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Science centres in post-pandemic reality – educational and market context

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Abstract: Science centres are an important element of the cultural and educational landscape of modern world. Their role is changing. Due to the diverse activities of these centres, they are of interest to academics and experts from many disciplines. Their classification stands at the border of education and culture, non-profit and for-profit and this makes them especially interesting. The goal of the paper is to present the role of science centres in the current COVID-19 pandemic.

Keywords: science centres, New Customer, Post-Pandemic Education, hybrid education

Introduction

Science centres are crucial institutions in terms of their social and educational role in smaller and larger communities. This role differs depending on the location (country and region), which is highly related to the local and regional culture¹. They enrich communities' knowledge and skills. The role of science centres, whose mission (in general) is to popularize science, grew significantly in COVID-19 and fake news because they can spread actual news in society and deliver knowledge and verified information to the public.

Science centres are entities responsible for sharing and co-creating contemporary knowledge with (and for) society. Regardless of their particular profile, all science centres aim to build and share knowledge in a communicative, natural, and understandable way. Expectations of visitors change dynamically. In times of infotainment, it is not sufficient anymore to just present new scientific results. In this article, three elements will be presented. The first part is devoted to new customers and their profiles, then it is continued with a description of the condition of the education and culture sector in the post-COVID reality. The final part will bring attention to science centres and their role in the "new" reality and customer context. On this basis conclusions are drawn.

New customers in times of pandemic and post-pandemic reality

Some authors introduced the term "New Customer" to the literature to stress the original character and profile of people living in the technocratic era². The characteristics

article Ternavska T., Shaumian, O., Mishenina, T., Voloshchuk, I., Raievska, Y., Hrys, A., *Socio-Psychological Directions of Resocialization of Persons, who are located in Places of Imprisonment*, "BRAIN. Broad Research in Artificial Intelligence and Neuroscience", Vol. 11(3), 2020, pp. 54–71.

¹ W. Grzegorzczuk, *Marketing na rynkach międzynarodowych. Badania, decyzje, organizacja*, Wydawnictwo Uniwersytetu Łódzkiego, Łódź 2020.

² B. Gregor, M. Kalińska-Kula, *Handel internetowy Perspektywa e-konsumenta*, Wydawnictwo Uniwersytetu Łódzkiego, Łódź 2020; B. Gregor, B. Gotwald, A. Łaszkievicz, *E-commerce a zacho-*

which have appeared in literature linked to technology advancements are now even more visible due to the urgent need to adapt to pandemic reality. Virtualization of most processes related to work and regular life has significantly influenced the attitude and needs profile of contemporary customers.

One trend that grows exponentially during and after a pandemic is the necessity for companies to care for the environment (taken broadly, including the local and global community). The situation of a real threat to health and life of people proved that customers expect companies to react to the crisis. Research proves that professionals believe that offering support for employees (89%), communicating sustainability (74%), and implementing sustainability actions (73%) is critical for success.³ Customers were pushed to plan activities which they could previously engage in spontaneously. For that reason, they use online reality⁴ to book experiences for a later date.

Not surprisingly, customers value the ability to purchase and walk out of a shop as fast as possible. Shopping for pleasure and taking time to enjoy the experience, especially in shopping malls, decreased during the pandemic. Companies and cities built outdoor facilities and this became growing trend to satisfy consumers trapped in their houses (or flats). It aligns with the need for sustainable planning of spaces, but pandemic seems to speed up the process.

The reality became “phygital”, crossing physical and digital reality. People get used to the dimensions of the two worlds: physical (real) in which they function and digital (virtual), supporting the real one. The second dimension helps enhance the experiences as reentry into reality is circumscribed during the pandemic. The trend of AR/VR usage by customers is related to age, as research proves – the younger the customer group, the more intense AR/VR usage.⁵ The technology that allows the mixing of the virtual and the real becomes one of the future technologies, after virtual and voice assistants.⁶ The use of mobile commerce technology enables tracking data to adjust offers to customers’ preferences. The pandemic has forced customers to value their time even more than before – distant learning (online) of children and remote work of parents⁷ fearing for their lives (living in constant danger of the virus) made customers

wania konsumentów, [in:] M. Bartosik-Purgat (ed.), *Zachowania konsumentów. Globalizacja nowa technologie. Aktualne trendy otoczenie społeczne-kulturowe*, Wydawnictwo Naukowe PWN, Warszawa 2017, pp. 99–126; D. Kaczorowska-Spychalska, *Digital Technologies in the Process of Virtualization of Consumer Behaviour – Awareness of New Technologies*, „Management-Poland”, 2018, Vol. 22, No. 2, pp. 187–203

³ G. Westbrook, A. Angus, *Top 10 Global Customer Trends 2021*, Euromonitor International, 2021, pp. 5–8.

