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Educating Space

National and cultural differences in the process and with quality criteria of school building programmes

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Abstract

We highlight some results from our project “Educating Space”, which aimed at initiating cooperation between stakeholders through working together aiming to establish guidelines and provide exemplar cases in school building development. In our related research we found that although quality criteria are similar in different countries, there are typical national features in emphases and trends that determine how social entrepreneurship can foster the process. In our paper we present our set of quality criteria with the learning environment approach and show some good examples from Hungary – assessing some success criteria we could find as common features in them. We found that effective learning environments support forming learning networks – and learning organizations create efficient learning environments tailored to their specific needs.

Keywords

SCHOOL BUILDINGS, LEARNING ENVIRONMENTS, INCLUSION, PARTICIPATION, ENTREPRENEURSHIP, NATIONAL DIFFERENCES

Introduction

According to trend analyses (OECD, 2001) schools (and formal education itself) can only keep its role and importance in tomorrow’s societies if they become much more connected and integrated into communities. Re-schooling scenarios include learning networks and community centres.

It is education’s responsibility to prepare our children to be ready to answer to the challenges of the ever faster changing world. But can schools themselves get into the rhythm? Can they face the same defies? Can they prove to be real learning organisations? Can they show signs of active entrepreneurship? Is it only due to subjects and projects to raise civic competencies?

These challenges are strongly linked to the ones brought about by sustainable development. It is a key issue of pure existence of mankind to find the boundaries of sensible (and

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meaningful) growth, and a core ethical question to serve future generations by our economic, cultural and social development – instead of threatening their mere survival. Although seldom considered as such, education is a key player concerning economic and social welfare and growth. On the one hand it is so because there is a strong need for a well defined paradigm shift: the elements of which and the competencies needed to actively implement them are based and shaped by education. On the other hand, we should be aware that education reaches behind classical schooling periods: life-long learning has become a premise to be able to live up to expectations such as flexibility and mobility set up by post-industrial societies but also a substantial condition to responsibly practice our democratic rights.

Education for sustainable development strongly emphasises democracy and entrepreneurship and states that by creating real-life learning situations (arising from “legitimate questions” from students), the learning process can lead students to be able to respond to similar types of future challenges actively exercising their civic rights and social competencies.

In order to achieve this we need such inspiring learning environments that invite all participants and help them realize their potential. The process that creates this is called inclusive pedagogy. Inclusion aims at involving each student to the learning process. Inclusive pedagogy seeks for answers about how to provide all conditions required for all students to get actively participating considering their individual pace of development and needs in the learning processes. Inclusive institutions are not only capable to integrate students with special needs or unique backgrounds, but have methods and tools to deal with any student that are different from the “average” (be them outstandingly talented, distressed, dropping out, re-starting).

In our research we were looking for inclusive, sustainable learning environments and good practices that shape these. We focused on school buildings as they shape our pictures of our environment and (not only physically!) frame the learning process.

We examined present knowledge about school buildings by literature review, then with content analysis we established a framework of quality criteria.

Then we took several field studies (documented by photos and structured interviews) to visit certain schools suggested by experts in various related fields – pedagogy, environmental psychology and architecture. We believe that a main achievement of this work with organising workshops for these experts from various fields was that we initiated a conversation that proved to be fruitful and really illuminating for all of us.

Throughout our research we took Manninen’s approach of learning environment as a theoretical and methodological foundation

We realized that quality criteria frameworks have many similarities throughout different cultures – although it was obvious that some elements get more or less attention depending on socio-cultural and national background. We found that schools that could form learning organisations themselves created an effective learning environment and (either step by step, in a long term – which in cases meant decades – or by reconstruction or re-building made possible by proposals) they transform their physical environments to best possibly meet their expectations. We also found that well-designed school buildings foster the forming of learning

organisations – therefore effective learning environments can be a vehicle to constructing learning networks.

School buildings

In our paper (and in our research) we focus on public educational buildings – with a special emphasis on schools. Public education serves all citizens: in its institutions everyone can have their share of educational experiences. But is this a fair share?

Subsequent research on student's attitude as well as assessment of students' projective drawings and personal sphere models (Vass, 2009) makes us rather dubious.

Assessment of building quality and return of costs is increasing with the rate at which stakeholders get involved in design: the more successful participation is, the more users' aspects are considered in planning (briefing) and design phase, the more the new building is embedded in local community's context, the more „profitable“ the amount spent on building a new school is. (DCSF, 2005). The question is whether investment in rebuilding, reconstructing or refurbishing our schools is really worth its prize.

