

EDUCATION THROUGH LANDSCAPE – CHALLENGES IN SCIENCE COMMUNICATION AND ECOTURISM

OKTATÁS TÁJJAL - KIHÍVÁSOK A TUDOMÁNYKÖZMUNIKÁCIÓ ÉS AZ ÖKOTURIZMUS TERÜLETÉN

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ABSTRACT

The purpose of this study is to summarize the science communication activities of the Faculty of Landscape Architecture and Urbanism, which are also required to include familiarisation with the image of landscapes formed by society. In 2006, the Faculty of Landscape Architecture and Urbanism of Szent István University integrated the issue of environmental education in its curricula. Parallely with the arrangements for environment education programmes, the traditional admission programmes of the Faculty have been renewed and extended since 2016. Landscape communication is also made possible for landscape architects as designers in the course of planning nature interpretation

facilities, or putting this the other way around: examination of the content of nature interpretation facilities can provide information to explore the receptiveness and knowledge of society on landscapes. In the current stage of our research it was found that from the 29 nature trails analysed 23 featured landscape-related content; most characteristic topics included landscape history, traditions, current landuse, and cultural heritage. All in all, science communication is both a tool and a target in landscape architecture education, developing new skills and competencies for our students, just as enhancing the society's general knowledge of the landscape and landscape architecture, moreover, providing essential experiences for ecotourism planning and design projects.

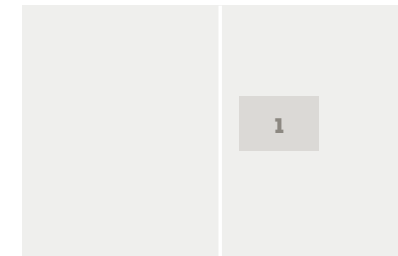
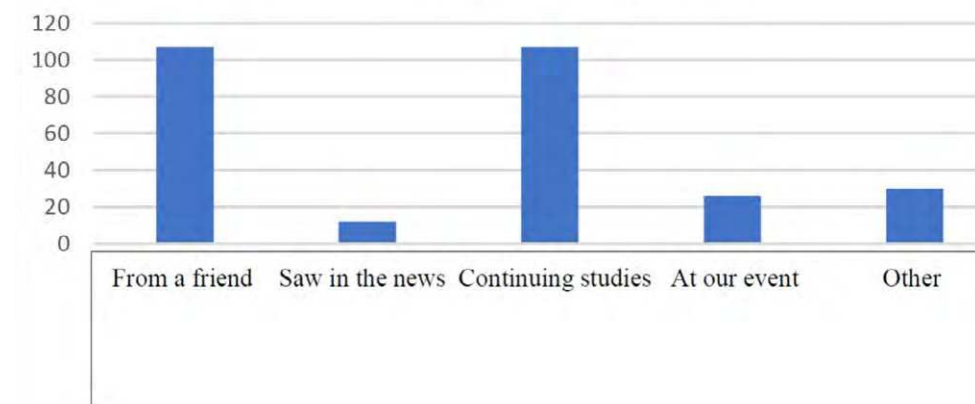


Fig. 1: Results of the survey conducted among first-year bachelor students (2017-2019)

"Where did you first learn about landscape architecture?"
(number of respondents), 2017-2019



INTRODUCTION

A landscape architect is a specialist who - with a complex knowledge - contributes to the formation of liveable, sustainable landscapes and establishments, properly operating communities, as well as to the balance of social interests and environmental / ecological conditions. Success is based on social reputation and recognition. Today, this requires such conscious, planned, and structured activities in which training locations and higher education institutions play a prominent role - to some extent as a part of their own marketing operations. Thus, in the course of their professional orientation attempts, universities also carry out science and profession related communication. In respect of

landscape architecture and landscape architecture education, this process and activity is even more complex, since not only the profession, but also some parts of its value system and key concepts are unknown, unclear and intransparent for a broad spectrum of the society - e.g. landscape character.

