

POST-COVID SCHOOL

Development opportunities for schools as a result of the coronavirus

DLA dissertation, Budapest University of Technology and Economics Doctoral
School of Architecture - T H E S E S

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ABSTRACT

Educational institutions (nurseries, kindergartens, schools) are an important arena for education, socialization and nursing, as children and young people spend most of their time in these places from an early age to adulthood. That is why the quality architectural design of educational spaces is a complex task, as well-designed school spaces can help with educational processes and the integration of curricula.

The Covid19 virus, which also reached Hungary in 2020, not only covered the usual way of life, but also transformed the use of buildings and spaces. The rhythm and use of space of both homes and schools have changed. This period has also made it clear how narrow the line between school and home is. The search for a sense of security arising from cosiness has become prominent in these uncertain times; a positive sense of home as a base point can provide a sense of security whose search for effective use of school can provide support for both the coronavirus and beyond period. However, due to the wide range of educational institutions and the different age groups of users, we cannot talk about a uniform design and solution option. In my dissertation, it is important to take into account the possibility of designing the space in different types of institutions according to the age peculiarity.

This age will not pass without a trace, bringing with it a long-term change and rethinking of these spaces. In my dissertation, I try to look for answers based on my own criteria, for which I use both architectural and environmental psychological systems. Based on these, focus points and keywords developed for each type of institution along - such as the safe place in the nursery, the free (movement) space in the kindergarten, the individual space requirement in the primary school, the free space personation in the grammar school, or the private space in higher education institutions - which I outline solutions. Based on this, in my thesis, according to the ages, I deal with the reception spaces in the case of nurseries, the use of the yard and outdoor space in kindergartens, the student houses in the case of elementary schools, participation as a design attitude in secondary schools comes to the fore, while in higher education institutions I focus on the use of private space. The coronavirus continues even while the dissertation is being written, perhaps it is already coming to an end. Due to the continuous changes and uncertainties, the dissertation does not seek to reveal the complete solution, it outlines possibilities and ideas with open questions left for further reflection. At the same time, it is also important that regardless of the coronavirus, the aspects raised should be considered as the focal aspects of a complex context, which induced changes that had already started before the virus case, and can be useful advice for dealing with the changed life situation.



- Reception area of Idesüss! Kindergarten and Nursery. Source: DIMITRIJEVIC Tijana: Köztelhasználat mint antiszegregációs eszköz. DLA dissertation, 2018.

1 THESIS: ABOUT THE RECEPTION AREAS

Reception areas of nurseries must be treated with special attention and sensitivity. Physical and emotional safety should be implemented: this is the space of separation and meeting, it is important to increase the sense of cosiness, but in addition, it must also deal with the stricter health regulations.

In the nursery school, the child is forced to be separated for the first time from the mother, the parents, and the home, who provided security until then. This separation takes place locally in the reception area of the building. That is why, from an architectural point of view, it is important to pay attention to this space, especially in the period of the coronavirus:

- friendly, cosiness design: welcoming external building design, use of warm colors, children's scale equipment
- hygienic conditions: creation of hand washing and diaper changing facilities also in reception areas
- safe, inspiring and maintainable yard design can help create a stress-free environment even during the pandemic.