In formal educational systems learning is targeted to occur typically in the school. And as in many other countries with strong traditions in formal education supported by behaviourist and cognitive psychological approaches, and shaped by our cultural heritage of schooling dating back to early medieval ages, the main scene for learning as a transaction is the classroom itself.

The majority of Hungarian schools can be classified as the so-called school as a fortress model (Obe Feilden, 2004). This means that they have a campus-like structure: the building creates a closed unit clearly separated from the surroundings – seclusion is not only represented in space (being detached from other community spaces) but also forms a core element of cohesion. This structure has some obvious advantages that (behind being part of our historic heritage) explain its popularity: the school ethos is easy to form, its plan is linear, clearly visible and therefore learning can be organised in a cohesive way (standard timetables, clear room divisions) – also its physical appearance seldom means a temptation that drives students away from the learning process itself. The closed environment can create strong communities. Most probably this must have been the reason behind some contradictional results Hungarian student attitude researches have lately revealed. PISA results (PISA, 2006) showed that most Hungarian students like attending their schools. At the same time another result (Rapos, 2005) proved that one-third of the students associates to prison when they hear the word “school” whereas one-fourth of them shows strong place attachment. One possible reason is that this closed physical structure can be excluding to other communities (which are the majority of local communities in most cases) and if social aspects of learning environments are not considered properly, school communities easily become segregated. This association to prison can be empowered by physical aspects of school buildings that also refer to medieval heritage: rows of closed classrooms doors opening to narrow corridors with not much natural light

The rigidity of a fortress type school can be dissolved and mellowed by various “tricks”. These include space use within rooms, innovative approaches to schoolyards, modern didactical environment and decoration focusing on age, gender and national specialities. Students, parents or the whole section of local community can be invited to take part in this process that results in a more open, inclusive building.

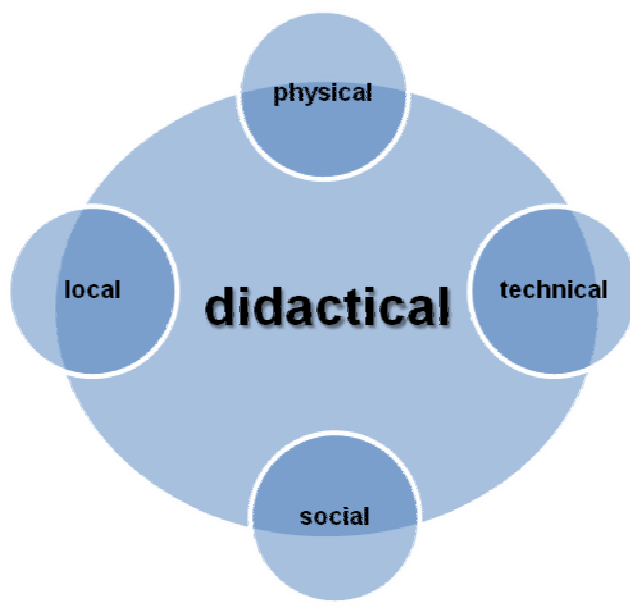
Most fortress-type schools house learning environments that fail to support constructivistic pedagogical approaches. Classical desks arranged in rows, labyrinth-like corridors are basically suitable for drilling-type of exercises in a strong, hierarchical organisation. Creating flexible, agile spaces should involve a strong pedagogical background: the school should establish (re-think) its mission, and based on that find all details that are necessary to transmit these ideals.

In our on-site visits we experienced that a change in the classroom arrangement (also in colours, decoration) empower the didactical renewal of teachers. In a well-designed physical environment teachers start playing with the opportunities of flexibility, and tend to move from teacher- to student centred teaching methods.

Architects have realized this for decades how school buildings' design and pedagogy can interact (Hertzberger, 2008): the building shape its users while teaching and learning processes create needs that are reflected in the physical appearance of the buildings.

A more sophisticated approach on this interaction is given by the learning environment framework. Although learning environment has lately become a catchword, it provides a learning-focused theoretical background to assess educational facilities. There are dozens of definitions about learning environment. Here we mean the totality of sociophysical factors that contribute to the development and learning of the learners (Lippai, Réti, 2009). This is a very complex picture – therefore makes it difficult to apply scientific inquiry to examine them.

