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Openness – flexibility – transition. Nordic prospects for changes in the school learning environment

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ABSTRACT

Amid increasing global and national interest in the built educational environment, this editorial considers developments within the Nordic countries that are investigated and discussed within the articles in this special issue. We discuss commonalities and divergences in the experiences of transition and change in the schools, located in a range of times and places. We observe Nordic openness being reflected in the interest of policy-makers and architects in schools with open designs, but also note the very real challenges for school leaders, teachers and students of transitioning from traditional enclosed classrooms and teacher-centred learning to student-centred approaches in a versatile space. Yet the articles of this special issue also make clear the educational and societal reasons and values behind attempts at this transition, and we conclude our editorial by proposing some ways to address the challenges we have identified.

ARTICLE HISTORY

KEYWORDS

School design; school space; participatory design; innovative learning environments; policy; practice

The last two decades have been notable for the increasing prominence given to the built educational environment by policy-makers, researchers and, we would hope, educators and students – this key issue of the relationship between schools and their users is one that we will be returning to. First, however, it is worth observing that the discussion of educational space has been happening at the global level (see e.g. Organisation for Economic Cooperation and Development (OECD), 2013; Organisation for Economic Cooperation and Development (OECD), 2017), at the national level in a number of countries (very conspicuously in New Zealand and Australia, but also across Europe and the Nordic countries) and, as the articles in this special issue demonstrate, at the local level of schools and their occupants.

All these considerations and efforts around the built learning environment are focused on the relationship of school space to the core functions and purposes of school education, i.e. to support teaching and learning. Since educational institutions are preparing the next generation for a future that we do not yet know, there is increasing consideration of the necessary, sustainable skills to be taught at school (cf. Organisation for Economic Cooperation and Development (OECD), 2014). In this

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context, the learning environment that has been built is intended to provide the foundations which, according to the project “Definition and Selection of Competencies” (DeSeCo), will lead to the acquisition of the key competences defined there: Autonomous ability to act, integration into heterogeneous groups and interactive use of media and means (e.g. language and technology). The acquisition of the mentioned key competences requires that pupils are enabled step by step to understand themselves as self-acting and self-responsible learners. To this end, traditional, teacher-centred teaching concepts must be transformed into modern, pupil-centred teaching-learning concepts. Transition is the hallmark of the current social, educational policy and pedagogical discussions about future-oriented school education, which are also reflected in changing learning environments. How the context outlined above is reflected and changed in an individual school and its pedagogical concepts regarding the learning space is made clear in the individual contributions of the special issue.

The articles making up this special issue report developments in the Nordic countries in particular, but they all convey important ideas about how the global and the local in education relate, including the travel of ideas and apparent certainties. At first glance, however, it appears that the articles could be placed at different points along this continuum from global to local. Hence, we have Niemi investigating how the transition from traditional school plans to designs that are becoming known internationally as “innovative learning environments” (ILEs) is working out in Finland while Rönnlund et al. consider what Swedish principals and architects perceive as “good” learning environments. In some contrast, the two articles from Rosen Rasmussen and Grannäs and Stavem focus on the school level, investigating specific examples of innovative, open design in Denmark and in Norway, at two different times in the last half century.

The importance of the learning environment for successful teaching and learning processes (c.f. Stadler-Altman, 2016; Woolner, 2010) and for changing processes (c.f. Stadler-Altman, 2018; Woolner, Thomas, & Tiplady, 2018)) is emphasised both in theoretical consideration and in empirical studies of educational science. A space in which learning, and teaching takes place is an expression of socially shared convictions (c.f. Lefebvre, 1991) and thus dependent on the historical and social context (c.f. Gislason, 2011). It is often difficult to see this social connotation in individual studies and to describe the connections from a broader perspective, since the respective research projects can only be dealt with in a complex way. It may therefore be helpful to describe the connecting context of the geopolitical situation of the contributions here from a somewhat more distant perspective. It is therefore our aim to regard the contributions as critical friends and to find the connecting, transnational element against the background of our own examination of this field of research.