A specificity of landscape architecture education in Hungary is that such specialists are trained only in one institution, thereby the Faculty of Landscape Architecture and Urbanism of Szent István University acts as the founder of the entirety of landscape architecture in Hungary, playing a key role in the promotion of the profession and science communication. The formation of this, however, was a complex and not completely linear process.

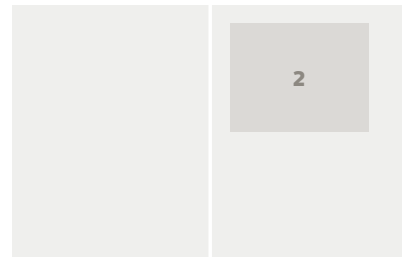


Fig. 2: The extended science communication activities of the SZIE Faculty of Landscape Architecture and Urbanism required new tools and a higher level of organisation

The purpose of this study is to summarize the science communication activities of the Faculty of Landscape Architecture and Urbanism, which are also required to include familiarisation with the image of landscapes formed by society. Landscape communication is also made possible for landscape architects as designers in the course of planning nature interpretation facilities, or putting this the other way around: examination of the content of nature interpretation facilities can provide information to explore the receptiveness and knowledge of society on landscapes.

FROM CLASSIC ENVIRONMENT EDUCATION TO THE COMMUNICATION OF LANDSCAPE AND LANDSCAPE ARCHITECTURE SCIENCE

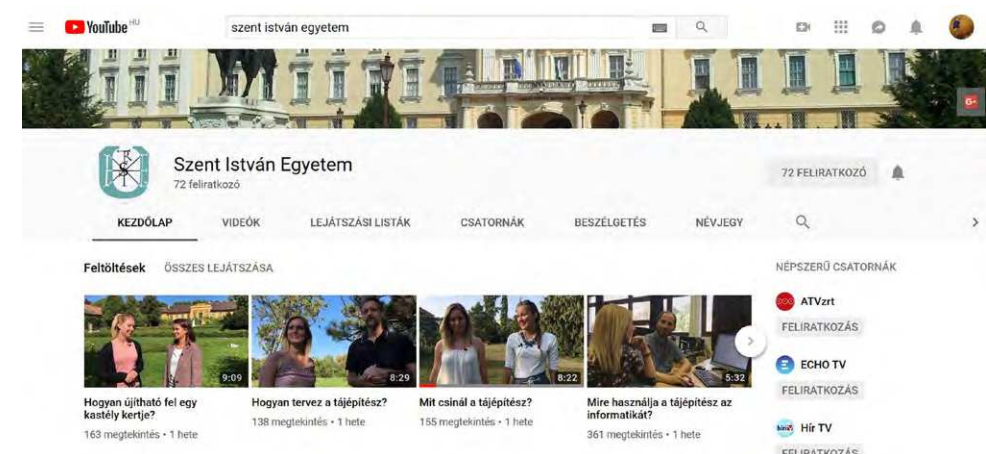
At universities today, environmental education is no longer expected to only convey up-to-date technical, natural scientific and legal knowledge. It is an important task for students to comprehend global environmental correlations in a broader time perspective (Orr 2010), to prepare for resolving unexpected situations, and to master appropriate attitudes as well. In addition to engineering thinking, students are also required to learn ethical engineering thinking and behaviour (Fekete 2010). One of the possible directions for jointly resolving the problems above is to integrate practical environment education

in university training, including landscape architecture training.

In 2006, the Faculty of Landscape Architecture and Urbanism of Szent István University integrated the issue of environmental education in its curricula. To begin with, the Faculty's students, having strong graphical skills, have drawn up and edited awareness-raising informative booklets, followed – as a second step – by workshops held for pre-school and school age kids. Publications and workshops focused on the following topics:

- waste management – 2006-2011
- production and utilisation of electric current – 2012-2015
- protection of water-quality – 2016-2018
- landscape protection – 2019-2020

At the Faculty of Landscape Architecture and Urbanism of Szent István University, a questionnaire consisting of 4 questions has been filled in by newly admitted first-year Bachelor students since 2017. In this framework, the following question is posed: “Where did you first learn about landscape architecture?” Most respondents first learned about the profession of landscape architecture from friends or guidelines for continuing studies, or from news sporadically (Figure 1), which properly illustrates the societal reputation of the profession. Partly for the reasons above, the topic of landscape protection itself has been selected as the subject matter of the traditional environment educational programme since