According to Manninen et al () learning environments can be described though in 5 aspects: physical (mainly the building but also the settings, the surroundings, the furniture), technical (tools and equipment intended to foster learning process), local (connection to the settlement and its communities), social (students background, cultural, linguistic, religious factors – even gender) and didactical that in ideal case embraces all.



1. :Five aspects of learning environments – after Manninen et al (2007)

From these above five aspects social and local ones often fail to get enough attention – although their roles are very important. If we consider inclusion as an efficient approach,

awareness of gaps within these aspects (between different individual learners but between teaches, parents and students as well) may help to eliminate conflicts brought about by different customs in linguistic behaviour, furniture and space use. Local context should be considered for another reason – and that is sustainability. Most educational facilities are used for about 180 days – maintenance can be not only more economic but also more sustainable if the building can serve local community needs as well. The building is also embedded in the city or village landscape: its surroundings can serve as a learnscape (ENSI, SEED, 2007) – a space outside the building where genuine learning experiences occur.

These structural factors are related to drop-outs (DCSF, 2005, PricewaterhouseCoopers, 2007b) and improvement in social aspects can serve as a remedy for attendance problems (PricewaterhouseCoopers, 2007a, 2008a).

To improve these aspects schools should initiate inquiries about them. based on these they may start participative planning with stakeholders that provide an excellent opportunity to educate for entrepreneurship. Also, students' initiatives can be empowered if it is a real-life situation. In the next chapters we will take a look at which factors may be influenced this way.

Students' involvement and inviting local communities to strengthen local context (and enforce local aspect of the school's learning environment) are in harmony with the aims of education for sustainable development as well – that is to use local knowledge for solving general (global) problems at the most appropriate level with maximum involvement of groups affected by the original problem.

But how can schools invite and embrace all different stakeholder groups? Can they meet the challenges of time and space constraints?

We argue that with the fast development of info-communication equipments and the increasing use of modern web-based knowledge management tools (such as web2 applications or wikis) a sixth aspect is relevant (independently from the technical one where Manninen et al included ICT tools) – and that is the virtual learning environment. It is reflected as a shadow of all five although it would require further research to claim the extent at which each aspect is influenced by this sixth one.

This virtual learning environment as an opportunity and also challenge stretches far behind ICT use in classrooms or elsewhere in education. Web-based tools provide means for partnership-building and help schools conquer time and space limitations in three ways.

Research supports (Dúll, 2007) that parents tend to recall and show signs of the same behavioural patterns when seated in a classroom for a parents evening or and interview with a teacher as was typical to their own student years in school. This makes it rather difficult (becoming a constant source of possible misleading situations) to continue a real conversation. Wikis, comment options and on-line questionnaires allow parents to express their opinion more freely without stress caused by time limitations (many of them have to take time off their workplace to be able to participate at such gatherings).

Teachers and principals are provided by the opportunity to become knowledge governors applying second or third generation knowledge management tools. In a virtual environment the traditional expectations and role models do not mean such a strong drive to be followed – therefore most teachers find it easier to shift roles and transform from “treasurer of

knowledge” to “manager of shared experience”. They become more welcoming towards new ideas and the free information flow provides them with inspiring experience that can be used in their day to day work as well.

For students as digital natives virtual environment means safety. It is a platform they are familiar with – and they are more willingly share their ideas.

Virtual environment can support participation as it provides two-sided communication and equity in the process. It breaks down traditional walls and helps dissolve routines solidified by concepts about expected role models and transactional patterns. Adult-adult situations are more likely to occur in such a “tabula rasa” contexts – not mentioning the possible nicknames that enforce the sense of minimal risk in case of value conflicts.

There are several tools that may support meaningful conversation: forums, chatrooms, cloud-tags, concept trees, concept maps, wikis and so on – most schools are just exploring these applications but those that are brave enough to experiment have reported unexpected rate of involvement and promising results – also good effects on attitudes.

