

# 2 OPEN-PLAN SCHOOLS IN ICELAND AND PEDAGOGICAL CULTURE

**Anna Kristín  
Sigurðardóttir**



School buildings that are designed according to an open-plan approach have gained popularity in Iceland over the last two decades, both at the elementary and secondary level. Sigurðardóttir and Hjartarson (2011) claim this to be a radical shift in school design moving away from traditional school design, with classrooms of similar size along a corridor, towards open-plan schools or schools with a cluster of classrooms. The intention is to enhance individualised learning, teacher collaboration and team-teaching and provide increased transparency and flexibility for different group sizes and learning styles. This trend is briefly described in this chapter in two sections: first, how and why this development started around the turn of the 21st century, and second, if and how pedagogical culture and practices might be different in open-plan classrooms than in traditional ones. Open-plan classrooms are defined as large learning spaces where two or more teachers are responsible for a group of students (could be up to 100); while a traditional classroom refers to a closed classroom where one teacher takes care of a group of students, normally around 20 to 25. The discussion is mainly based on thorough investigation in 20 schools at the elementary and lower secondary levels in Iceland (Óskarsdóttir, 2014), the results of which have been presented in several publications.

### **THE BEGINNING OF SHIFT IN SCHOOL DESIGN**

The shift towards a more open-plan approach has relatively clear roots in Reykjavík city, the capital of Iceland, around the turn of the century. It can be said that two main events pushed it forward and made it realised; first, a clear and carefully monitored policy that focused on individualised learning (currently named student-centred learning); and second, changes in the way new school buildings were

designed and established buildings were renovated. At that time, many new buildings were designed and built because more space was needed in schools due to increased population and new laws that required the extension of students' school days.

A new educational policy was made in wide collaboration with stakeholders. The main theme was individualised learning with similar characteristics to student-centred learning as defined by Land, Hanafin and Oliver (2012). Student-centred learning is learning that requires a student's active participation in shaping and building his or her own knowledge and understanding. Consequently, daily school work needs to provide activities that enable individuals to address their own learning interests and needs and to study at multiple levels of complexity. This calls for a school and classroom environment that differs from a traditional 20th century environment, with classrooms of the same size, arranged with individual tables in rows and every student facing in the same direction. Veloso, Marques and Duarte (2015) refer to this as an industrial design that relies on old ideas, assuming that learning is a simple linear process where the teacher transmits knowledge to the students. This does not follow the tenets of student-centred learning.

The policy was intended to influence all aspects of schooling; teaching and learning as well as the physical environment as a whole. It was assumed that in order to implement the policy, a holistic view and coherence was necessary (Sigurdardottir, 2007). Too often the physical environment is left out in educational reforms as a factor that might enhance change. This is normal as there is limited empirical evidence linking the physical learning space and educational practices (Blackmore et al., 2011; Woolner, McCarter, Wall, & Higgins, 2012). Gislason's (2010, 2015) conceptual model is one of few explaining this link suggesting that the physical space, teaching organisation, staff culture and student milieu are ele-

ments which are logically aligned with one another. This means that the organisation of teaching should reflect cultural values and assumptions among staff and be congruent with physical design. Consequently, innovative school design would only promote intended educational changes if the other components are taken care of.

In line with these ideas, a measurement tool was developed (Reykjavik City Department of Education,



2005) describing the development towards individualised learning, focusing on six factors including the physical environment. An environment that fosters individualised learning was supposed to be open and flexible and rich with technology.

The second event that most likely influenced the change in the design of school buildings, is the way new buildings were prepared and designed. A collaborative process called the design-down process (Jilk, 2002) was used at the very beginning of the

design process. A carefully chosen group of different stakeholders was required to move sequentially through a series of design steps, with each step built on decisions from previous steps. The group first defined fundamental ideas and values to underpin work at the new school, and then moved on to define the structure of pedagogical work. Finally, the team made decisions about the building itself, which inevitably must be different from buildings designed for older ideas about learning. Sigurdardóttir and Hjartarson (2016a) describe the work of one of those groups that designed innovative schools and found out that ten years later the vision established by the group has been realised in the school work to a large extent. At the beginning of the century, using these kind of collaborative processes was the norm resulting, in various types of new buildings, but most often with an open approach, meant to enhance flexibility and collaboration.

### **PHYSICAL SPACE FOR STUDENT-CENTRED LEARNING**

Flexible spaces for flexible learning are frequently mentioned as a condition for creating the environment appropriate for teaching and learning in the 21st century, with focus on student-centred learning, teacher teamwork and new technology (Barrett, Zhang, Moffat and Kobbacy, 2013; Benade, 2015; Blackmore et al., 2011; OECD, 2013). In schools, where the emphasis is on student-centred learning, the entire space is seen as a learning area and is not divided into traditional classrooms. Rooms are of different sizes, and serve multiple functions; they may have sliding glass walls and movable furniture. Common areas are designed that are suitable for collaboration (Eiken, 2011). However, what counts as an innovative practice is controversial and depends on conditions at each given school (OECD,

2013). Consequently, there are different approaches regarding the question of how far the aim should be to open up and “deprivatise” educational spaces. The general trend seems to aim towards creating visibility, which means, among other things, opening up classroom doors so that learning and teaching can be shared.

