

BARBARA ŚWIT-JANKOWSKA<sup>1</sup>

## TRADITION AND MODERNITY IN SPACES DEDICATED TO EDUCATION

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### TRADYCJA I NOWOCZESNOŚĆ W PRZESTRZENIACH DEDYKOWANYCH EDUKACJI

#### Abstract

Education spaces have been present in our culture since its inception, although they often played their role in an unofficial way. The key element of the education process was “the meeting” – whose background could be a garden, street, square or building. Specific types of rooms were formed with the gradual formalization of general education and despite the changes that have taken place over the centuries (in lifestyle, science, architecture, construction, etc.) this space has been disturbingly little modified to this day. The article discusses layouts of classrooms, emphasizing the role of tradition as an element shaping the interior of modern classes and indicating new, alternative solutions in which space is no longer a background but becomes an active element of the education process.

*Keywords: Architectural education, educational space, school's architecture*

#### Streszczenie

Przestrzenie edukacyjne są obecne w naszej kulturze od samego początku, choć często odgrywały swoją rolę w nieoficjalny sposób. Kluczowym elementem procesu edukacji było „spotkanie” – którego tłem może być przypadkowy ogród, ulica, plac lub budynek. Określone typy pomieszczeń powstały dzięki stopniowej formalizacji kształcenia ogólnego i pomimo zmian, które miały miejsce na przestrzeni wieków (w stylu życia, nauki, architektury, budownictwa itp.), przestrzeń ta została niepokojąco mało zmodyfikowana do dnia dzisiejszego. W artykule omówiono układ funkcjonalny sali szkolnej, podkreślając rolę tradycji jako elementu kształtującego wnętrze nowoczesnych klas i wskazującego nowe, alternatywne rozwiązania, w których przestrzeń nie jest już tłem, ale staje się aktywnym elementem procesu edukacji.

*Słowa kluczowe: Edukacja architektoniczna, przestrzeń edukacyjna, architektura szkolna*

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<sup>1</sup> Ph.D. Arch. Barbara Świt-Jankowska, Institute of Architecture, Urban Planning and Heritage Protection, Faculty of Architecture, Poznan University of Technology, barbara.swit-jankowska@put.poznan.pl; ORCID 0000-0003-0683-7584

## 1. INTRODUCTION

Education and its dedicated space have accompanied humanity ever since ancient times. The contemporary right to education is one of the essential rights of man: it is important to the prosperity of both individuals and communities.<sup>2</sup> However, one must remember that, at earlier times, formalized theoretical education was available only to the lucky few. All the others were educated *informally*, in a life-long process involving the formation of attitudes and gaining knowledge based on one's own experience and the educational impact of their environment. Such education was (and continues to be) provided by the whole milieu of an individuals, comprising both the artificial structures such as – the building, the street, town or city, and the natural environment (though its worth noting at this point that the contact of children with wild nature is increasingly limited these days<sup>3</sup>).

In that context, designing places which are dedicated to education is of greater importance and can be perceived as a more general notion, encompassing all forms of architectural design and urban planning. This paper is too short to allow the discussion of all the aspects of the problem. Under the circumstances, the paper will only present the notion of *space dedicated to education* in the context of changes which accompany the growing globalization and the incessant, very rapid technological progress. These changes are the foundation of digital revolution which we are witnessing and which may lead to the emergence of a new image of man – the network man (*homo irretitus*).<sup>4</sup>

## 2. SPACE AND ENVIRONMENT – TERMINOLOGICAL CONSIDERATIONS

The notion of *educational space* is very often come across in the contemporary literature: it is a point of reference to architectural issues but also to such areas of science as pedagogy, sociology or cognitive psychology. It is both conveniently universal and intuitively familiar – like an axiom, which needs no detailed explanation. The very notion of *space* has just become a kind of codeword, which comes handy in describing the various phenomena and which functions successfully in many scientific disciplines. The sense of it is wide and it varies in time: with scientific progress, it acquires some new attributes, tending usually to increase its terminological capacity. When combined with the adjective *educational*, it encompasses nearly all the problems of education and every subject which is connected with education at least to a minimum extent.

The term *educational space* can be explained in many ways, depending on the intention and views of the defining person. As presented in the arts, educational space has a less formal

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<sup>3</sup> There are many children today who have never seen a pig, cow or hen, and who believe that, for instance, the source of products of animal origin is the hypermarket because that is where you buy them.