From our exemplar cases, Petőfi Sándor Lutheran Grammar School of Bonyhád which is a very formal secondary school with long-dating traditions started to take small but firm steps to establish an inclusive approach. The school staff realized that by strengthening social and local aspects, they can achieve high student involvement and develop partnerships within the region. At first they focused on so-called “cosmetic factors” and criteria that contribute to place attachment of students. They also empowered student government within the school. When democratic decisions had a tradition, they built on students’ innovative ideas and empowered their entrepreneurship. As a result of this, in ten year’s time not only the school interior design got totally renewed but step by step parents, local authorities, entrepreneurs, later even regional or international firms began partnership with the school – thus based on real community needs the school got modern sports fields integrated in a decorative school park with wisely designed relaxation areas around, a student club, a small sauna and community room in the school’s dormitory. They developed a local system of mapping opinions and needs and collecting new ideas. Also they built a huge and flourishing network that supports or actively participates in building projects. They maintain networking in several genuine ways. At present, they are working on building Hungary’s second largest athletic stadium that would also serve as a regional sports centre – without any centralised support: the school managed to buy a derelict factory hall (with concessions from local authority also financial aid from the church, from for-profit partners but also from parent and alumni associations) and are in the phase of shaping it to their needs.

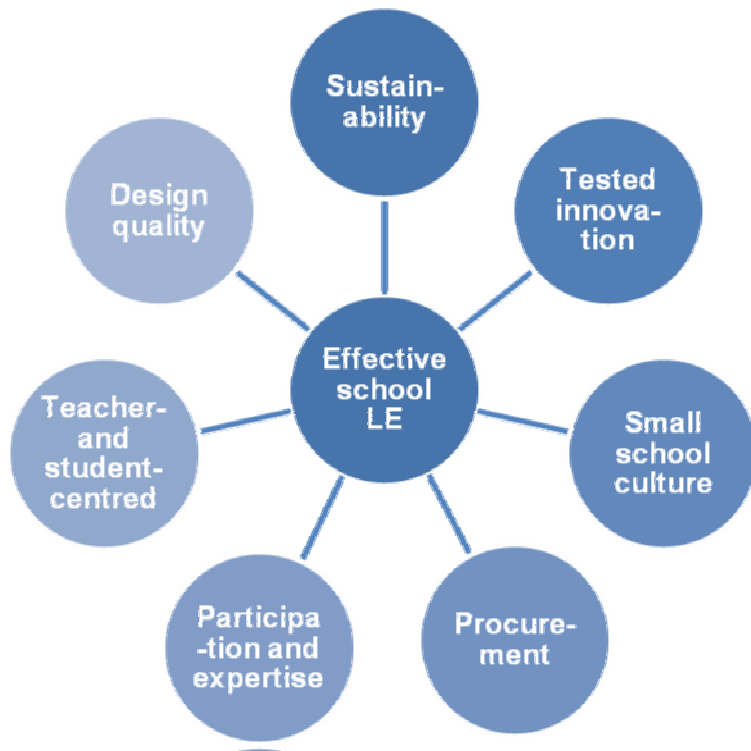
Another case, the IV. Béla Primary School in Hejőkeresztúr, which is a small school in one of the leadst developed part of our country facing high rates of unemployment and also conflicts between nationalities. This school adapted several learning programs including complex instruction and table games to make the everyday school life of children with high risk of drop out as exciting and as meaningful as possible. At the same time they tried to create an apolitical yet embracing physical environment that transmits the idea of inclusion without exclusion to any sub-groups. But the school staff also realised that they can only be successful if overall attitudes toward the school change in the village. The Generation program invites parents and grandparents to the school – they share their life experience and knowledge – and in exchange students offer various services including web points, computer

education. The program did not only answer the challenge of initiating conversation between generations and different stakeholders in education, but had a huge positive impact on the attitude towards the institution within the region. The school became a respected community centre with living programs, everyday happenings. Opening up to these experiences was a proof of the schools' ability to adapt to local challenges and willingness to share and co-operate with local citizens. To support continuous co-operation the issued a mission statement about becoming a real learning organisation. This on-line statement is embedded in a web page where the virtual environment provides equal opportunity to all to share and comment on videos of community events, lesson parts, projects or events in the school. It serves the school ethos and besides raises community pride. By using the website and participating in the programs, the school does not only educate its students for active citizenship but empowers adults in the village. Also it contributes to raising entrepreneurship – and it results in a neat building with a nicely maintained school-yard and a genuine decoration (a donation to the school). Also step by step, this school gained a special role not only in the region's but in the country's professional life: several programs and school visits are organised to share their various good practices and rich experiences.

3. Quality criteria

What makes a good school building? It is obvious that the building in Bonyhád would be frightening to most pupils in Hejőkeresztúr – but the set of features and characteristics of the buildings are very sophisticated to examine: even if we decide to focus on the physical factors exclusively.

Effective learning environments can be influenced by and identified through a set of different factors though.