Transition

Given the theme of transition across the special issue, it is not surprising that change is a consistent issue within all four articles. It is interesting to delve deeper, however, to see the underlying ideas and examples, and to examine how these play out across the articles and the contexts they represent. All the articles are concerned with how educational ideas and educational environments relate to each other during times of change, specifically whether altered ideas will be mirrored by changed physical settings

and vice versa. The articles also prompt us to ask whether the driving force in these transitions are the ideas, or the spaces, or the overall, socio-political shifts that manifest themselves in the educational institution of school.

In a number of the articles it is possible to see the familiar trajectory of policy, as well as political or cultural, ideas about education being enacted through the buildings, with the aim of changing local ideas and so the practices of teachers and students. Most clear in this respect is Niemi's research context where the new Finnish core curriculum, with its emphasis on learner-centred and inquiry-based approaches is understood as being connected to the parallel, government-led, drive for schools to be designed or remodelled to be more spatially varied and versatile. The study by Rönnlund et al. could initially be seen as a contrast, as it examines the perspective of local stakeholders since the decentralisation of school management from the 1990s has led to policy decisions and actions at the middle, municipal, level. However, while the stakeholders they interview work on local building projects they are "positioned in local, national and global policy landscapes" (Rönnlund et al p. 4). Their views about "good" learning space differ, leading to the authors' rejection of a simple "shift" in school design from traditional, enclosed classrooms to innovative, open space.

The article from Norway, by Grannäs and Stavem, provides the starkest example of how any intentions of enacting educational change through the built environment can go awry. The authors reveal how Norwegian education policy was translated into local policy working directly on the school environment, through stipulating a design of interlinked spaces in place of classrooms, which was a mismatch with teaching practice. If the story of walls erected and pedagogy unchanged seems familiar, and so unavoidable, it is worth considering the possible circumstances of this individual school. The new school was created by bringing together some existing schools, making it necessary to "relocate teachers and students to the new school" (Grannäs & Stavem, p.7) so considerably more was changing here than the physical setting. Although, as these authors note, research elsewhere has suggested a tendency towards conservatism by teachers (Woolner, McCarter, Wall, & Higgins, 2012), the same research team has reported an example of failure to adapt in a UK school through too much change being attempted and, arguably, poorly managed (Woolner, Clark, Laing, Thomas, & Tiplady, 2014). It could be that in this Norwegian school a similarly ambitious transformation of setting and practices was attempted, and its apparent mismatch should not be taken as an indication of the impossibility of education escaping the "hegemony of the classroom" (Burke, 2014, p. 42).

The other school level study, from Denmark (Rosén Rasmussen), suggests an alternative path to transitioning to open space, with a detailed historical examination revealing how educational ideas and use of space seemed to proceed together as school staff developed practices in their new open school in 1970s Copenhagen. The tensions and, sometimes partial, resolutions show yet again the complex process of educational change. Additionally, from the work of Rönnlund and colleagues, it becomes clear that the discussion around the question "What is a good school?" must not only be conducted with teachers, pupils and architects. Rather, the planning of schools and school buildings would benefit from the involvement of a multi-professional team and the stakeholders who are involved in and use the schools. Across the articles in the special issue, such debates about participation in change processes are evident.