2019, thus – really and truly – stepping over to the area of the communication of the science of landscape architecture, and showing a practical example to the implementation of the objectives of the National Landscape Strategy (2017) as related to social “landscape awareness” and increased landscape identity. The examination of the landscape architecture aspects of environment education has already been published within the scope of doctoral research as well. Basic research issues include the characteristics of open spaces favourable from the point of view of environment education, and the characteristics of children's use preferences and attitudes in different types of open spaces (Jákli 2017).

Parallely with the arrangements for environment education programmes,

the traditional admission programmes of the Faculty have been renewed and extended since 2016. Open day appearances have been transformed into interactive environment protection festivals, and supplemented by professional orientation and science communication programmes at frequented external locations and science festivals. This requires the procurement of interactive devices demonstrating landscape architecture as well as videos presenting the profession, the launch of new social media interfaces, arrangements for drawing competitions to appeal to students, the involvement of well-known public figures representing and promoting the value system of the profession, setting up a Faculty working group, as well as intensive cooperation with the Faculty

Location	Year of establishment	Number of stations	Landscape-related content		
			Landscape history, landuse, landscape pattern	Landscape character, scenery	Landscape restoration landscape management, landscape planning
Molnári	2019	5	1	-	-
Bácsbokod	2019	5	1	-	-
Kaposvár	2019	8	2	-	1
Gönyű	2019	4	1	-	-
Szarvas	2019	no data	no data	no data	no data
Nagyrécsce and Magyarszerdahely	2018	no data	no data	no data	no data
Székesfehérvár	2018	8	2	-	1
Vértess	2018	12	2	-	-
Páty	2018	6	1	-	-
Karczag	2017	9	5	-	-
Mohács	2017	4	4	-	-
Fót	2017	5	-	-	-
Nagymaros	2017	2	1	-	-
Csesztreg	2017	6	2	-	-
Pákozd	2017	4	-	-	-
Kaszó	2017	no data	no data	no data	no data
Zalaszabar	2016	12	2	-	2
Tamási	2016	7	3	-	1
Paloznak	2016	5	3	-	-
Sopron Hills	2016	6	5	-	-
Budakeszi	2016	6	-	-	-
Hatvan	2016	12	2	-	-
Zalakaros	2015	5	2	-	-
Sárród	2015	5	1	-	-
Duna-Gerecse region	2015	10	5	-	-
Gyomaendrőd	2015	9	1	-	-
Kiskunhalas	2015	9	2	-	1
Péteri	2015	10	1	-	-
Zalakaros	2015	8	2	-	-

Students' Self-Government (Figure 2). One of the interactive playing devices for scientific communication – of unique design – is a layout table made of wood, divided into 8x8 pcs elements, to be furnished with different landuses, such as a village, a town, a vineyard, a small and a large ploughland, a plantation, or a natural forest. There is a water stream on one side of the layout table, from where the “terrain” is elevated into the other direction.

In the long run, the interactive playing device can also be suitable for examining the picture of the landscape formed by the society (Boromisza et al. 2019b). In order to test this, we took photos – a total of 69 – of “landscapes” installed by children using the interactive playing device to furnish landscapes with

throughout the 3 days of two national science promotion events in 2019. On each occasion, children were allowed to use the same 20 landscape elements to furnish the signboard. After the digitisation of results, the landscapes installed by children were compared using Microsoft Excel. Based on the first results, it can be observed that the children involved in the research were not willing to place urban areas beside the water course, nor to more highly elevated reliefs, but they preferred to use forests in both situations. At the same time, ploughlands are frequently placed beside the water flow, which probably coincides with their personal experiences. On this basis, the scenery of a plain along a water stream – delineated by ploughlands and grasslands,

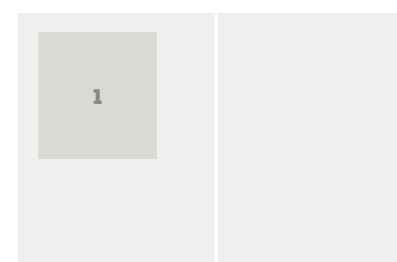


Table 1: Overview of the landscape-related content of the 29 nature trails analysed (2015-2019)

and somewhat mosaic-like – and a homogeneous, downy and hilly landscape dominated by forests is delineated.