2. :Factors that affect effective school learning environments (from ProcewaterhouseCoopers 2007b, pE21)

In order to systemize the factors that influence the physical aspects of learning environments we made a literature review from which we chose those that had systemic approaches and that aimed to help design, planning and also assessment and evaluation – such as BSF sets of quality indicators (CABE, 2006, 2007), Eartman’s 31 criteria (Eartman, 2004), the 12 SEED-criteria for eco-schools (Tschapka et al, 2005) and also 12 criteria based on neurobiological research (Lackney, 2008). After the content analysis we also compared our results to OECD CELE project’s set of criteria toward quality buildings.

We found many similarities between these systems although it was clear that national differences can be tracked in the notion of some specific criteria – we found that the strongest differences of emphases occurred regarding safety (which is possibly in connection with social patterns and role of children in the family), individual needs – especially gender differences, community building (most possibly arising from different approaches to schools and the role of formal education itself) and school ethos.

We also found that literature in environmental psychology strongly supports these quality criteria, but the perceptions of the physical environment vary between different groups of stakeholders. Inquiries made mainly with open-ended questions and interviews or videotaping exercises with university students also refer to this existing difference that comes from different expectations, needs and resources that support that.

We also conducted an online survey with teachers to learn more about their perceptions. (In order to be able to raise their awareness. It is one of the outcomes from our project that we write recommendations and collect hints, tips, good practices in a handbook for teachers to initiate innovative thinking about school buildings. To realize the strength and weaknesses of existing practices therefore was a substantial need for us to be able to do a meaningful

work.) These surveys showed that teachers are well aware of factors affecting community life and school ethos – but surprisingly enough they were much less conscious about physical well-being or individual needs.

Our groups of quality criteria are as follows:

1. Physical well-being

This cluster includes all factors that directly affect health, concentration, help to maintain attention, physical activity and cover basic bodily needs. Many of them are well researched even in lab experiments – such as temperature ventilation, amount of natural light, acoustics, air quality. The effect of these have a well based physiological background as well. Colours (especially applying green), restrooms (cleaning, orientation, accessibility), connection to natural environment (sight to living nature, plants), insulation, store rooms (open and accessible), ergonomic furniture and respecting basic spatial needs of individuals show great flexibility within nations, age groups and are also more difficult to determine as exact indicators.

Literature shows that investment in these factors have a direct return in learning outcomes if they are below a certain level: then improving them are more sophisticated to measure in learning outcomes.

2. Individual needs

The opportunity to get separated (forming boxes), having cosy corners, places to hide or to socialize, rooms for smaller groups, individual decoration, the sense of being a user (having a personal touch on or a relationship with the space) is one of the factors that can be improved using very little monetary resources but designing requires real involvement and participation. Improving this criterion may result in better respect to norms and higher attendance.

Environmental psychology offers a wide range of tools to strengthen place attachment – especially affective elements (Dúll, 2002, Hollahan,1982) that may vary depending on the sub-groups we intend to involve. Therefore communication between school staff and students and empowering students' entrepreneurship to shape their physical environment is a crux of the idea of creating spaces tailored to individual needs.

Accessibility is also a part of this cluster – although we find it important to underline that inclusive design eliminates the need of transferring buildings to meet all standards of being accessible as it means respecting the needs of all users.

3. Safety

This cluster involves criterion for avoiding emergencies and ones to be followed in emergency situations – but also includes factors that may mean risks: such as staircases, lifts. Separation (fences, gates, walls), safety devices (magnetic cards, cameras) are also part of this group.

There are several contradictions between community role of schools and the sense of safety. In more individualistic societies for example safety cameras would mean offending privacy whereas in other communities they are accepted parts of the system protecting users from unwanted visitors or risks.

4. Learning in focus

Beyond basic equipment for learning (which also vary not only with age groups but also depending on how technologized a community is), this cluster includes facilities that invite to participate in a learning network (tableaus, posters, message boards, info stalls), or shape its physical opportunities (such as chairs, pillows or other sitting amenities, special facilities (sports hall, schoolyard, library, labs, art workshops and so on) and flexible classrooms.

As modern learning theorise become more and more widely accepted there are less and less differences about indicators regarding these criteria.

5. Agility

Massive, stable, timeless yet flexible building that is “long life – loose fit”: may serve generations and can be modified according to actual needs.

From the point of sustainability agility gains another meaning: it is an advantage if school buildings can be transformed easily: not only in case of emergency (in case of natural disasters they usually serve as shelters) but in the time of the year when the building is not in use.