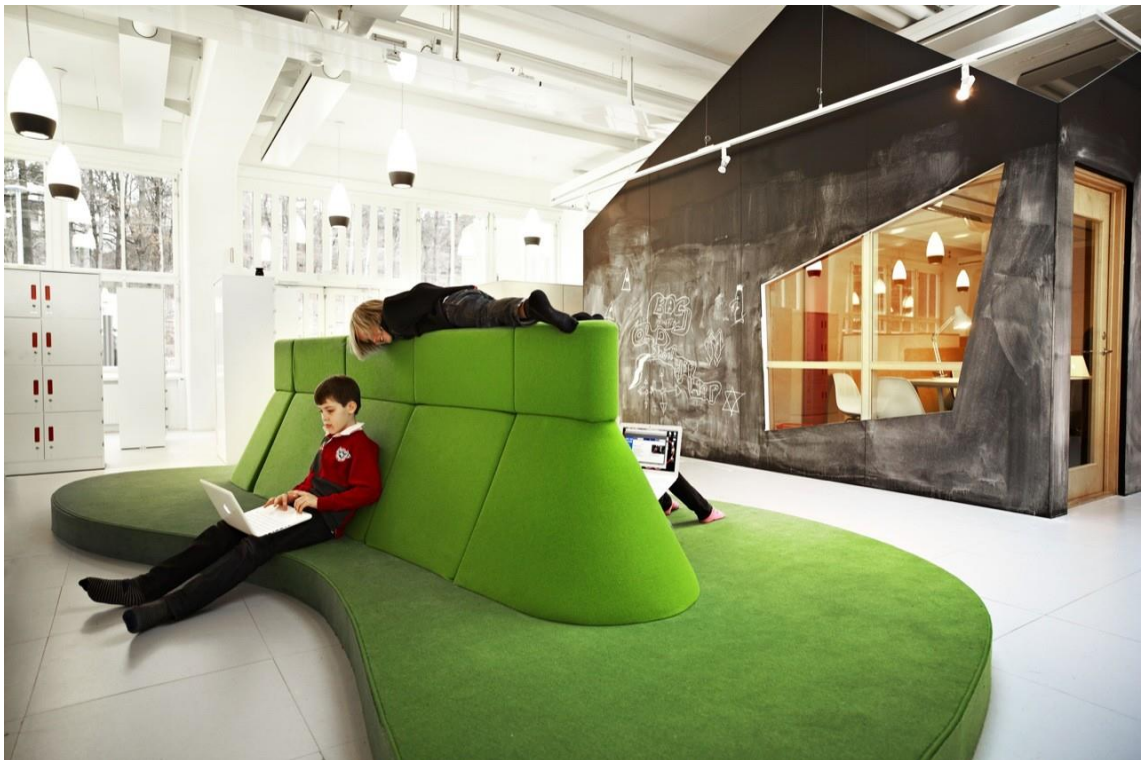
- Mesés kert Kindergarten (Csaba Nagy, Károly Pólus - Archikon Architect's Office): Roof terrace.
Photo: Zsuzsanna Benyovszky-Géczi

2 THESIS: ABOUT YARD USE

The open air, the outdoors, and the use of the yard have significantly increased in value during the coronavirus. For all types of buildings, the proper design and use of these spaces, the optimal location, size, and space connections must be strived for.

The use of yards and open spaces is important at all ages, but from an age point of view, it is significant for preschoolers, due to the development of motor development. The stress-free interior spaces of kindergartens that help free movement and the courtyards and transitional space that allow you to stay in the open air are especially useful during the epidemic, since physical distancing is not possible in this age group. From an architectural point of view, it is worth highlighting these parts of the space when planning:

- creation of spaces of appropriate size, free from material congestion
- clean (interior) architectural tools and soft color use
- comfortable transitional spaces, which allow outdoor classes even in a wider weather interval
- appropriately sized yards, inspiring, well-maintained and safe facilities can be used to promote a suitable, stress-free and homely environment for the little ones, even during the coronavirus.