INTEGRATION OF THE TOPIC OF THE LANDSCAPE INTO NATURE INTERPRETATION

Familiarisation with the social knowledge related to the landscape, with the level of landscape awareness also constitutes a special way through nature interpretation. A specificity thereof is provided by the fact that landscape architect specialists regularly take part as designers in eco-touristic development projects, thereby tourism, eco-tourism, and nature interpretation are also present as part of landscape architecture training.

As shown by visitor numbers, the social demand for nature attraction factors is increasing; the eco-touristic offer has rapidly expanded over the past few years (Bell, 2009, Kiss 2007, Mikházi 2015). The registered number of visitors of the eco-touristic services of national park directorates has been constantly increasing since 2005, except for the 2010 fallback (Pádárné Török 2018). It is a characteristic tendency that eco-tourism appears within the landscape with more and more facilities; at the same time, there are few professional guidelines and points of reference for integrating them into the landscape functionally, ecologically

and aesthetically; moreover, attempts for integration in the landscape are not implemented in practice in many instances. In order to decide on the placement and design of equipment, the vulnerability of natural values is required to be specified together with the relevant environmental impacts accompanying investment developments (by improving the methodological grounds required), the criteria, aspects and means of landscape integration. The study produced in 2019 at the Department of Landscape Protection and Landscape Restoration provides points of reference primarily up to the systematic presentation of design recommendations, international / Hungarian good examples and best practices in respect of integrating / fitting eco-touristic facilities into the landscape.

Prominent eco-touristic establishments feature educational trail / nature trails for nature interpretation. The proportion of nature trails reached half of the total of eco-touristic establishments as early as 2012, which further increased in 2017 (55%); in 2018, there were 188 nature trails established and operated by national park directorates (Pádárné Török 2018). As regards the content of nature trails, the work of Duhay (2006) serves as a basic and comprehensive source of information, providing an overview of presentation locations and nature trails in nature protection areas by national parks. As regards the capital, Budapest,



Fig. 3: Examples for nature trail signboard graphics, working up landscape-related topics (Boromisza et al. 2014, 2016, 2019a)

Bajor-Lampert and Bajor (2018) expressly elaborated the subject of nature trails for education, grouping establishments (41) according to the level of protection of the area. In respect of content, the homepage of Patkós Stúdió (url1) – markedly specialised in the design and implementation of nature interpretation – provides valuable insights, using which the nature trails of the company completed in the past five years (2015-2019) were analysed. In respect of the 29 nature trails, the focus was on the content related to the landscape, whether the signboards of each station featured topics of a) landscape history, landuse, landscape pattern, b) landscape character, scenery, c) landscape restoration, landscape management, and landscape design (Table 1).

It can be established that the nature trails analysed mainly deal with natural endowments and natural values, including the flora and fauna and habitats in general. Out of the 29 nature trails, 23 featured landscape-related

content (in 3 cases there was no information available); most characteristic topics included landscape history, traditions, current landuse, and culture history values, cultural heritage. In some cases (6 signboards) landscape restoration and landscape management appeared as topics (e.g. habitat reconstruction, forest structure transformation). The opinion of society on landscape restoration can be positively influenced as a topic of nature interpretation, which is greatly needed on the basis of our earlier research among primary school pupils on the assessment of lake shores transformed and semi-natural (Jákli and Boromisza 2017). On this basis, it can be established that the topic of the landscape has been present in the recent period of nature protection presentations, but subject-related content is within a considerably narrow range. No topics related to landscape character and scenery have been found in the sample analysed. The results so far suggest that the

landscape awareness communicated to society still has considerable reserves through this mechanism (Figure 3).