Agility may also mean that the building can serve the community: it may host performances, concerts, community events, conferences – even produce profit for the community itself that maintains it.

6. Community building

Schools need spaces that provide opportunities for the whole school to be together – that is the basis of community experience. A schoolyard or a spacious hall can support this function. It is also important that sub-groups within the school (such as forms, classes) may shape their own territory – they may apply their own signs (even colour code in curtains, walls) and that there are places in the schools where there is opportunity to see and to be seen – staircases, corridors can also have this function (Hertzberger, 2009).

Boxes and eliminating (especially long) corridors (Cságoly, 2004) can also contribute to forming a sense of community. A nice example of this is when small corners for student discussion were created by separating the ends of the corridors with wooden lace panels in the Bonyhád school – this step significantly decreased aggression levels and vandalism in the school.

7. Legible design

According to Lynch, paths, edges, districts, nodes and landmarks help us to construct a cognitive map: those spaces that are easily re-constructed in our minds are called legible spaces. (Lynch, 1960)

Legibility can also be increased with little cost, but improving it can result in better place attachment. This means that students are more willingly get involved in

There are evidences that also suggest that legible buildings contribute to better learning outcomes as legible spaces help the brain develop in the same areas (frontal lobe and the limbic system) that are crucial to making algorithms and also play an important role in storing and recalling memories.

Legible building make users feel more secure, which is also an important factor especially with young age groups.

Presenting the building to users is a key element of legibility. Surprisingly enough with our questionnaires and interviews we found that even in schools with the best practices teachers are not aware of the importance of the presentation process and they hardly ever apply direct and indirect means consciously.

8. Genius loci - ethos

Each school is different and unique in a sense – and those that manage to define this become successful ones. Physical environment can contribute to creating a “couleur locale”: local shapes, forms, materials can be reflected or represented in the building to put it into local contexts – local history or stories can be rhymed at in the building or some school traditions can be expressed.

Aesthetic criteria are important factors to raise pride of users and the local community. It is fundamental that users have joy in using the building, and that it contribute to forming their identity. The modernity of the building should stay in harmony with the environment (or in case of renovation: with the original building). At the same time the building should provide a future-leading learning environment – it is a very efficient indirect tool to socialize users. The building can teach a lot about the community, the local and social contexts. But it should be done in a way that design is aware of individual differences, therefore careful attention should be paid to stay neutral to groups with different values.

9. Environmental awareness

All criteria in connection with environmental awareness and sensibility and openness towards the natural surroundings are listed here. Reducing carbon and ecological footprint, awareness of resources, energy saving (insulation, water circulation, heating, recycling, reusing), using recycled or reused materials that are aesthetic, massive and maintainable, having local plant species resistant to treat by frequent use, caring for animals, (bird friendly gardens, taking notice and care of animal trails and so on), eco-friendly solutions (solar panels, green roofs, heat pumps – most possibly involved in educations as well) are parts of this group.

Many school development programs require dedication to environmental issues from participating schools and local authorities.

At the same time we found it contradictory that most teachers from eco-schools were eager supporters of using natural building materials, especially wood – whereas the eco-footprint of them compared to reused or recycled materials were much bigger. It was interesting to note that environmental educators themselves showed indisposition for applying these environmental friendly materials.

Quality criteria may serve as a checklist but also as a tool for systematic development of a school. Being aware of the importance of these and finding innovative ways to increase some of these factors gives opportunity to schools to influence processes that affect them.

Deák Diák Primary School in Budapest is located in a congested district and is located in an old building in a narrow yard with little opportunity to change. At the same time they chose to focus on quality criteria that can be improved with little investment. First of all they concentrated on decoration. This had a good effect on school ethos as well as community building (as exhibited articles raise the respect for and reputation of the community that produced them) and also the legibility. They apply small hand-made signs in corridors to indicate the classes that use that part of the building – also have a hand-made welcome sign and corridor decoration. Within classrooms and with the colours they consider individual needs. The arrangement of the decoration takes legibility into consideration. The school has a continuous communication with users – they apply online platforms and regular questionnaires to learn more about parents' opinion. Student initiatives are welcome in the school – and the classroom environments are meant to inspire these – quite efficiently. This way they are one of the rare examples that do not suffer but profit from having very different students: those with difficult family background and those with mainly professional, middle-class parents with little if any problems of integration.