⁴ J.W. Wiktor, K. Sanak-Kosmowska, *Information Assymetry in Online Advertising*, Routledge, London 2021.

⁵ *Euromonitor International Digital Consumer Survey*, fielded March to April 2020.

⁶ M. Evans, *Digital Consumer Survey 2020: Key Insights*, Passport Euromonitor International, June 2020.

⁷ M.M. Kowalczyk, *Koncepcje wychowawcze współczesnych rodziców dzieci w wieku wczesnoszkolnym w aspekcie koherencji*, IMPULS, Kraków 2020.

spend more time with their families at home instead of going to shopping malls. This might be the reason why customers became more creative with their free time.⁸

“Time for Myself” became a priority for more than half of the people, and the amount is growing since 2016.⁹ It might be more critical since mixing realities and the necessity to work from home forced customers to set boundaries more efficiently. Increasing flexibility (related to remote working) in terms of place and time causes changes in the services market, for it starts to be required that services are available 24/7. Customers are less likely to drive a long distance for shopping, limiting the spread to the 15-minute radius, and for that reason, companies might need to change their operating models – into an online or local offer.¹⁰ People became more concerned with their safety, understood as a necessity to take care of hygiene and self-protection. Security is now frequently defined as mental well-being¹¹ (before feeling good, getting enough sleep, and absence of diseases).¹² The necessity to introduce distant learning, which will be explored in detail below, caused many problems, including loneliness and emotional difficulties.¹³

Those trends are crucial also for a decrease of spending in almost all categories (clothing and footwear – 51%, sports equipment and outdoors – 46%, restaurant food pickup, and delivery – 41%, office equipment – 36%, health and beauty products – 35%).¹⁴ However, some products noticed a significant growth in online sales. They were: disposable gloves (670%), bread machines (652%), cough medicine (535%), soups (397%), rice and bread grains (386%), and packaged fruits (377%).¹⁵ The trend of the homebody economy is one of the new trends related to the lock-down¹⁶. While people have been locked in their homes due to the prevention of virus spread, they learned how to fulfil their needs at home, including working, shopping, and using services (i.e., cultural and educational).

⁸ G. Westbrook, A. Angus, *Top 10 Global Customer Trends...*, op.cit., pp. 17–19.

⁹ Euromonitor International Lifestyles Survey, fielded January to February 2020

¹⁰ G. Westbrook, A. Angus, *Top 10 Global Customer Trends...*, op.cit., pp. 20–23

¹¹ M. Zahneis, A. W. June, *How has the Pandemic Affected Graduate Students? This Study Answers*, “The Chronicle of Higher Education”, 13.09.2020, p. 3.

¹² *Euromonitor International Health and Nutrition Survey*, fielded February 2020, cyt za: G. Westbrook, A. Angus, *Top 10 Global Customer Trends...*, op.cit., p. 34.

¹³ OECD, *All the lonely people: Education and loneliness*, “Trends Shaping Education Spotlights”, No. 23, OECD Publishing, Paris, <https://doi.org/10.1787/23ac0e25-en>.

¹⁴ N. Ivakovic, *Beyond the Pandemic – a New Era of Consumer Behaviour*, [in:] A. Aleksić, V. Ruzic, Z. Baracska (eds.), *Economic and Social Development*, February 2021, p. 8.

¹⁵ A. Bhatti, H. Akram, H.M. Bassit, A.U. Khan, S.M.R. Naqvi, M. Bilal, *E-commerce trends during COVID-19 Pandemic*, “International Journal of Future Generation Communication and Networking”, Vol. 13, No. 2, 2020, pp. 1449–1452.

¹⁶ S. Vranica, K. Robinson, *Emerging consumer trends in a post COVID 19 world*, accessible through: <https://www.mckinsey.com/business-functions/marketing-and-sales/our-insights/emerging-consumer-trends-in-a-post-covid-19-world>, 29.08.2021.