In the article from Sweden, many of the ideas about the use of educational space, come from the school leaders and architects, not the teachers, even though they seem to centre on the actions of teachers. Here again we can see the tendency of observers who are not teachers to lay the responsibility for enacting change at the feet of the profession. Although, in the Danish and Finnish cases, Rasmussen and Niemi show that teacher actions are indeed key to negotiating successful transitions, we must be wary of over-emphasising their role in the local-to-global politics and policies that all the special issue articles engage with. As Priestley reminds us, unexamined assumptions about teacher beliefs and behaviour risk positioning teachers simplistically as ‘either “barriers” or “agents of change”’ (Priestley, 2011, p. 2). The complex ways in which teachers position themselves in relation to change indeed become clear in Niemi’s study in the Finnish context. Change processes in schools are and must be predominantly supported by teachers if they are to be implemented successfully. Niemi uses a current example to show that barriers in change processes – be they of a structural or pedagogical nature – can only be overcome if, on the one hand, teachers are actively involved and, on the other hand, the school’s pedagogical concepts are taken into account. In this context, it would also be interesting to include the implicit pedagogical beliefs of the teachers and to make them fruitful for changes, e.g. in school and lesson development projects within the framework of quality development (c.f. Stadler-Altmann, 2018; Zanin et al., 2021)

A view of the traditional classroom as flexible is one which contrasts with the usual perspective on the enclosed classroom, but that is none the less suggested by Rosén Rasmussen’s historical study. It appears from the minutes of meetings that the teachers adapting their practices to open spaces realised that problems with noise travelling, and perhaps disturbing other groups, tended to limit the pedagogic possibilities open to them. This interpretation, in terms of an enclosed classroom’s *flexibility* for teaching and learning practices, is notable in light of the repeated references to flexibility in the articles from Finland, Sweden and Norway. Yet these authors all link flexibility to open plan school design, often describing these spaces additionally as “new” and “innovative” (Sweden and Norway) and “transformative” (Finland). Importantly, however, all these researchers, and sometimes the stakeholders whose views they report, understand that the flexibility of *use*, the variety in practices, that these spaces are supposed to enable depends on social and pedagogical flexibility that is not always evident.

Nordic perspective on transition

The complex relations and tensions across the national level of each country, the connecting geographical location in the north and the international level, with the relationship between school buildings and teaching-learning activities is discussed in all four contributions. The key question is what the typical Nordic element in this discussion can be.

The Nordic cultural context for these school developments and the associated school architecture is evident in that a dynamic and democratic approach to teaching and learning (Tse, 2019) appears in all contributions. The shared view of what distinguishes a democratic society and how this is reflected in the school can be seen in the considerations of openness, both in the historical perspective explicitly in the contribution from Denmark, and from the perspective of the teachers explicitly in the

contributions from Norway and Finland, as well as from the perspective of the stakeholders in the contribution from Sweden. From these perspectives, the variance of reflection on teaching and learning between traditional and modern teaching is also discussed.

This typically Nordic openness is reflected in the open plan schools presented in the contributions from Denmark, Norway and Finland. The Danish school example with open classrooms around shared spaces could be interpreted as a characteristic of an open society that is in a constructive exchange and in which no activities take place behind closed doors. The way in which open spaces are dealt with as described above can also be seen in the examples from Norway and Finland. Here this open basic attitude seems to collide with the need of individual retreat for learning, visible in the transformation activities in the Norwegian school buildings and in some, though not all, of the comments made by the Finnish teachers. This also reveals a social tension between collective and individual needs.

The distinction between physical, pedagogical and social space in the Swedish contribution picks up on this tension. Here the social space can be understood as representative of the social demands placed on schools when it comes to appropriate interaction and behaviour in schools and society. A pedagogical space can be described if it is explicitly about pedagogical interaction, be it teaching or school life together with educational demands. The school building, in turn, as a physical space reflects the ideas of the school and its function in society.

So, if *openness* is the Nordic element in all contributions, then it is put to the test by the transnational, international context. The shared social background becomes clear in all contributions, which on the one hand can be seen in the historical references of a common geopolitical development and on the other hand in a shared conviction that school as part of society essentially passes on the values and norms of this society. The conviction that a democratic society should be characterised by openness can be seen in the school buildings examined and in the discussion about the challenges and opportunities of openness in teaching and learning.