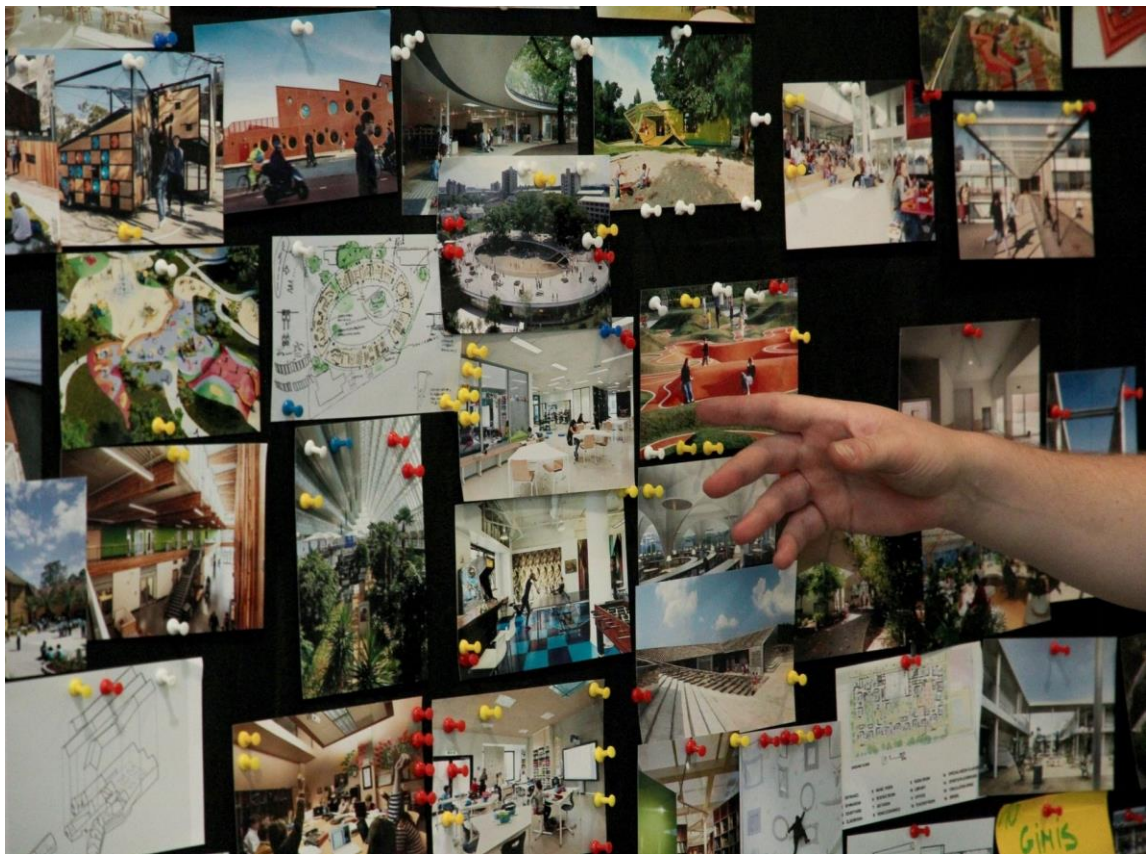
▪ Indoor space of the Vittra Telefonplan School. Source: <https://www.archdaily.com/202358/vittra-telefonplan-rosan-bosch> (Last download: 2021. 03. 30.)

3 THESIS: ABOUT THE LEARNING HOUSES

Reform pedagogic trends show a favorable direction in the design of educational spaces as well. With the strengthening of the role of the learning houses, small group education is completed, the cosiness atmosphere can be enhanced, and compliance with the epidemiological regulations is more favorable.

Primary schools are used by children at several age stages. That is why its variability is important so that all age groups can use it properly. At the same time, it is at this age that one's own identity begins to form, in addition to the stress that can occur with learning, the uncertainty of the coronavirus can also cause difficulties. Learning houses can be a comprehensive solution to all of these:

- spaces suitable for small group education provide the opportunity to keep the appropriate distance
- its flowing, innovative and inspiring solution can have a motivating effect on the integration of the curriculum
- its design with noticeable functionality in its layout makes its spaces cosy, which can reduce the stress caused by learning and the coronavirus.



