



<http://dx.doi.org/10.16926/eat.2023.12.16>

Wioletta SOŁTYSIAK

<https://orcid.org/0000-0002-4680-398X>

Jan Długosz University in Czestochowa

e-mail: wsoltysiak@ujd.edu.pl

## The idea of universal design in the educational process at University.

### “Universal design as a space of equal opportunities and accessibility for people with disabilities”

---

**How to cite [jak cytować]:** Sołtysiak, W. (2023). The idea of universal design in the educational process at University. “Universal design as a space of equal opportunities and accessibility for people with disabilities”. *Edukacyjna Analiza Transakcyjna*, 12, 285–293.

---

### Abstract

The article presents the concept of universal design in the educational process at University in the context of the author’s participation in the project called “Universal design as a space of equal opportunities and accessibility for people with disabilities.” To achieve the aforesaid aim, professional literature was studied, project tasks were discussed and the idea of universal design was referred to taking into account contemporary educational space. The author writes about the inclusion of universal design in the teaching-learning process at University, about the inclusion of teaching and accessibility which is a key-word for the idea of universal design. The aim of the project was achieved. Both the lecturers and the students gained more awareness of accessibility. Within the framework of realizing the project tasks, the author studied, among all, the rules of universal design and their practical use. The participants obtained knowledge, competencies and skills, which should allow for using them in the social sphere, in their professional practice.

**Keywords:** universal design, accessibility, inclusion, competencies, skills.

### Introduction

The inspiration for writing the article was the author’s cooperation with the team realizing various tasks within the framework of the project called “Univer-

sal design as a space of equal opportunities and accessibility for people with disabilities” at Jan Długosz University in Częstochowa, organized within the framework of the contest of the National Centre of Research and Development “Universal design” (POWR.03.05.00-IP.08-00-PUN/19). The main aim of the project for the project participants was to obtain knowledge, competencies and social skills concerning universal design (UD). The article describes selected aspects of implementing project components into the educational process. These were the following tasks: developing guidelines for a new subject “Universal design” and implementing them into studies curricula, developing course description cards and lesson plans. Moreover, the subject matter of universal design was to be discussed during certified trainings for the teaching staff.

The lesson topics for the subject offered the project participants an opportunity to learn about the needs of the community with disabilities and other people with special needs, from the point of view of universal design, taking into account digital, ICT, architectural and social accessibility.

The practical aim of realizing the aforementioned lesson plans with students was obtaining new social competencies and skills of using the rules of universal design of goods and services in practice. This aim reflects current needs of our society, job market and economy.

The main aim of the article derives from the aims of realizing the project tasks. It attempts to demonstrate how the lecturers’ and students’ awareness can be raised as far as universal design is concerned, how this concept can be used in practice in the process of constructing the reality surrounding us.

## Universal design in literature

The idea of universal design assumes the creation of a product or service design useful for all the people to the greatest possible extent, without the need of adaptation or specialist design (Mace, 1985, p. 149).

To comprehend the subject matter of UD, one has to start from the very beginning, when in 1945 Jack Fischer, a person with a motor disability, filed a petition to the authorities of Kalamazoo, a town in the south-western part of Michigan, to make the pavements more accessible (Wróblewska, 2022, pp. 44, citing Brown, 1999). Thanks to Fisher’s initiative, the kerbs were cut. This event constituted a springboard for universal space design. Only three decades later, in 1972, also in America, the first gradually slanting pavement in the form of a kerb was constructed. This fact was made widely-known by the Disabled People Rights Movement. A year later, Ronald Mace developed the first building code. Being a person with a disability, the author also coined the term “universal design,” as he understood people with similar needs. He became a pioneer in

designing accessible buildings so that the biggest possible number of people could use them, without distinguishing anyone due to their disability (Wróblewska, 2022, pp. 46, 47).

In 1984, the concept of universal design was introduced in education, in its material and immaterial dimension. Its authors were Anne Meyer and David Rose. They made sure classrooms were accessible to all the students, taking into account their various needs. They developed school curricula that made learning with the use of new technologies easier (Wróblewska, 2022).

The idea of universal design is particularly propagated in Norway and Ireland, where exclusivity and holism are emphasized as the foundation of universal design. Norway is a pioneering country which introduced the idea of social inclusion based on seven rules of universal design: 1. Equal opportunities for use. 2. Flexibility of use. 3. Simple and intuitive use. 4. Noticeable and understandable information. 5. Tolerance for error. 6. Low physical effort. 7. Appropriate size and space for approach and use. These rules are widely used to ensure equality for all citizens and their full participation in social life. From the beginning of the seventies of the 20<sup>th</sup> century, the ideas of UD were being gradually introduced into schools. Schools for children with special needs were liquidated and, in 1976, replaced with adapted education. Its aim is to respect students' developmental differences by individual approach and taking into account local circumstances of ethnic and social minorities (Jagiełło-Kowalczyk, Tokarski, 2022, p. 95 citing: Nilsen, 2010, p. 489). It was assumed that social competencies are more important than acquiring knowledge, that is why designing appropriate spaces enhancing the idea of social inclusion is so important (Jagiełło-Kowalczyk, Tokarski, 2022, p. 95 citing: Hansen, 2005, p. 135).

