall aim will be to develop a catalogue of good practices and communication models for Polish universities, so as to make use of their valuable potential and their character as institutions of social service.

Bibliography

- Bardon A., *The Truth About Denial: Bias and Self-Deception in Science, Politics, and Religion*, Oxford University Press, USA, New York, 2019, pp. 97–113, <https://doi.org/10.1093/oso/9780190062262.003.0002>.
- Duś I.A., *Higher Education – Should the Image of the University Be Shaped?* [in:] *Social Responsibility of the University*, ed. K. Leja, Katedra Zarządzania Wiedzą i Informacją Politechniki Gdańskiej, Gdańsk 2008, pp. 100–107.
- Jędrzejewski S., *Digitalisation of Radio and Television in Poland – Course and Social Effects* [in:] *Dynamics of Change in the Media*, eds. A. Hess, M. Nowina Konopka, W. Świerczyńska-Głównia, Instytut Dziennikarstwa, Mediów i Komunikacji Społecznej Uniwersytetu Jagiellońskiego, Kraków 2019, pp. 169–188.
- Communication of Science, eds. E. Żyrek-Horodyska, M. Hodalska, Wydawnictwo Uniwersytetu Jagiellońskiego, Kraków 2016.
- Leja K., *Introduction* [in:] *Social Responsibility of the University*, ed. K. Leja, Katedra Zarządzania Wiedzą i Informacją Politechniki Gdańskiej, Gdańsk 2008, p. 5.
- Łosiewicz M., Czechowska-Derkacz B., Bałandynowicz-Panfil K., *The University of Gdańsk in the Face of the Challenges of the Development Policy of the Pomeranian Region. Forms of Presentation in the Media*, Wydawnictwo Uniwersytetu Gdańskiego, Gdańsk 2020.
- Marszałek A., *Jagiellonian University: Scientific and Research Potential of the University and Its Role in the Learning Region (the Case of Małopolska)* [in:] *The Role of Universities in the Promotion of Cities and Regions*, ed. T. Domański, Wydawnictwo Uniwersytetu Łódzkiego, Łódź 2011.
- Nowosad A., *Data Journalism and Automated Journalism in the Era of Big Data and Artificial Intelligence* [in:] *The New Communication Revolution*, eds. M. Nowina Konopka, W. Świerczyńska-Głównia, A. Hess, Instytut Dziennikarstwa, Mediów i Komunikacji Społecznej UJ, Kraków 2023, pp. 17–47.
- Sam C., van der Sijde P., *Understanding the concept of the entrepreneurial university from the perspective of higher education models*, “Higher Education” 2014, Vol. 68, pp. 891–908, <https://doi.org/10.1007/s10734-014-9750-0>, (accessed: 24.04.2026).
- Scheufele D.A., Krause N.M., *Science audiences, misinformation, and fake news*, “Proceedings of the National Academy of Sciences of the United States of America” 2019, Vol. 116, No. 16, pp. 7662–7669, <https://doi.org/10.1073/pnas.1805871115>.
- Social Responsibility of the University*, ed. K. Leja, Katedra Zarządzania Wiedzą i Informacją Politechniki Gdańskiej, Gdańsk 2008.