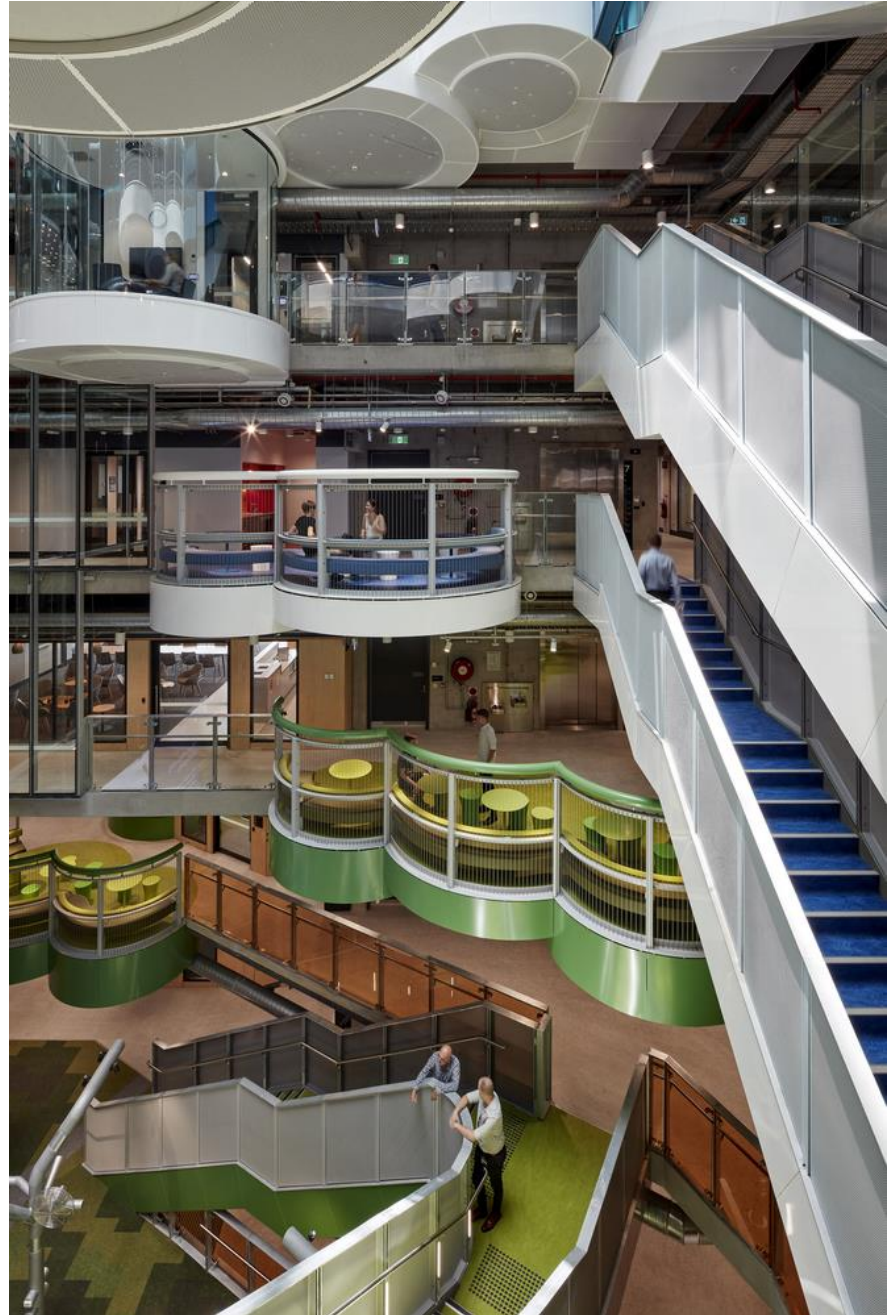
- Preference test using school photos and drawing angles when designing the Piarist School Center in Mosonmagyaróvár. Source: <https://epiteszforum.hu/scholae-piae-mosonmagyarovari-piarista-iskolakozpont-terve> (Last download: 2021. 03. 28.)

4 THESIS: ABOUT PARTICIPATION

Involving adolescent students in the shaping of their environment, taking individual needs into account, and including cosiness examples can greatly help the integration of knowledge and socialization.

In the case of high schools, from an architectural point of view, in addition to spatial design that enables differentiated use of space, taking into account the search for identity and finding an individual voice, the participation and involvement of students as an architectural attitude can be a solution to the closedness characteristic of the age group:

- The possibility of using larger (community) spaces and outdoor spaces in small groups can help teenagers to retreat, and can also be a useful space planning solution during the coronavirus period.
The involvement of students in the shaping of their environment can help in the management of learning difficulties and the stress caused by the pandemic, in addition to the search for identity typical of the age group.



▪ Interior organization of the new building of Andrew N. Liveris University.
Source: https://www.archdaily.com/990954/university-of-queensland-andrew-n-liveris-building-lyons-plus-m3architecture?ad_source=search&ad_medium=projects_tab
(Last download: 2022. 11. 03.)

5 THESIS: ABOUT THE SINGLE-PERSON STUDY CABINS

Primarily in university and in the world of large space workplaces, the creation of small or one-person workplaces appeared as a new demand. This process was greatly accelerated by the pandemic. A spatial structure that is successful in protecting against the virus also increases the sense of cosiness.

The universities is located on the border between the school and the workplace: no longer children go here. However, the crowded spaces of large buildings are difficult to use during the coronavirus period:

- taking into account the needs of the age group, the design of study booths or workstations that allow the use of small groups and private space
- separating spaces with large numbers of people into spaces suitable for retreats, creating study corners and cozy islands of silence can be a solution even during the coronavirus.