<sup>4</sup> This term, first used by Janusz Morbitzer, denotes the effect of digital revolution, which is the third revolution – after the invention of writing and then printing – and is changing the world so spectacularly. (J. Morbitzer, *O nowej przestrzeni edukacyjnej w hybrydowym świecie*, Labor et Educatio, 2015, no. 3, p. 412).

image, related to attitudes and processes taking place in the process of education rather than to formal solutions (although the terminology tends to refer to technological sciences): “*structure* ordering social life, social activities (...), based on the system of education and educational activity”<sup>5</sup>, *field* “of educational activities”<sup>6</sup>, or “*area* in which an individual, by mutual interactions, absorbs permanent elements of knowledge, learns how to act and think.”<sup>7</sup>

In technological sciences, *educational space* definitely more often refers to a formal framework being created to provide the appropriate outer conditions during the process of education. That such action is purposeful is emphasized in this paper by the transformation of the above term into the notion of *space dedicated to education*: in it, the key role is that of the designer’s conscious, intentional approach to changing the existing situation into one that is better in the aspect of the didactic process. In this context, the definition is closer to the notion of *educational environment*, which is usually understood as the specific place where all sorts of classes are held (the classroom, school building, library, or museum). On the other hand, one should keep in mind that, in the present times, the sense of the term is often extended to encompass also less material aspects, as indicated in the definitions of some authors, including A. Kozerska – “all the factors – tangible and non-tangible connected with their education, with learning”<sup>8</sup>, and M. Polak – “the educational environment of an individual student may not exist physically but be virtual or online, located hundreds of kilometers away from the place where the teacher is.”<sup>9</sup> The introduction of the *space dedicated to education* helps focus our attention to the problems of creation, and to encompass both the aspects of physical space – here and now – and that of a non-physical or virtual space, extending beyond the conventional understanding of the world.

### 3. TRADITION, CONTINUATION (COPYING), AVANT-GARDE

The tradition of designing places which are dedicated to education goes back to very distant times: evidence that schools were organized as early as around the third millennium B.C., was first found in Mesopotamia. Those schools provided education to future scribes (cuneiform writing) and the places of their education tended to become culture and scientific centers. Owing to archeological discoveries, parts of the schoolrooms with parallel rows of benches for two, three or four students have been reconstructed. First schools were also established in ancient Egypt around those times: in all probability, teaching was provided in buildings which had not been built specifically for the purpose: the youngest students had

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<sup>5</sup> I. Surina, *Rozważania o przestrzeni edukacyjnej – od teorii do praktyki edukacyjnej* [in:] I. Surina (ed.) *Przestrzeń edukacyjna wobec wyzwań i oczekiwań społecznych*, Oficyna Wydawnicza Impuls, Kraków 2010, p. 14.

<sup>6</sup> B. Dudel, M. Głowska-Sołdatow, *Współczesna przestrzeń edukacyjna uczniów klas młodszych* [in:] J. Izdebska, J. Szymanowska (ed.) *Wielowymiarowość przestrzeni życia współczesnego dziecka*, Trans Humana Wydawnictwo Uniwersyteckie, Białystok, 2009.

<sup>7</sup> S. Juszczak [et al.], *Dydaktyka informatyki i technologii informacyjnej*, Wydawnictwo A. Marszałek, Toruń 2006, p. 16.

<sup>8</sup> A. Kozerska, *Obiektywne środowisko edukacyjne seniorów w Polsce*, Edukacja Dorosłych, 2013, no. 2.

<sup>9</sup> M. Polak, *Odpowiednie środowisko edukacyjne wpływa na jakość i wyniki edukacji*, edunews.pl, 28.04.2009, source: <https://www.edunews.pl/nowoczesna-edukacja/innowacje-w-edukacji/715-odpowiednie-srodowisko-edukacyjne-wplywa-na-jakosc-i-wyniki-edukacji> (access: 24.06.2019).

their classes outdoor whereas their elder schoolmates continued their education in military or temple schools. The main role of the school was to prepare the students to do practical jobs. Learning was a process based on severe discipline, physical punishment, and the memorization of directly communicated information.<sup>10</sup>

The European culture and tradition of education stem principally from the pedagogical experience of ancient Greeks, Romans and Christians. Plato was the first to introduce a coherent educational system which included also the youngest students (gardens for children). The Hellenist period saw the development of collective teaching addressed to groups of students, writing schoolbooks, teaching aids, and libraries. The typical forms of school life, such as classes or exams, were worked out in those times. The classrooms were equipped very simply, with – the teacher’s desk (*thronos*) and stools for the students (holding their wax tablets on their knees).<sup>11</sup>

Over the next centuries, education was monopolized by the Christian Church providing education in cathedral or monastic or parish schools. How well the schools were equipped depended on the generosity of the guardians, though just some indispensable items – such as the table and benches along the walls – were sufficient; in many a poor parish school, the children would be sitting on a handful of straw tossed onto the ground. The first urban schools, maintained by the town halls, were established in the 13th century. The students worked in forms, or age groups – adequate to their level of education – but were usually gathered in a single room, divided into sectors. Even though, early in the 15th century, each group had a dedicated teacher, the students were still taught in the same room. Some time later each group was given a separate room – the archetype of the contemporary classroom. The schoolroom was equipped with simple, indispensable items, and teaching was based on the memorization of the acquired knowledge.