New trends in the post-pandemic education and culture sector

Education and culture¹⁷ have also changed due to the pandemic for many reasons. The first is isolation and an urgent need to speed up the virtualization of teaching¹⁸ and offer delivery to make it as efficient as possible. The second is the digitization of all processes which used to be “traditional”. Apart from the apparent need to improve digital literacy, especially among elderly teachers and professors, there were many other challenges. One of them is the urgent need to create virtual content shown to students and customers instead of traditional presentations (or exhibits) during face-to-face interactions¹⁹. Although this may be perceived as easy, current events proved that presentations with the usage of graphic programmes are very challenging. Moreover, there are hardly any online resources available due to work conducted in a traditional (“real”) environment. Additionally, the speedy development of technologies enables teachers and students to be brought “up to date” with modern solutions.

Gwilym Croucher and William Locke present some trends applicable to the Australian higher education system, and some of them are relevant also for other countries and educational systems. There is growing acceptance for online education, prioritizing research related to social and economic recovery and uncertainty about transnational education and research collaboration.²⁰ Research proves that there are some consequences caused by COVID-19 related to students themselves: growth of the dropout rate, limited access to learning facilities, learning disruption, prolonged study, job losses and increase of students debt.²¹ Restricted or blocked access to school facilities forced teachers to use distant learning solutions. Consequently, this is the first generation of students equipped with an ability to “own” the responsibility for the learning process in a way never experienced before. Forced digitization allows the disabled, living in rural areas, minorities, and stay-in-home moms to compete in a labour market with their skills acquired by online courses, changing the market

¹⁷ W. Krawiec, *Zarządzanie wartością dla klienta a marketing doświadczeń w instytucjach kultury. Działania współczesnego teatru i filharmonii*, Wydawnictwo Uniwersytetu Łódzkiego, Łódź 2020.

¹⁸ O. Pirogova, N. Temnova, E. Markova, *Online education in Russia: status and development trends*, [in:] *E3S Web Conf.*, Vol. 258, Region, May 2021, <https://doi.org/10.1051/e3s-conf/202125810020>.

¹⁹ D.T. Nguyen, K.T. Chung, *New Trends in Technology Application in Education and Capacities of Universities Lecturers during the COVID-19 Pandemic*, “International Journal of Mechanical and Production Engineering Research and Development”, Vol. 10, Issue 3, Jun 2020, pp. 1709–1714.

²⁰ G. Croucher, W. Locke, *A post-coronavirus pandemic world: some possible trends and their implications for Australian higher education*, The University of Melbourne, accessible on: https://melbourne-cshe.unimelb.edu.au/_data/assets/pdf_file/0010/3371941/a-post-coronavirus-world-for-higher-education_final.pdf, May 2020.

²¹ E.M. Onyema, N.Ch. Eucheria, F.A. Obafemi, S. Sen, F.G. Atonye, A. Sharma, A.O. Alsayed, *Impact of Coronavirus on Education*, “Journal of Education and Practice”, Vol. 11, No. 13, 2020, pp. 108–121.

permanently.²² Along with changes, there are challenges, including limited access to education of those with lower socioeconomic status (due to lack of access to computers and internet) or learning difficulties (due to lower computer skills), making it challenging to evaluate students on an equal basis.²³

Traditional learning, happening in a physical environment,²⁴ uses the concept of educational space organization, which influences the learning itself²⁵ and happens to be hard to copy in an online environment. The traditional class environment was replaced by students' homes, where the educational institutions do not influence; socialization is limited to online channels (including social media and social innovative learning environments²⁶). Students demand more options for choice in terms of courses and ways of their delivery due to technological advancement and lower college costs due to lower costs (while comparing physical and electronic education) of universities.

Those problems are visible internationally²⁷ due to the exact cause for change (which is pandemics), even though their intensity might differ, depending on the country or region. Some trends might be used for education, especially in terms of distance learning. They are: (1) **cloud platforms** allow students to gain knowledge through access to the course content, course materials, which facilitate the educational process in the same environment; (2) **Learning Management Systems (LMS)**, which divide the general activities of students and teachers and those related to education only (in example: Moodle), give the chance for shy participants to present their point of view with the usage of a keyboard rather than speaking during classes²⁸; (3) **M-Learning** through specific learning applications, such as Kahoot, which can be a separate learning tool or enrich the activities taking place on other platforms; (4) **Massive Open Online Courses (MOOCs)** are a chance for separate courses organ-

²² T.L. Friedman, *After the Pandemic, a Revolution in Education and Work Awaits*, "New York Times" 21.10.2020, accessible on: <https://nyti.ms/3jetczN>.