MASTERWORK: FAMILY HOUSE IN THE DÓZSA GYÖRGY STREET



- Street facade. Photo: Zsuzsanna Benyovszky-Géczi

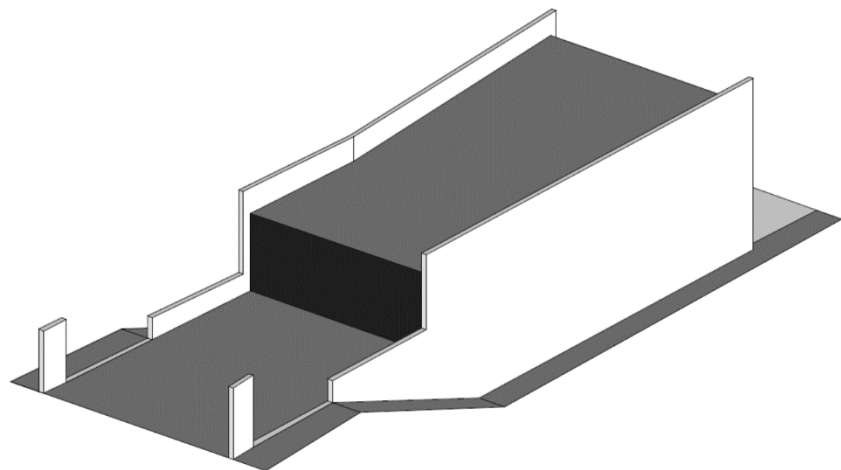
I was given the unique opportunity to design my own first independent family house for our family. The endlessly struggling but exciting and instructive process that has been going on for five years is slowly coming to the end, we are occupying our new home designed entirely for our own needs.

The building is a detached, single-family residential building. The plot is long and narrow, with the smallest freestanding plot width, with the smallest free-standing plot width, so the building was designed to take advantage of the full width of the site by drawing a three-metre side garden along the side boundary lines. These sidewalls, rising to the attic — which continue as retaining walls, edging, and then a gate pillar — shaped the mass of the building and gave its character. Between these walls are the dark-colored short-side facade walls of the street and garden. The positioning of the house was determined by the size of the front garden, allowing the maximum green courtyard to remain at the rear. The original vegetation, the trees, were preserved almost entirely, although the two almond trees on the street front posed a serious challenge because of the fence.



- The unique structure of the neighborhood. Photo: Zsuzsanna Benyovszky-Géczi

The building has a flat roof, which will later function as a roof terrace. A green roof is planned for the next phase, which will also help the microclimate of the building and reduce its ecological footprint. The lush green of the roof and the courtyard will complete the overall view of the house, therefore I have chosen the white and the anthracite plaster — containing granite and glass grains — as a clear background for the green plants. Plaster glistening is changing by the path of the light, is reminiscent of the "mirror houses" of my childhood in the countryside. (In many places in my childhood I saw houses with tiny mirrors in their plaster that glistened in the sunlight. It was a special, defining experience.)



- Axonometry. Source: Zsuzsanna Benyovszky-Géczi



- The first-floor entrance of the mass of buildings arranged on the line of the plot.
Photo: Zsuzsanna Benyovszky-Géczi