SUMMARY

All the activities listed can be further developed: familiarisation with the knowledge of society about landscapes can be further specified by fine-tuning the mechanisms mentioned. In case of the interactive game, further major statistical analyses and the use of landscape ecology methods are planned to be used in the next phase of the research, in addition to a further increase of sample numbers. As regards the research commenced in relation to nature trails, analysis is intended to be continued by a more differentiated content assessment related to landscapes, by further breaking down the three topics, as well as by processing illustrations related to each topic (e.g. historical map, graphics based on freehand drawing, and interactive elements). The analysis can be extended to the assessment of other presentation options (e.g. visitor centres, paper-based publications, virtual nature trails), broken down by regions / nature park directorates / landscape character types.

It is reasonable for many reasons to increasingly involve university students in current Faculty communication mechanisms, in the research commenced as described above. Students can face

the image of society created about the landscape and landscape architecture and the knowledge thereof, as well as children's awareness of responsibility, sense of justice, pursuit of knowledge, creativity, and exemplary enthusiasm, meaning that the strengths of nursery school education – e.g. the method of passing on, interdisciplinarity, the enhancement of taking initiatives and arousing interest – may also be exploited in higher education (Békésiné et al. 2011).

Perspective opportunities include the use of the Faculty's communications channels – primarily its social media interfaces – for science communications purposes (e.g. for sharing educational videos) (Gerber 2014). Opportunities for interactivity can be provided in this case as well: new vistas can open for involving university students, and for researching landscape-related thinking.

All in all, science communication is both a tool and a target in landscape architecture education, developing new skills and competencies for our students, just as enhancing the society's general knowledge of the landscape and landscape architecture, moreover, providing essential experiences for ecotourism planning and design projects. ©

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OKTATÁS TÁJJAL - KIHÍVÁSOK A TUDOMÁNYKÖZMUNIKÁCIÓ ÉS AZ ÖKOTURIZMUS TERÜLETÉN

Jelen tanulmány célja összefoglalni a Tájépítészeti és Településtervezési Kar tudománykommunikációs tevékenységét, amely többek között a társadalom tájról alkotott képének megismerésére is alapoz kommunikációfejlesztési stratégiájában. A Szent István Egyetem Tájépítészeti és Településtervezési Kara a környezeti nevelést 2006-tól kezdődően különböző formákban építette be oktatási programjaiba. Az óvodások, iskoláskorúak és felnőttek számára szervezett környezeti nevelési programokkal párhuzamosan, 2016-tól kezdve a Kar hagyományos beiskolázási programjai is megújultak, kibővültek.

A táj kommunikációja tervezői szempontból nézve is fontos. Tájépítészeti feladatként, a táj megértését szolgáló természetvédelmi bemutató létesít-

mények tervezése során ismerni kell a létesítményeket és tájat használók igényeit és ismereti szintjeit. Ez fordítva is igaz: a természetvédelmi bemutató létesítmények tartalmának vizsgálata információt adhat annak feltárására, mit kaphat, mit tudhat a társadalom a tájról, milyen irányba érdemes fejleszteni a tervezési irányelveket.

A fenti kérdésekre a válaszok egy részét attól a kutatástól várjuk, amely során eddig a különböző hazai természetvédelmi bemutató létesítmények közül 29 tanösvényt vizsgáltunk. A kutatás jelenlegi fázisában megállapítható, hogy a vizsgált helyszínek közül 23 esetben volt tájhoz kötődő tartalom. A legjellemzőbb témák ezeknél a bemutatóhelyeknél a tájtörténet, a hagyományok, illetve a jelenlegi tájhasználat, és a kultúrtörténeti értékek.

Összességében, a tudománykommunikáció egyszerre eszköze és célja a tájépítészeti oktatásnak. A hallgatók

számára új készségeket és kompetenciákat biztosít, segít megérteni a kortárs társadalom tájhoz és tájépítészethez fűződő viszonyát, értékes tudással és tapasztalatokkal járulva hozzá az ökoturisztikai projektekhez szükséges tervezési ismeretek elsajátításához, elmélyítéséhez.