Only the Renaissance noticed the *child* and the problem of proper education. The Jesuit schools, which were first established in those times, were the model of the school architecture of that era: modern, convenient buildings with plenty of light, wide halls and classrooms and with space for sports.

The next centuries would bring new solutions and educational concepts. A great variety of educational concepts were developed in the Age of Enlightenment and in modern times. Institutionalized education has gradually started to be compulsory since the 18th century. However, the basic concept of educational space remained the same as before – the central element being the classroom equipped with a greater or smaller number of items and provided with additional space for physical recreation. Although a few new educational concepts which were developed at the turn of the 20th century (Rudolf Steiner, Maria Montessori, Loris Malaguzzi) admitted the importance of a properly designed space to the didactic process, the dominant trend remained unaffected. The structure of the classroom remained very similar to that in Mesopotamia – the stable, constant, unvarying space composed of the teacher’s desk and the bench rows facing the blackboard.

Some of the schools being built in these times attempt not to copy that standard. But even though they may have a modern structural form, comprise highly esthetic details with carefully selected finishing materials or wall colors, they continue to copy the same, centuries-old

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<sup>10</sup> P. Mazur P., *Zarys historii szkoły*, Wyższa Szkoła Ekonomii, Turystyki i Nauk Społecznych w Kielcach, Kielce-Myślenice 2012.

<sup>11</sup> *Ibidem*.

standard – the line of classrooms along a long hall. Once built, schools are rarely modified at all and if they are, their spatial arrangement remains virtually unchanged.

The classroom remains the most important space in educational environments – all the same, it is a place of which the functional layout has been least modified over time. Then again, the classroom is a specific microcosm – a center of informal education, also of that related to space. It ought to be flexible and adaptable to the changing educational needs of children. Only very rarely is the permanently copied standard enhanced with latest technology such as interactive whiteboards or image projectors; sometimes, the children are given separate cabinets for their personal belongings as part of personalization measures and early-education students get colorful flooring for a fragment of their classroom.

Also worth noting are some more avant-garde ideas which are present in designing the space dedicated to education – such as forest schools, where the very necessity of the existence of a school building is questioned. Although the concept has successfully worked for a few decades in Scandinavia, Japan, Switzerland, Germany, UK, USA and Canada – in Poland it is still regarded as a new idea. Forest schools have been defined as an “inspiring process which offers children, youth or even adults an opportunity to grow more self-confident and develop self worth by self-studying in a forest environment.”<sup>12</sup> Another example of a non-standard approach can be the concept of elimination from the school space of its characteristic attributes: the school bells, division into forms, the school benches – these are not found in schools based on Steiner’s or Montessori’s philosophy, in democratic schools it is the child who chooses how and when he or she is going to learn. In theory, these solutions ought to have an effect on the functional layout of rooms and on their equipment; in practice – often, there are only minor differences between conventional layouts. This usually results from the fact that building a new school is a much more costly solution than the adaptation of existing buildings, so the latter option usually prevails.

#### 4. MODERN SOLUTIONS

In the contemporary world, it is not possible to effectively teach young people in a space which was designed for conditions, established in pre-IT revolution times. Technological progress has made some cracks in the foundations of the previous systems of education, which were based on individuals having a specific theoretical knowledge. At present, an unlimited volume of information is accessible nearly instantly, and the major problem is to move skillfully from one set of data to another, to search effectively the Internet resources and be creative in their interpretation. The notion of *spaces dedicated to education* requires a thorough verification and reevaluation so they can satisfy the requirements of the next generations. They ought to combine what is the best in conventional teaching with the opportunities offered by the 21st century. The educational environment framework must flexibly support the teaching process. The results of research works being carried out in various parts of the world indicate that there is a clear relationship between designing educational spaces and the outcome of teaching – the school space ought to enable the school community to act in conformity with the principles of new pedagogy, based on cooperation, sustainable development, and fitting to the needs of individual students.

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<sup>12</sup> Forest Education Initiative, <https://www.forestschools.com> (access: 24.06.2019).