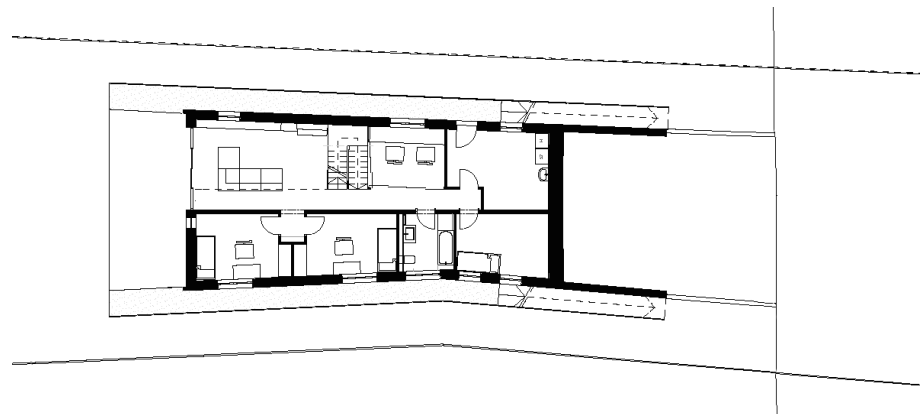


- Courtyard facade. Photo: Zsuzsanna Benyovszky-Géczi

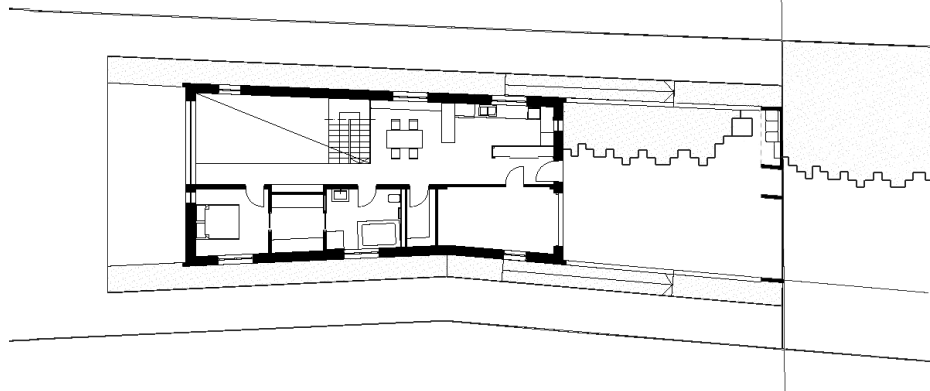


▪ Courtyard façade in the evening. Photo: Zsuzsanna Benyovszky-Géczi

The house has been divided into public and private functions with a longitudinal wall, which is running through the building. The narrower, south-east-facing lane accommodates private functions such as bedrooms and bathrooms, and the wider lane contains communal spaces: the kitchen, dining room, living room, and working area. It was important for everyone to have their own retreating, personal space, while at the same time the central community spaces are connecting everyone, which can be good and enjoyable spaces for family life. Due to the slope of the plot, the entrance is in the upstairs. The garage, entrance hall, kitchen, dining room, pantry, bathroom, walk-in wardrobe and parents' bedroom are located here. On the ground floor there are children's rooms, a bathroom, a guest room, engineering, a working room and a living room. In the next phase, the terrace will get a light pergola, so it will function as a second kitchen, as a living room, as a transitional space between the interior and the courtyard.



▪ Ground floor. Source: Zsuzsanna Benyovszky-Géczi



▪ First floor. Source: Zsuzsanna Benyovszky-Géczi

The living room was designed to be the centre of family life. Its double height, not only provides a horizontal link between the communal functions and the private spaces, as well as a direct connection with the terrace and the courtyard, but also establishes a vertical connection with the upstairs spaces. Due to the minimization of traffic and the narrowness of the house, the corridors form part of the premises of the public spaces, as a hidden passageway. They are accessed by doors that close uniformly in a plane of the longitudinal wall. Entering through the front door, the house opens up: from the entrance hall to the end of the courtyard through the glass walls of the living room. Thus, although the living room is one level down, the transparency and natural "pull" of the communal area make it the dominant and favoured space of the house. From here, the whole house is visible and easily accessible. For clarity, glass barriers have been installed at the open staircase, which acts as a natural divider in the space, and at the upstairs corridor.



▪ Livingroom. Photo: Zsuzsanna Benyovszky-Géczi



- From the entrance to the end of the house and the staircase. Photo: Zsuzsanna Benyovszky-Géczi



- Kitchen and the bathroom-wardrobe-main bedroom on the first floor. Photo: Zsuzsanna Benyovszky-Géczi

CURRICULUM VITAE



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STUDIES

- 2016-2018 Absolutory - Budapest University of Technology and Economics Doctoral School of Architecture
- 2008-2014 Architectural engineering diploma - BME, Faculty of Architecture
- 2005-2009 Teacher's diploma in drawing and visual communication - EKF, Faculty of Humanities

PROFESSIONAL EXPERIENCE

- 2015-2021 Practical training (Project Design, Public Building Design 2) a BME Department of Public Building Design
- 2016 Architectural drawing and design at SchM Studio Kft.
- leader architect: Zoltán Schrammel
- 2015 Mentor, Public Administration Scholarship Program for Higher Education Students with Disabilities
- 2015- Architecture and Strategic Department of the State Secretariat for Architecture and Construction, architectural consultant
- 2014-2015 Architectural drawing and design at Wéber Architect's Office Kft.
- leader architect: József Wéber
- 2013 Fine arts education at the Múzsák Elementary Art School, Ócsa
- 2012-2013 Fine arts education at II. Rákóczi Ferenc Primary School, Dabas
- 2011 Architectural drawing and design at Tamás Karácsony DLA architect
- 2010- Fine arts private education (hand drawing, planning, representational geometry, admission preparation)