²³ M. Poletti, *Hey teachers! Do not leave them kids alone! Envisioning schools during and after the coronavirus (COVID-19) pandemic*, "Trends Neurosci Educ.", 14.08.2020, <https://doi.org/10.1016/j.tine.2020.100140>.

²⁴ A.M. Al-Ansi, A. Al-Ansi, *Future of Education Post Covid-19 Pandemic: Reviewing Changes in Learning Environments and Latest Trends*, "Solid State Technology", Vol. 63, Issue 6, 2020, p. 201586.

²⁵ H.K. Wilson, A.J. Cotgrave, *Factors that influence students' satisfaction with their physical learning environments*, "Structural Survey", Vol. 34(3), 2016, pp. 256–275.

²⁶ R. Junco, *The relationship between frequency of Facebook use, participation in Facebook activities, and student engagement*, "Computers & Education", Vol. 58(1), 2012, pp. 162–171.

²⁷ L. Kobysheva, A. Luginina, N. Gafiatulina, Y. Atramonova, *Organization of higher education in context of digitalization: online learning experience at pandemic, development trends*, "E3S Web of Conferences. XIV International Scientific and Practical Conference "State and Prospects for the Development of Agribusiness – INTERAGROMASH 2021", Vol. 273, 2021, <https://doi.org/10.1051/e3sconf/202127312052>.

²⁸ I. Nakane, *Negotiating silence and speech in the classroom*, "Multilingua. Multilingua – Journal of Cross-Cultural and Interlanguage Communication", Vol. 24(1–2), 2005, pp. 75–100.

izations and internationalization²⁹, which seems to be problematic during COVID-19; (5) **Open Educational Resources (OER) and Open Educational Practices (OEP)** are an answer for problems related to lack of educational materials accessible online, but also allow accessing the teaching materials by teachers from all over the globe; (6) **Social Networking Applications** have similar potential as OER. Still, the materials are shared differently because creators usually use social networking sites to share knowledge and build the image of the self as an expert. It is beneficial for potential students who get access to the information and at the same time can diversify and develop their skills,³⁰ (7) **Live, Interactive Online Courses (LIOC)**, also called webinars, are introduced instead of traditional courses in physical spaces. The general difference between MOOCs and LIOC is that the first one is asynchronous, and the teaching process is not limited in time for students and teachers. While, the second one is happening simultaneously for all participants (students and teachers);³¹ (8) **Artificial Intelligence-Based Tools**³² are the future of education and analysis of educational results of students. They are applied for existing tools or run as separate solutions.

The creative and cultural sectors faced similar challenges and used digitization to survive during the pandemic, and were highly harmed by the pandemics.³³ They were forced to use the online environment extensively due to the lack of possibilities to open physical facilities for visitors³⁴ and must be still facing the changes in customer behaviours. Therefore, as an economic sector, culture is advised to build complementarity with other sectors (such as education, health care and social services) to make it more resilient in future crises and protect it in the long run.³⁵

The presented solutions have been available before the COVID-19 pandemic, but its occurrence speeded up their development and popularization. Indeed, some

²⁹ B. Kang, *How the COVID-19 Pandemic Is Reshaping the Education Service*, [in:] J. Lee, S.H. Han (eds.), *The Future of Service Post-COVID-19 Pandemic*, Vol. 1, Springer, Singapore 2021, pp. 18–19.

³⁰ A.M. Al-Ansi, A. Al-Ansi, *Future of Education Post Covid-19 Pandemic...*, op.cit., pp. 201590–201593.

³¹ B. Kang, *How the COVID19...*, op.cit., p. 20.

³² Ibidem, pp. 21–22.

³³ K.a Vitálišová, K. Borseková, A. Vaňová, T. Helie, *Impacts of the COVID-19 Pandemic on the Policy of Cultural and Creative Industries of Slovakia*, “Scientific Papers of the University of Pardubice, Series D: Faculty of Economics and Administration 2021, Vol. 29(1), 1241, pp. 1–11.

³⁴ I.T. Priambodo, S. Sasmoko, S.B. Abdinagoro, A. Bandur, *E-Commerce Readiness of Creative Industry During the COVID-19 Pandemic in Indonesia*, “The Journal of Asian Finance, Economics and Business”, Vol. 8, Issue 3, 2021, pp. 865–873; Y. Kalyuzhnova, O. Khlystova, A. Imayo, *The impact of the COVID-19 pandemic on the creative industries: evidence from Kazakhstan*, “International Trends”, (In Press), http://centaur.reading.ac.uk/99884/1/Kalyuzhnova_proof.pdf.