Tokaji Ferenc Secondary School in Tokaj is one of the best known eco-schools in Hungary. The architectural design had a strongly based pedagogical background as well. The materials (types of rocks) as well as natural ecosystems and landscape are all represented in the building. Aesthetic points are also important and contribute to create a local pride in the citizens – so strongly that motifs from the school buildings appeared even on some newly built private homes. The school ethos is very strong: it shapes the attitude of the users and the successful combination of physical and didactical aspects of the school's learning environment add up to a constantly increasing learning outcome measured by results of school leaving exams and the number of students that have successful careers in higher education. The design and maintenance process of this school building is a nice example of co-operation between the architect and the school staff – the latter being well aware of student needs and inviting them to participation that results in a continuously evolving physical environment. Although most schools in the area are affected by a drop in students number, this school has to find strategies to deal with the ever increasing number of students who wish to enrol.

Trends and dilemmas in pedagogy and design

Architectural modernisation is a tool for socialisation as well – and as such it is important to be aware that the school building besides hosting and giving a frame to educational

processes serves as a model itself. Therefore trends in architecture and pedagogy should interfere in a way that they empower each other – instead of eliminating the effects.

One such example is that architecture tend to challenge the boundaries of being inside or out of the building – postmodern spaces flowing into each other may prove to be valuable from the didactical point of view: at the same time we have seen that legible and clear plan is important for users and to keep the school as a system operating (a sense of compartmentalisation is necessary in most school building types). Also, opening up and leading the user to the surroundings can support constructivist learning approaches but at the same time it raises concerns about safety.

Another such trend is abolishing spaces, creating simple and clear forms, free from added values, being pure and apolitic (Bahovec, 2009) – but this can be in contrast with creating a school ethos or community building: unless we declare that our shared value statement is being neutral and embracing to all. Many argue that in this case schools are unable to fulfil their roles in transmitting national traditions and values.

Inclusion as a design approach aims at serving all users – similarly inclusive pedagogy invites all students to a common learning experience. Therefore we suggest that inclusion can be the approach that may solve these contradictions. It is also true that a well-defined pedagogical mission and also a constant conversation between the designer, the school staff and the other stakeholders serve as an essential element to establishing such an approach.

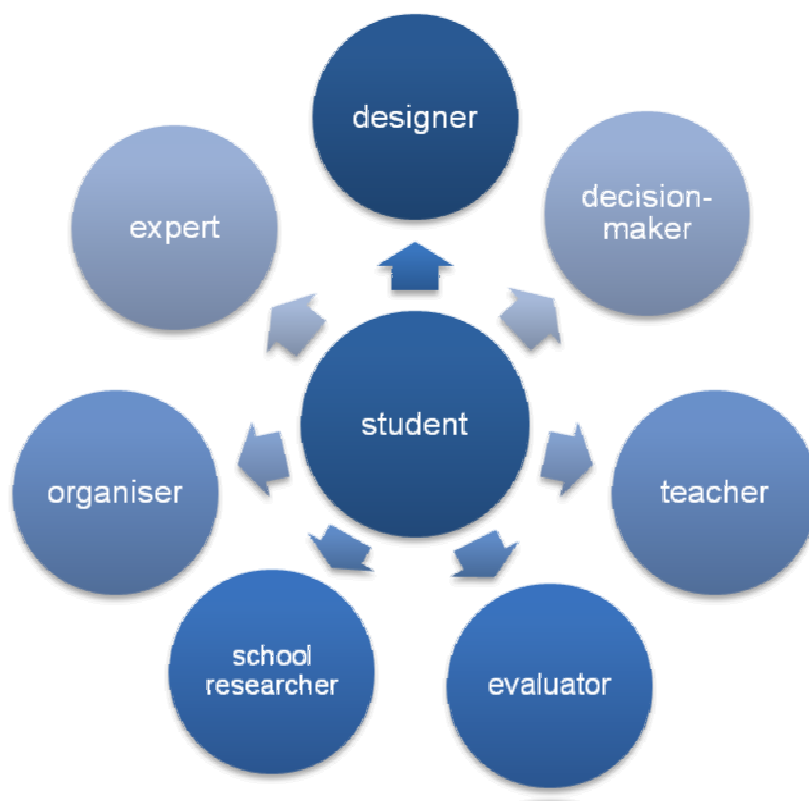
Kincskereső Primary School in Budapest has always been in the centre of the whirlwinds of innovation. Established by Márta Winkler, a Hungarian teacher famous for her genuine teaching methods and unconventional ways of space use, creating a welcoming environment for new-comers to school, who has been experimenting with these aboriginal solutions since the 1960s, this school has been a paradise for teachers with strong dedication to try new ideas. Therefore the school experienced many currents of new pedagogy – yet it managed to conserve its original mission and sense of secure stability towards pupils and parents as well. Was it up to the dominant personality of the founder – or maybe the authoritarian leadership? Most definitely not. The most important message the school wished to transmit was inclusion. And this inclusion was welcoming to teachers' innovation as well: therefore it created a living workshop where all stakeholders contributed to establishing the sense of the community. Children were invited to join common activities from the very first hour they spent in school: the traditional performance by teachers got extended to the audience, thus by the time girls and boys realized they participated in school life. The calendar of school tradition gave pace but also challenge to children. In October, first class students already performed in harvest festival together with upper grade pupils. Preparing for such events gave the sense of responsibility and also brought about a lot of situations where decision had to be made. Therefore students could acquire the elements of democratic decisions while their autonomy was by far respected. No wonder that they willingly participated in transforming the schoolyard (and creating special places there such as the bed of beads that is meant for toe-exercises or planting and caring for willows that serve as a decoration and background for ceremonies, but also living toys and (with commonly accepted rules and regulations) climbing challenges as well. With the help of parents and 6-10-year-old students Márta Winkler and her colleagues transformed a dull estate building into an original learning environment.