- 2010 Architectural drawing and design at Földes és Társai Architect's Office Kft.
- leader architect: László Földes
- 2009 Architectural drawing and design at Narmer Architect's Studio
- leader architect: Zsolt Vasáros DLA
- 2009 Visual art education for Éva Janikovszky Elementary School and High School,
Budapest

IMPORTANT WORKS

- 2018-2021 Family house in the Dózsa György street, Budapest
- 2016 Semmelweis University Faculty of Health Sciences – design contest, Budapest
(leader architect: Zoltán Schrammel, co-workers: Gyula Grédics, Zsuzsanna Géczi, Rasoul Daryanavard, Liang Shui, Olivier Keseru)
- 2015 National Architecture Policy (Prime Minister's Office for Architecture
Construction Deputy State Secretariat with the Architect's Round Table, led by Ervin Nagy, and prepared with the cooperation of Csaba Bodonyi DLA. Contributed: Zsolt Füleky deputy State Secretary, András Katona head of department, Bence Balogh, Viktória Baloghné Simon, Cecília Abigél Bartos, Ágnes Bendsák, Tibor Bodnár, Márton Dauner, Zsuzsanna Géczi, Imola Emese Horváth, József Kolossa DLA, Ferenc Pálfalvi, Miklós Riedel, Levente Sütő, Zoltán Szij, Sarolta Sztankovics, Gergely Tarnai, dr. Enikő Vörösmarty-Molnár)
- 2014 Stadium MTK, Budapest – invitational design contest, 4th place
(leader architects: ACW Consortium: Zsófia Csomay, Miklós Heppes, István Koczka, József Wéber, co-workers: Mária Balog, Zsuzsanna Géczi, Máté Fülöp, Mátyás Magyarai)
- 2014 Community House in Újpalota, Budapest – design contest
(leader architect: Wéber Architect's Office: József Wéber, co-workers: Mária Balog, Zsuzsanna Géczi, Máté Fülöp)
- 2014 Design of family house in Liszt Ferenc Street, Budapest (leader architect: Wéber Architect's Office: József Wéber, co-workers: Mária Balog, Zsuzsanna Géczi, Máté Fülöp)
- 2012-2015 Transformation and expansion of Sapientia University, Csíkszereda, Romania
(leader architect: Wéber Architect's Office: József Wéber, XYZ Architect's Studio: Veronika B. Szabó, co-workers: Mária Balog, Ágnes Drabant, László Francsics, Máté Fülöp, Zsuzsanna Géczi, Attila Kurucz, Barbara Óri)

EXHIBITIONS

- 2018 Book presentation: Továbbépítés és újrahasznosítás, Fuga, Budapest
- 2017 Book presentation: Építészet és idő. A 60-as és 70-es évek magyarországi építészetének örökségéről. Fuga, Budapest

| | |
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| 2013 | Artist colony, Bábolna |
| 2012 | Artist colony, Ócsa Winter exhibition, Ócsa LÉTra Group exhibition, Vác |
| 2011 | Delivery of a relief monument, Vay Miklós Vocational School, Sárospatak LÉTra Group exhibition, Menta Terasz, Budapest |
| 2009 | Film presentation, Tűzraktér, Budapest |
| 2007 | Lithographic workshop, Miskolc Exhibition, Eszterházy Károly College Lyceum, Eger Exhibition, Kis Zsinagóga Gallery, Eger |
| 2006 | SANYA Graphics camp, Sárospatak |
| 2005 | Group exhibition, Hungarian Museum of Fine Arts, Budapest |
| 2004-2006 | ART ÉRT Free School of Fine Arts, Sárospatak |