Overall, this special issue could be read as a warning of the challenges of educational change and, specifically, of the problems inherent in the often-suggested spatial transition from schools based on enclosed classrooms to more open educational environments. Given the current enthusiasm in many parts of the world for such physical “innovation” (Campbell, Saltmarsh, Chapman, & Drew, 2013; Ministry of Education, 2011; Sigurðardóttir & Hjartson, 2011) and the burgeoning, often critical, debate about the challenges of open plan design (Imms, 2018), it seems important for this commentary to evaluate very carefully such a conclusion. In essence we feel that, as these articles demonstrate, there are very real challenges for school leaders, teachers and students. Yet, as these articles also make abundantly clear, the educational and societal reasons and values behind attempts at transition, from student choice to engagement, teacher collaboration to learning across disciplinary boundaries, do suggest the attempt might be worthwhile. The transition processes between open and closed school buildings and teaching situations are the cause and result of a divided social discourse, and we must question the demands placed on schools and teaching time and again, since the questions of an uncertain future are answered in the buildings of the past. Therefore,

in the following section, we look beyond these articles and their Nordic contexts to propose some ideas that might assist researchers, practitioners and policymakers.

Openness – flexibility – transition

Firstly, in relation to the possibility of school design responding to Nordic openness through open plan design, we would suggest that open spaces could be provided *in addition to* traditional enclosed classroom rather than always being presented as an arrangement that has to be *instead of* classrooms. This could resolve the tension we noted above between collective and individual needs. Next, in all discussions of school space and use, at whatever position on the local to global continuum, it is necessary to clarify how key terms are being used and to ensure shared understanding. A word that is continually abused in this respect is “flexibility”, and this happens despite many researchers highlighting the range of ideas this single word can convey. To mention just some recent thinkers who we are aware of: Dovey & Fisher, (2014) proposed a distinction, based on the time and effort required between to rearrange a space, between “agile” flexibility and “convertibility”; Woodman (2016) noted the different understandings of flexibility held by architects, teachers and students; Wood (2017) demolishes the idea of flexibility as being about the space in isolation, arguing that a “focus on flexible learning spaces can obscure people and their work . . . people, rather than spaces, should be the focus of design attention” (p. 238).

Widening the scope of our suggestions beyond recent views on the design of school buildings, we propose rediscovering some old ideas that have been presented by academics researching learning environments, as well as other issues in education, and which these articles have reminded us of. Starting at the most local, school, level, Rosén Rasmussen’s reflections on the importance of the furniture chosen for the 1970s open plan school and the comments of Niemi’s teachers about who “can decide the furniture” (Niemi, p.10), recall a diagram in a seminal research publication about open plan schools. In the UK in the 1970s, Bennett and colleagues conducted an extensive mixed methods study that included observations of practice in primary schools with open plan designs across the country. In attempting to summarise their multiple findings and convey the complexity of the relationship between material and social aspects of the learning environment, they present a diagram (Bennett, Andreae, Hegarty, & Wade, 1980, p. 173) that includes “furniture” as a key influence on the use of school space through an interactive relationship with “teaching organisation” and “circulation”. Also in the 1970s, but drawing primarily on experiences in schools in the US, Proshansky and Woolf proposed an insightful distinction between the way that resources, furniture and spatial arrangements can facilitate educational change through their “*pragmatic* role” but also through the “*symbolic* message of what one expects to happen in a particular place” (Proshansky & Wolfe, 1974, p. 558–9, italics in original).

Moving away from researchers concerned with school space, Stephen Ball and colleagues have been investigating educational policy in the English context for the past half century. We need to remember their understanding of how policy is not tidily and completely “implemented” but is instead rather more messily “enacted” at school level in each and every school (see e.g. Maguire, Braun, & Ball, 2015). These articles, together with the expanding body of research about school space, show clearly that

there is no reason to expect educational ideas enacted through the built environment to be any more homogenous across schools.