³⁵ OECD, *OECD Policy Responses to Coronavirus (COVID-19) Culture shock: COVID-19 and the cultural and creative sectors*, 7.09.2020, https://read.oecd-ilibrary.org/view/?ref=135_135961-nenh9f2w7a&title=Culture-shock-COVID-19-and-the-cultural-and-creative-sectors&ga=2.239270592.215178936.1630420290-1259918271.1630310990.

changes will hopefully not be permanent, such as wearing face masks³⁶ and keeping physical, social distance.³⁷ Furthermore, the role of culture is significant during and after the pandemic due to its positive influence on the mental well-being of people,³⁸ which was presented as one of the main issues above.

Science Centres facing post-covid reality

Science centres and science museums are entities bridging education, culture and social work.³⁹ “They serve as important platforms for the empowerment of people, allowing people to make well-informed decisions,”⁴⁰ to broaden their knowledge⁴¹ and to build communities.⁴² However, new reality related to pandemics made them adapt due to various funding schemes (from those funded by government and local authorities to those operating as private entities).

Due to the high amount of information surrounding people, the “new customers” are highly selective in acquiring knowledge. Therefore, some of them are not well-prepared for the reality of fake news and post-truth. It is visible during the pandemics while speaking about vaccination and social distancing.⁴³ For that reason, science centres are responsible for educating and supporting visitors and whole communities to prevent social and health crises.

For sure, this role is crucial in terms of health conditions and technology (including IT and STEM). This is why the role of science museums and science centres is more

³⁶ M. Spitzer, *Masked education? The benefits and burdens of wearing face masks in schools during the current Corona pandemic*, “Trends in Neuroscience and Education”, Vol. 20, 2020, <https://doi.org/10.1016/j.tine.2020.100138>.

³⁷ J.Z. Tria, *The COVID-19 Pandemic through the Lens of Education in the Philippines: The New Normal*, “International Journal of Pedagogical Development and Lifelong Learning”, No. 1(1), 2020, ep2001, <https://doi.org/10.30935/ijpdll/8311>.

³⁸ A. Tubadji, *CULTURE: A tool for mental health resilience in COVID-19 times*, [in:] Ch. Wyplasz (ed.), “Covid Economics Vetted and Real-Time Papers”, Issue 32, June 2020, pp. 179–207.

³⁹ P. Barczyński, B. Gotwald, M. Kowalczyk, *Science Centres as The Drivers of Change on Social and Educational Arena*, „International Journal of Economics, Business and Entrepreneurship” (2615–6873), 2018, Vol. 1, No. 2, pp. 127–137; B. Gotwald, *Komunikacja marketingowa w środowisku omnikanalowym. Potrzeby i zachowania konsumentów na rynku centrów nauki*, Wydawnictwo Uniwersytetu Łódzkiego, Łódź 2020.

⁴⁰ UNESCO, *Science Centres and Science Museums*, <http://www.unesco.org/new/en/natural-sciences/science-technology/science-policy-and-society/science-and-society/science-centres-and-museums/>.

⁴¹ J. Falk, M. Storksdieck, *Using the contextual model of learning to understand visitor learning from a science center exhibition*, “Science Learning in Everyday Life”, Vol. 98, Issue 5, 2005, pp. 744–778.

⁴² J.H. Falk, M.D. Needham, *Measuring the Impact of a Science Center on Its Community*, “Journal of Research in Science Teaching”, Vol. 48, No. 1, 2011, pp. 1–12.

⁴³ E. Dwoşkin, *Vaccine opponents outline online campaigns to sow distrust in coronavirus vaccine*, “The Washington Post”, 23.12.2020, <https://www.washingtonpost.com/technology/2020/12/23/anti-vaxx-covid-vaccine/>.

important than ever before. Virtualization of work and life surprised some people who dived into online reality forced by the situation. For that reason, education institutions with high trust (such as science centres) are supposed to help people develop understanding and knowledge about the new reality (with a high component of information technology and VR/AR). The creation of “phygital” reality by the science centres may be a way to introduce customers to the discussed issues, allowing them to experience and understand new technology without an urgent need to learn about it theoretically (instead of “learning by doing”). It is also advised to introduce more mobile solutions which make customers digital natives in a safe environment created by science centres. The necessity to develop an offer to organize time for children and families in the most valuable way is a priority to be faced soon. Customers who get used to distance learning and working expect other entities to offer solutions and products the same way (available 24/7 offer accessible online). Another challenge might be creating spots in smaller cities by great science museums to reach customers living in distant areas because they are less eager to travel to get the offer. Due to the increase of technology density in schools, science centres need to create new education channels, including cloud and mobile solutions, because those used before tend to get not attractive for students who experienced the mentioned (modern) technological solutions in their schools.