Common features of efficient schools

Most schools we found outstandingly efficient in creating their learning environment, started from an emergency situation: either it originated in a threatening trend they realised (most usually drops in expected enrolment numbers) or it came from a set of failure experiences (most often vandalism or discipline problems or drop-out), but many times they were also connected to a strong inner drive to innovate, to give the maximum, a sense of responsibility and a high devotion to the profession – mainly on the behalf of the principal or a charismatic figure from the teachers. All in all, they reported to have experienced a high tension arising from an urge to act and the internal will to respond. Therefore they established a “no way back “-strategy accompanied with a “yet”-morale. The latter is typical (rather frequently occurring) to crisis situations in East-Central European history and has a strong background from various narratives.

This means they were clearly aware of the need for change, they were consciously planning for and working step by step towards renewal. At the same time all obstacles strengthened this dedication: despite all circumstances they wanted to experiment with their ideas.

All these schools realised that they need allies. Amongst possible partners most of them opted for students from the very beginning. Students were involved to an increasing extent – and the first successes empowered teachers and gave a feed-back to trust students of competent users: the more responsibility students got, the better outcomes the school experienced and the greater students involvement was stretched.



3. : Student roles in planning and shaping a school building and the learning environment

Most schools gained further partners through informal connection on behalf of students and parents. These partnerships proved to be lasting and beneficial to all parties involved.

Most schools expressed that they would rather choose this slower development route again instead of taking leaps – which is in contrast with aims from national school building programmes. Most schools we visited acted independently from any national school building programmes – only choosing to participate if the programme's goals were in harmony with their own ideals.

Benefits from efforts

It is also true that slow development requires a lot of effort and endurance from the whole school community. Is it worth all sacrifices?

We found that there are five groups of beneficial effects all schools mentioned in the interviews – these are also supported by literature (PricewaterhouseCoopers, 2007b):

1. they experienced lower aggression;
2. they all have a high attendance and a strong decline in drop-outs;
3. norms are better respected (not only by students but teachers and other staff members are also more susceptible to following common norms);
4. they experience that each year the number of their potential partner and supporters increases (due to a larger network of connections);
5. they regained a strong link to the local community, became a respected member involved in local decisions.

Finding a new link to communities might be the best result a school can ever have. It means it has stepped on a track that – according to OECD's scenarios – leads to re-schooling, getting back an important role and serving the communities real needs. These schools can provide their students with social learning experiences that are elementary to find their place in the world and adapt to its ever changing conditions. It means they can give them munition for a lifetime and serve our societies with sensible, active, responsible decision-makers who are willing to take initiatives where needed. These schools therefore act as supporters of the public fulfilling their most classical and noble role.

We have seen that school buildings contribute to providing efficient learning environments that (through creating conditions for active involvement) support entrepreneurship and civic competencies – and these learning networks can create an environment that supports their optimal operation.

We hope that the conversation we initiated with our project empowers all such learning organisations and helps others take steps to become such themselves.

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