Finally, the comments by the non-teaching Swedish stakeholders about using innovative space ‘to make teachers teach in a more “non-traditional manner”’ (Rönnlund et al., p. 11) reminded us yet again of the desire to exert control based on ideas that are partial and value laden. Back in 1982, Ian Cooper commented, also in relation to designing schools with the intention of forcing a change in practice, that, “those who seek to influence primary education – albeit by seeking buildings designed to facilitate preferred patterns of use – are involved in politics, for they are involved in attempting to shape or reform the future” (Cooper, 1982, p. 43). Bringing this recognition up to date, we have the recent reflections of Smardon and colleagues on the influence of the OECD on school buildings: “the work of educators is a political project that is inherently affiliated with organisations associated with global economic interests. As ILEs are an OECD initiative, they reflect the interests of a global, economic movement” (Smardon, Charteris, & Nelson, 2015, p. 163).

This global and economic interest is also fostered by educational studies. Barrett, Zhang, Davies, and Barrett (2015), Sanoff (2001) and Walden (2009) show that the built learning environment has an influence on teaching and learning. A well-educated next generation seems to accomplish the promise of an evolving society. However, we need to ask ourselves how our global and local society should and could evolve. As the future is open, plans and decisions must be made in the here and now, within the existing framework. Ultimately, school buildings seem to be only an expression of a social convention (cf. Stadler-Altman & Lang, 2019) and we must avoid falling into a *space trap* in two respects. On the one hand, we cannot assume one-dimensionally that changes in the built environment will bring about a positive change in teaching and learning and, on the other hand, we cannot hold the school building responsible for social changes. It becomes clear in all contributions to the special volume that “space [...] has an effect on people, and people have an effect on space, on other people, but also on objects in their actions” (Noack, 1996, p. 13). According to de Certeau (1988), it is only through actions on a psychological and physical level (cf. Aebli, 2006) that a place becomes a space. Through this linguistic distinction between place and space, he describes a differentiation that distinguishes between the physical place and a space charged with meaning through social behaviour. This systematic differentiation between physical space and social space is characteristic of the present contributions, which also introduce a special Nordic perspective. This makes it clear that school buildings cannot be understood, interpreted and further developed without the surrounding society and geopolitical context. In our opinion, it is this actual increase in understanding of the links between built learning environment, teaching and learning, and societal beliefs that is the particular contribution of this special issue.

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Notes on contributors

Pamela Woolner has an established international reputation for researching educational environments. Her research includes investigations of underlying issues for learning space design, and examinations of the use and development of space in British schools. Currently, she is leading an Erasmus+ project, CoReD <https://www.ncl.ac.uk/cored/>, which is developing tools for school communities to use to evaluate, and change, their school space or how they use it. She has also recently co-authored *Constructing Education: An opportunity not to be missed through the Council of Europe Development Bank (CEB)*, intended as a framework for investments in education https://coebank.org/media/documents/Constructing_Education.pdf

Ulrike Stadler-Altman is a recognized expert in the pedagogical and didactical design of space for teaching and learning. Her particular interest lies in social practices in space, the empirical recording of teaching-learning actions and participatory design processes. As chair holder and research cluster spokeswoman for General Didactics, her research focuses on school and teaching development, teacher professionalism, knowledge transfer processes, student self-concept, and gender in educational science. Her current research projects focus on digitalization in teaching and learning processes, e.g. with the editorship of the “Digital Teacher Education”, special issue of the journal *Teacher Training* under review (1/2021) and the Erasmus+ project “I’m not a robot: Working with AI in day-to-day pedagogical work in nurseries and kindergartens”. She directs the EduSpace Lernwerkstatt (Learning Workshop), which focuses on the learning of didactical thinking, transfer processes and spatial design elements for teaching-learning processes in teacher training (<https://www.unibz.it/en/faculties/education/eduspace-lernwerkstatt/>).

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