The centres are also expected to continue education in climate and climate change, which may cause even more dangerous problems than pandemics. Sustainability actions are related especially with companies, but it does not change that science centres offering products to customers are sometimes perceived as similar to commercial entities. Science centres are forced to prepare a diverse offer for customers from various age groups to plan activities. It is vital due to post-covid restrictions and the need of customers in that area. In addition, a chance for rapid delivery of the product, with diverse distribution channels (including online), can be a crucial element to allow centres to compete with the commercial free-time offer.

Another element that is crucial in terms of science centres in the mental health of people living in neighbouring communities. For example, some people experienced PTSD (Post Traumatic Disorder) related to being locked up in houses, facing loneliness and terrifying news, experiencing the deaths of relatives and friends, living in constant fear, losing jobs etc. Science museums can play a significant role in supporting customers to reduce negative emotional and mental consequences of this situation. They can not only offer direct support but also – let customers understand their emotions and state better.

Science centres can benefit from the developing trend of the homebody economy⁴⁴, delivering an offer accessible for visitors online, as mentioned above. There are new areas of product development, including educational materials production,

⁴⁴ Nielsen, *Homebody Economy Gains Steam amid Epidemic*, 27.02.2022, www.nielsen.com; M. Ringman, *How The Homebody Economy Is Shaping Digital Customer*, “Forbes” 17.12.2020.

courses for private and corporate clients (i.e. schools), conducting research related to the new reality and popularizing their results. Science museums and science centres that offer access to knowledge are a chance for students with lower socioeconomic status who experienced negative consequences of no access to school facilities. The science centres could influence the reduction of prolonged study positively, learning disruption or dropout rate.

Conclusions

Science centres are the entities related to knowledge development and local community support. As presented above, the institutions operating simultaneously in the education, culture and social work area have a considerable potential to reduce the negative consequences of COVID-19. Their potential can be seen in a few areas. Primarily they have a mission of sharing knowledge and empowering people for their own “truth search” (also online). The increase of technology density in schools results in the need to improve digital literacy (regardless of the age group) and accessibility of valuable materials in all the channels (including online and mobile). The role of science centres in creating safe environments for experiencing phygital reality is crucial, especially for youngsters. They learn how to use new technologies to plan, learn, work, socialise.

Nevertheless, mental issues arise, such as feeling isolated, over-responsible on the duties or even experiencing PTSD due to COVID-19 restrictions. Distant learning and working create a potential for equality building for previously disadvantaged groups, but it stands along with the exclusion of people without access to online solutions. The consumption models are changing, creating a whole new potential for sustainable shopping, delivery planning, free time spending or climate care. Science centres may speed the positive processes or slow them down if they reduce their involvement. For that reason, they should be supported to introduce necessary actions, especially in terms of information and communication technology. Most of the problems related to the economic and social area should be addressed both in the short and long run. Future research should assess the impact of science centres and how this impact could be researched and strengthened (considering the “Bilbao effect”)⁴⁵.

⁴⁵ M. Patterson, *Revitalization, transformation and the ‘Bilbao effect’: testing the local area impact of iconic architectural developments in North America, 2000–2009*, “European Planning Studies”, Vol. 30, Issue 1, 2020, pp. 32–49.

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Streszczenie

Centra nauki w rzeczywistości postpandemicznej – kontekst edukacyjny i rynkowy

Centra nauki stanowią istotny element krajobrazu kulturalno-edukacyjnego współczesnego świata. Ich rola zmienia się wraz z ewoluowaniem podejścia do włączenia społeczeństwa do tworzenia nauki. Z uwagi na zróżnicowane spektrum działania omawianych podmiotów stają się one przedmiotem zainteresowania naukowców i praktyków wielu dziedzin. Ich klasyfikacja na pograniczu instytucji edukacyjnych i kulturalnych, non-profit i for-profit czyni je szczególnie interesującymi. Celem artykułu jest wskazanie aktualnej roli społecznej centrów nauki w kontekście przemijającej pandemii COVID-19.

Słowa kluczowe: centra nauki, nowy konsument, edukacja post-pandemiczna, edukacja hybrydowa

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