Konrad Kaletsch created the eighth rule, i.e. perception of equality (Konieczna-Woźniak, 2020). Its main assumption is perceiving people with special needs as equal in all areas of social life.

Moreover, according to Anna Jurkowska (2002, p. 157), apart from the rules of UD, the following factors that are also important for accessibility should be added: social, economic, aesthetic and cultural context.

The subject matter of UD can be discussed from a theoretical and empirical perspective. Grzegorz Gawron (2015, p. 135) notices that universal design can be part of the functionalist paradigm due to suggesting appropriate tools for the realization of universal design, but it can also be of a pragmatic nature due to its suggested set of instruments. Using the concept of universal design leads to the establishment of universal rules, thus it can be said it has got positivist orientation, but it is also based on seven rules, which can make it normative in nature. The aim of the authors of the realised project was to equip students with new competencies in the field of UD, but also, as future designers of social life, to make them more sensitive to groups at risk of exclusion, to the aspect of acces-

sibility for people with disabilities. Following this path, it can be noticed that UD is also part of the critical paradigm.

The idea of UD touches upon realistic philosophy, which assumes that every person possesses the unchangeable existential structure that consists of three layers:

physical, linked with motor activities, mental, linked with drive and mental functions, and spiritual that concerns intellect and will. Disturbance within any of these layers impacts only its function, having no influence on the existential structure. A person with a given disability is not existentially disabled (Stankiewicz, 2022, p. 93).

I agree with Stankiewicz that a perfect human being does not exist. A person with a disability is physically or mentally imperfect, maybe more than a person not diagnosed with any. However,

this disability neither deprives nor impairs the very existence, i.e. this dimension of human being that decides on a person's dignity (Stankiewicz, 2022, citing: Chudy, 2002, pp. 113–126).

The author agrees with the view that universal design functions on the border of paradigms (Gawron, 2015, p. 135). It can provoke many controversies as it is not yet well-established in theoretical and empirical research. However, it can be easily noticed that the main tool and aim of the universal design concept is modeling citizens' living conditions, their environment, products and services in the way that respects human rights to freedom and a dignified life.

An example of activities broadening knowledge and developing universal design concepts and skills is a project "Universal design as a space of equal opportunities and accessibility for people with disabilities" realized since 1 June 2020 and financed by the National Centre of Research and Development.

## **Universal design at University**

The Resolution no 102/2018 of the Council of Ministers of 17.07.2018, concerning the government's programme "Accessibility Plus" ("Dostępność Plus") for the years 2018–2025, makes it obligatory to introduce the subject matter of social accessibility into public policy. For instance, the webpage of the Prime Minister's Office (Uchwała..., 2018), informs that it is to constitute the extension of the strategic project "Space for everyone" ("Przestrzeń dla wszystkich"), deriving from the regulations of the international Convention on the Rights of Persons with Disabilities. As the legislator states, about 30% of society members might experience limitations in mobility or perception. This tendency might be growing due to ageing society and low birth rates. That is why adapted solutions should be universal to enhance life quality and independence for all citizens. The

topic of universal design was introduced into the area of Jan Długosz University in Czestochowa in response to the results of the questionnaire conducted among students giving their opinions on the needs, barriers and expectations of people with special needs. The respondents took into account professional functions fulfilled in the future as well as social actions that should reflect current needs of economy, job market and society.

The project was to provide 522 students with support, within the framework of general-academic and practical studying programmes adapted to the needs of contemporary graduates entering the job market. What is more, the support was also given to 10 employees from the teaching staff. After completing their training and learning about the technicalities of the project, developing model solutions and course description cards for selected studying curricula as well as developing lesson plans, the lecturers could share their knowledge and skills with their students, during lectures and workshops devoted to the subject of universal design.

The completed tasks within the framework of the project helped to reach the goals of the Knowledge Education Development Operational Programme (PO WER – Polish acronym) defined for the activities of 3.5 Complex programmes for tertiary education institutions, Axis III (Oś III) Higher education for economy and development, Knowledge Education Development Operational Programme 2014–2020.

The project tasks resulted in broadened knowledge, competencies and social skills among students as far as using the rules of universal design was concerned, especially its practical aspect, taking into account the specificity of particular fields of study, and in enriching teaching skills of the lecturers supported by the European Social Fund within the scope of the educational process. The obtained effects were verified with the help of a survey questionnaire, and obtained certificates were to confirm the results achieved.