PUBLICATIONS

| | |
|------|---|
| 2021 | BENYOVSZKY-GÉCZI Zsuzsanna: A nevelési központok koncepciója Jeney Lajos munkássága alapján. In: Dúll Andrea, Somogyi Krisztina, Tamáska Máté (szerk.): <i>Iskolaépítéset Magyarországon. Örökség és megújulás</i> . Martin Opitz Kiadó, 2021, 161-182. |
| 2021 | BENYOVSZKY-GÉCZI Zsuzsanna: Az óvodai udvarok és játszótérek kiemelt szerepe. <i>Építészfórum</i> , 2021. https://epiteszforum.hu/az-ovodai-udvarok-es-jatszoterek-kiemeltszerepe?fbclid=IwAR1IH2rbmzP9RJQTNIIgbyRxs5Q4wwiZuc33xvLQLs22FWIT05PTtUa1jyU |
| 2021 | BENYOVSZKY-GÉCZI Zsuzsanna: Otthon az egykori nyaralótelepen. <i>Építészfórum</i> , 2021. http://epiteszforum.hu/otthon-az-egykori-nyaralotelepen?fbclid=IwAR2frXdPNWpX_UTy93yAzxnWlcX-VB43773zDkn0u4saL5wALmeIU52SUNs |
| 2018 | BENYOVSZKY-GÉCZI Zsuzsanna: Felsőoktatási intézmények terei és rehabilitációjuk lehetőségei. In: Kerékgyártó Béla – Szabó Levente: <i>Továbbépítés és újrahaznosítás</i> . BME Építőművészeti Doktori Iskola, 2018, 216-231. |
| 2018 | BENYOVSZKY-GÉCZI Zsuzsanna: A budapesti Piarista Gimnázium és a piarista rend újabb rehabilitációja. In: Kerékgyártó Béla – Szabó Levente: <i>Továbbépítés és újrahaznosítás</i> . BME Építőművészeti Doktori Iskola, 2018, 232-237. |
| 2018 | BENYOVSZKY-GÉCZI Zsuzsanna – KOVÁCS Dávid – KOVÁCS Károly Lehel: A Síp utca és az Egyház utca közötti terület. In: Kerékgyártó Béla – Szabó Levente: <i>Továbbépítés és újrahaznosítás</i> . BME Építőművészeti Doktori Iskola, 2018, 282-283. |

- 2018 BENYOVSZKY-GÉCZI Zsuzsanna – KOVÁCS Dávid – KOVÁCS Károly Lehel:
Bessenyei tér. In: Kerékgyártó Béla – Szabó Levente: *Továbbépítés és újrahaznosítás*.
BME Építőművészeti Doktori Iskola, 2018, 280-281.
- 2017 GÉCZI Zsuzsanna: Nevelési központok elméletben és gyakorlatban. Jeney Lajos
kutatásai. In: Kerékgyártó Béla – Szabó Levente: *Építészet és idő. A 60-as és 70-es
évek magyarországi építészetének örökségéről*. BME Építőművészeti Doktori Iskola,
2017, 130-145.
- 2017 GÉCZI Zsuzsanna: Mai szemmel: Nevelési Központ, Kecel. *Metszet*, 2017/5, 15.
- 2017 GÉCZI Zsuzsanna: A háború utáni magyar iskolaépítéséről. In: Kerékgyártó Béla –
Szabó Levente: *Építészet és idő. A 60-as és 70-es évek magyarországi építészetének
örökségéről*. BME Építőművészeti Doktori Iskola, 2017, 148-151.
- 2017 GÉCZI Zsuzsanna – HURTÁK Gabriella: CLUB ALIGA. Közösségi házból nevelési
központ kialakítása Montessori-iskolával. In: Kerékgyártó Béla – Szabó Levente:
Építészet és idő. A 60-as és 70-es évek magyarországi építészetének örökségéről.
BME Építőművészeti Doktori Iskola, 2017, 122-129.
- 2016 GÉCZI Zsuzsanna: Téri nevelés az alapképzésben. *Építészfórum*, 2016.
<http://epiteszforum.hu/teri-neveles-az-alapkepzesben>
- 2016 GÉCZI Zsuzsanna: Művészetterápiás- és fejlesztő központ a Normafán.
Építészfórum, 2016. <http://epiteszforum.hu/muveszetterapias-es-fejlesztzo-kozpont-a-normafan>

LANGUAGE KNOWLEDGE

| | |
|---------|--|
| English | Intermediate "C" type internationally and state-recognized language exam |
| French | Intermediate "C" type state-recognized language exam |
| Spanish | Beginner level |



2023