The creation of a new *space dedicated to education* (the term *school architecture* tends to limit the issue) ought to involve active contribution from both students and teachers, and to provide them with a friendly work environment, a freedom to learn and seek one's own ways. To repeat the words of J. A. Lackney<sup>13</sup>, the design of a modern school ought to encompass, among other things, the maximization of cooperation in planning and designing, and the introduction of management solutions for handling the available resources at school, to support the students' activities. Schools ought not to grow too big for the child's emotional comfort; rather than that, they ought to become learning centers, submerged in the local community and customs (this involves the contexts of landscape, culture and history). As in the pedagogy of Loris Malaguzzi, a kindergarten or school tends to reflect the local community and the basis to be copied from in designing is the spatial structure of a student's typical surroundings – home, street or town. In Poland, in the overcrowded schools built in 1960's to commemorate the millennium of the Polish state, the children's right to quietness and safety, right to be different, right to privacy and freedom to take decisions have been violated for many years, and artificial divisions into age groups prevented the younger students from benefiting from their elder schoolmates. Designing a modern space dedicated to education ought to attenuate these problems by offering every individual a private space (*home base*), enclaves of peacefulness, direct contact with nature on the one hand, and also a space to be shared with others, which enables the sharing of one's knowledge, experience, teaching aids, and a free exchange of opinions.

We are witnessing a change in the role of the teacher in the didactic process – once the alienated master standing behind his or her desk and having all the available knowledge – is becoming an active organizer of educational situations, an architect of the educational environment, animator, guide, advisor; this change ought to be reflected also in architecture. Space ought to support the teacher's actions, be a source of active educational impulses, be multidimensional and dynamic – in contrast to the existing structures, which are stable and uniform. In practice, this involves the creation of opportunities for cooperation and interaction between the teachers and the students, as well as the making available of contents, objects, equipment, and technology.

The appropriate introduction of new technology into the teaching process is a tremendously important aspect of designing. The contemporary children, according to U. Eco, are a *generation of aliens*<sup>14</sup> – young Europeans have not experienced wars or diseases which decimated their grandparents' generations, they are living in an overcrowded world dominated by the urban landscape, nature is orderly and not dangerous, they are communicating through social media, have daily contact with a various human races, cultures, and sexual behaviors. Their perception and ability to concentrate have changed observably over last twenty years. In this context, the introduction of new technology in the teaching process is causing a justified fear that classical upbringing will be further “degraded”. On the other hand, dissimilarity is a feature of every generation, as noted by Socrates in his description of his contemporary younger generation of 2,500 years ago: “Our youth today is strongly longing for luxury, has bad manners, contempt for power and authority, no respect for the elderly. They would rather deal with rubbish than learn.”

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<sup>13</sup> J. A. Lackney, *History of the Schoolhouse in the USA* [in:] R. Walden (ed.) *Schools for the Future. Design Proposals from Architectural Psychology*, Springer Fachmedien Wiesbaden 2015.

<sup>14</sup> U. Eco, *Pape Satan aleppe. Kroniki plynngo społeczeństwa*, Rebis, Poznań 2016, p. 72.

There are many interesting technological solutions nowadays which, when applied skillfully, could support one's growth without deprecating the conventional ways of acquiring knowledge. Unfortunately, the introduction of new technology in schools tends to be limited to fixing an interactive whiteboard, arranging for a computer room, or providing free access to the Internet. Modern educational space – physical and virtual – ought to be intertwined so as to form a safe environment, which is suitable for the students' needs. The real benefits of technology can be used by supporting cognitive development with the VR technology or by following the students' interests and using their involvement in the joint creation of community projects, such as in the British educational project *Fountaneers*, in which the school community designed an "intelligent" fountain responding to the students' needs. In addition to the real benefits of the fountain's operation, the teachers emphasized the benefits of the collaborative approach to teaching and learning through participation, cooperation and practical activities.

In a world that has been dominated by individualism and social media, building links between the virtual and real worlds may soon become one of the main tasks of the spaces dedicated to education. Although no school is able to satisfy all the needs of its students, it can still create a space with opportunities which will be a starting point for further educational activities, for practicing creativity and for learning about oneself. Direct interpersonal contacts may only be supported by providing the students with such external conditions in which the return to the real world will be a pleasure expected by all, an opportunity to be together in a suitably designed place, rather than a unpleasant necessity, controlled with the sharp sound of the school bell just before a lesson.

Instead of the final section: „The principle of slavery still pervades pedagogy, and therefore, the same principle pervades the school. I need only give one proof – the stationary desks and chairs.” Maria Montessori.<sup>15</sup>

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**Author's note:**

An academic teacher, researcher and practicing architect. Graduated in architecture at the Poznan University of Technology. She completed MSc. degree (2001) and Ph.D. (2008) in architecture at the Faculty of Architecture Poznan University of Technology, where she lectures from 2003 in the Division of History of Architecture and Urban Planning. Her interests in teaching include the history of nineteenth – and twentieth-century architecture, theoretical subjects, and modernization of historical buildings and spaces. She is an author of several articles on the role of lighting in architecture and the importance of architectural education for the quality of the surrounding space. As an architect, she is focused on designing interiors in such spaces as houses, offices and pre-schools. In association with Projektornia.pl (a small architectural practice, based in Poznan) she has designed several houses and kindergarten.