The project tasks were realised in several stages. The first stage consisted in teaching staff training and establishing the Universal Design Model Development Team. The Team's task was to develop model solutions for teaching UD and to develop course description cards. They constituted the basis for lesson plans realising the topics of lectures and workshops. What is more, while implementing the project tasks, the participants of the project were equipped with specialist equipment to simulate selected disabilities and tools to organize everyday activities for people with visual impairment. These aids played a significant role, supporting the realization of lesson plans and introduction of UD during workshops.

The next task was to recruit students selected from several faculties, maintaining the equality of chances regardless of one's sex, age and disability. The project activities were organized in such a way so that the project participants

could combine their professional and family life, and so that women were not discriminated, and in case of students coming back to university there was a remedy programme helping them complete the knowledge they lacked.

The subject matter of universal design was introduced into studying curricula as an obligatory subject in second-degree (M.A.) studies, and as a facultative subject in first-degree (B.A.) studies. That is why students were recruited by direct contact with them. Potential participants were informed about the idea of universal design, its role for professional training and their certified participation, important for their future professional practice.

The students showed interest in this new approach (Jówko, 2022, p. 68) and the fact that learning about it lets them obtain competencies in the area concerning social diversity. The students from the following nine faculties participated in the project: Pedagogy, Administration, Economics, Accountancy and Taxes, Law, Dietetics, Human Nutrition and Dietetics, Criminology and Security Systems, English Philology. The studying curricula for universal design were realized according to the established timetable and organized in modules. For B.A. students there were two modules of UD classes. For M.A. students there were three modules.

The first module encompassed the realisation of lecture topics, introducing the subject matter of UD, discussing groups with special needs, among others, people with disabilities, the elderly, pregnant women and children. The students were familiarized with legal acts concerning the topic. They also learned about the institutions and organizations supporting the functioning of people with special needs. They were presented with literature describing the idea of social inclusion referring to selected fields of study.

The second module for first-degree studies and the third module for second-degree studies approached the subject matter of UD from the practical point of view. Lessons were run with the use of simulators of an elderly person and a person with visual impairment. Some classes were realized by experts in care for people with special needs and by experts with disabilities who could discuss lesson topics from the point of view of a person with a certain disability. The topics, among others, touched upon the following subject matters: disability, architectural, digital, ITC and social accessibility, employment conditions and support for people with disabilities, adapting working environment to the needs of people with disabilities, situation of people with disabilities in European Union countries, e-learning and accessibility of academic education. The workshops made use of teaching aids enhancing the process of education. These were, for instance, simulators of an elderly person and a person with visual impairment. They helped to demonstrate everyday activities of people with special needs and their mobility in existing architectural and spatial circumstances.

The level of knowledge and competencies concerning UD was monitored before the classes commenced and after their completion with the help of the research tool, i.e. a survey questionnaire. The analysis of completed survey questionnaires and certificates obtained by the participants of the project confirmed broadened knowledge, competencies and skills concerning architectural, digital, ITC and social accessibility.

## **Conclusion**

Universal design is the philosophy of designing products, services and environment. I agree with the approach of Grzegorz Gawron and Paulina Rojek-Adamek (2022, p. 5) saying that designed reality is not bespoke as such reality does not exist. Yet, the aim of modern design is creating that takes into account cultural, ethnic and physical diversity, and the one that fairly easily adapts projects to surrounding conditions. Design should be socially responsible and consider the necessity of an emphatic approach towards the recipient in order to avoid social exclusion (Gawron, Rojek-Adamek, 2017, p. 6). Thus, design should be treated like a tool for seeking innovative solutions for the users' needs, in each and every dimension: public and private, and both in the social and spatial context. That is why in order to implement the rules of UD, we have to educate our community. As the author remarks, the issue of accessibility is not known among students. The realized projects are good examples of attempts at using universal design practically so that it constitutes the source of many worthy solutions or at least a change in approaching the needs of another person. The project participants see the need of permanent education in the field of universal design. The concept should be discussed and implemented in the educational process at all its levels, especially in higher education. This conviction derives from the diversity of needs of people who start their university education and still a small number of those who acknowledge their disability or dysfunction.

What is more, university graduates are future constructors of our life and the future together with the accessibility of space where we function depends on them. It should be accessible to everyone, regardless of their limitations. Universal design is understanding and identifying one's and someone else's needs. It is striving to intuitively identify our potential. In order to achieve these aims, it is crucial to teach empathy and interpersonal sensitivity. And universal design should be treated like over-disciplinary mental architecture (Perkowska & Bajkowski 2022, p. 11).

## References

- Brown, S. (1999). The curb ramps of Kalamazoo: discovering our unrecorded history. *Disability Studies Quarterly*, 9(3), 203–205.
- Bajkowska, M.M., Perkowski T. (2022). *Projektowanie uniwersalne w przestrzeni uniwersyteckiej – idee, możliwości, dobre praktyki*. Białystok: Wydawnictwo Uniwersytetu w Białymstoku.
- Chudy, W. (2001). Człowiek niepełnosprawny w świetle filozofii. In: P. Mazanek (ed.), *Filozofia i teologia w życiu człowieka* (pp. 113–126). Warszawa: Uniwersytet Kardynała Stefana Wyszyńskiego.
- Gawron, G. (2015). Universal design – projektowanie uniwersalne jako idea w dążeniu do osiągnięcia partycypacji społecznej osób niepełnosprawnych. *Roczniki Nauk Społecznych*, 7(43), 1, 1–9; [http://dx.doi.org/10.18290/rns.2015.7\(43\)](http://dx.doi.org/10.18290/rns.2015.7(43)).
- Gawron, G., Rojek-Adamek, P. (2017). Again in place. Design w obronie wieku. *Kultura Popularna*, 2(52), 4–19; <http://dx.doi.org/10.5604/01.3001.0010.7046>.
- Hansen, A. (2005). Education in Norway – equality, nature and knowledge. In: E. Maagerø, B. Simonsen (eds.), *Norway: society and culture* (p. 135). Kristiansand: Portal.
- Jagiełło-Kowalczyk, M., Tokarski, Ł. (2022), Inspiracje dziedzictwem przyrodniczym i kulturowym w projektowaniu wnętrz. *Housing Environment. Współczesna architektura mieszkaniowa w przestrzeni miasta*, 41, 93–102; <http://dx.doi.org/10.4467/25438700SM.22.033.17156>.
- Jówko, E. (2022). Projektowanie uniwersalne. Innowacja w kształceniu studentów Uniwersytetu Przyrodniczo-Humanistycznego w Siedlcach. *Student Niepełnosprawny. Szkice i Rozprawy*, 22(15), 65–72; <http://dx.doi.org/10.34739/sn.2022.22.06>.
- Jurkowska, A. (2002). Idea projektowania uniwersalnego w planowaniu przestrzennym. *Architectus*, 1(11), 155–158.
- Mace, R.L. (1985). Universal Design. Barrier-Free Environments for Everyone. *Designers West*, 33(1), 147–152.
- Nilsen, S. (2010). Moving towards an educational policy for inclusion? Main reform stages in the development of Norwegian unitary school system. *International Journal of Inclusive Education*, 14(5), 479–497; <https://doi.org/10.1080/13603110802632217>.
- Stankiewicz, T. (2023). Epistemologiczne i antropologiczne aspekty projektowania uniwersalnego. *Paideia*, 5, 89–112.
- Wróblewska, U. (2022). Projektowanie uniwersalne w przestrzeni uniwersyteckiej – idee, możliwości, dobre praktyki. In: M.M. Perkowska, T. Bajkowski (eds.), *Historia amerykańskiego uniwersalnego projektowania w kontekście*



*ludzkich doświadczeń – twórcy, luminarze i propagatorzy idei* (pp. 57–77). Białystok: Wydawnictwo Uniwersytetu w Białymstoku.

Uchwała w sprawie ustanowienia rządowego programu “Dostępność plus” (2018). Online: <https://www.gov.pl/web/premier/uchwala-w-sprawie-ustanowienia-rzadowego-programu-dostepnosc-plus> [Accessed: 20.10.2023].

## **Idea projektowania uniwersalnego w procesie edukacyjnym na uniwersytecie. „Projektowanie uniwersalne przestrzenią równych szans i dostępności dla osób z niepełnosprawnościami”**

### **Streszczenie**

Artykuł traktuje o koncepcji projektowania uniwersalnego w procesie edukacyjnym na uniwersytecie, w kontekście udziału autorki w projekcie pt. „Projektowanie uniwersalne przestrzenią równych szans i dostępności dla osób z niepełnosprawnościami”. W tym celu dokonano przeglądu literatury, omówiono zadania projektowe i odniesiono się do roli idei projektowania uniwersalnego we współczesnej przestrzeni edukacyjnej. Napisano o włączeniu projektowania uniwersalnego do procesu nauczania-uczenia się na uniwersytecie, o inkluzji nauczania oraz dostępności, która jest słowem kluczem dla idei projektowania uniwersalnego. Zakładany cel projektu został osiągnięty. Wykładowcy i studenci nabyli większą świadomość w zakresie dostępności. W ramach realizacji zadań projektowych zapoznano się m.in. z zasadami projektowania uniwersalnego i ich praktycznym wykorzystaniem. Uczestnicy nabyli wiedzę, kompetencje i umiejętności, które pozwolą im na wykorzystanie ich w sferze społecznej, w praktyce zawodowej.

**Słowa kluczowe:** projektowanie uniwersalne, dostępność, inkluzja, kompetencje, umiejętności.