### **PHYSICAL SPACE AND PEDAGOGICAL CULTURE AND PRACTICES**

It should be noted that even though the majority of recent school buildings in Iceland are in favour of the open-plan classroom, the most common arrangement is the traditional classroom setup of one teacher with a group of students. This was the case in 60% of 380 observed lessons in a recent study on Icelandic schools, especially at the lower secondary level (Sigurdardóttir & Hjartarson, 2016b). Open-plan classrooms were evident in 19% of the observed lessons, most often in the youngest grades (27%). There were, however, examples where the physical space threw off the other elements in Gislason’s (2015) model. In some cases, the building had been designed as an open-plan school but in other cases walls had been removed in order to accommodate team teaching. In some cases, the teachers had decided to collaborate and organise team-teaching and share responsibilities in spite of a traditional classroom arrangement. There were also examples of classrooms that had been designed as open but had subsequently been closed by building walls. Wide sliding doors or portable walls between classrooms were common in all schools but most often these walls were closed.

If and how differences in the physical environment change educational practice are not simple questions, as many theoretical and methodological issues are unsolved, and different studies indicate



contradicting results (Imms, 2016). In the Icelandic study (Sigurdardottir & Hjartarson, 2016b), teachers' responses in an electronic survey indicated that student-centred learning was at a slightly higher level in open-plan classrooms than in traditional ones. Students were allowed more choice in the open-plan classrooms and teachers claimed that they gave students different tasks according to learning ability. Also, as expected, teacher collaboration was much



more prevalent in open-plan schools than in traditional ones. Teaching methods, on the other hand, seemed to be not so different, according to teachers' responses. Some methods commonly associated with individualised learning did not feature strongly in any of the classrooms. Direct instruction was the most common teaching method in both types of classrooms, but significantly less used in the open-plan classrooms. The comparison also shows that there was not a significant difference between teach-

ers' use of some methods, such as individual work with worksheets and written assignments. Neither was there a significant difference in teachers' use of group work and collaborative work, experiments and hands on tasks, and independent or collaborative project work, methods that are commonly associated with student-centred learning (Land et al., 2012). Drama and learning games were used more in open-plan classrooms. These results are in line with earlier findings indicating that teachers do not necessarily change their teaching practice as they move from traditional classroom spaces to a new school building with open-plan classrooms (Woolner et al., 2013). Osborn (2016) claims that it is maybe not a good idea to abandon a traditional arrangement, such as a teacher-centered learning environment or older technology, and replace it with new techniques. Teachers and students need to get used to a new type of technology or pedagogical approach, and teachers need ongoing training to adapt their pedagogical practices. Therefore, a blend of old and new might be a good solution.

Interesting differences also appeared in professional dialogues between teachers working in open and traditional settings (Óskarsdóttir, 2014), indicating differences in pedagogical culture. Teachers working in open-plan classrooms claimed that professional dialogue about school issues was critical and were more open to dialogue than those working in traditional classrooms. They also believed that they were more involved in decision making concerning school issues and collaborated significantly more on various aspects of their teaching than their colleagues in traditional classrooms. These aspects are considered to be strong predictors for a mature professional learning community (Sigurdardóttir, 2010) that again linked positively with school effectiveness in different studies (Fullan, 2016). Ingvar Sigurgeirsson and Ingibjörg Kaldalons (2017) suggest, however, that these differences in pedagogical cul-



ture have their roots in team teaching rather than the arrangement of the space. Open-plan classrooms are designed to enhance team teaching which they in most cases do, but it is not ensured.

## **FINAL REMARKS**

Meeting each individual's needs has been on the agenda in Iceland for decades, and was rekindled at the beginning of this century under the banner of individualised learning by Reykjavik and some other local educational authorities. A prominent part of these efforts was to create a physical learning environment that supports the development of this aim, calling for more openness and flexibility, as discussed above. Evidence, on how it has succeeded, is contradicting. Icelandic teachers, regardless of which kind of environment they are working in, seem to appreciate features like varied environments for different group sizes, dynamic boundaries and ability to change facilities according to pedagogical needs and ideas (Óskarsdóttir, 2014). Pupils at the elementary level were generally pleased with their classroom environment, especially if it involved sofas or soft and cosy areas (Óskarsdóttir, 2014), while students in upper secondary schools value an environment that gives them the flexibility or power to make decisions about their learning preferences (Sigurdardóttir, 2018), such as an environment that is more social and useful for informal learning (Osborne, 2016). Some evidence claims a positive impact of open programmes on student attitude and behaviour (Imms, 2016). The students' ideas cohered well with international recommendations about innovative learning environments (OECD, 2013), thus making it worthwhile for education authorities at all levels to listen to them. The classroom observations in the Icelandic study (Óskarsdóttir, 2014) disclosed only a few indications of student-centred learning as described, for example, by Land et al. (2012), such

as self-directed inquiry or opportunities for students to make independent decisions about learning. This however was more frequently noted in the open-plan classrooms than in the traditional ones (Sigurðardóttir & Hjartarson, 2016b). This is in line with results from Prain et al. (2015), suggesting that open-plan schools are promising in terms of enabling more personalised learning and student well-being. Many questions remain unanswered about how changes in the physical environment might affect educational changes. Open classroom arrangements alone do not necessarily facilitate different teaching methods. It should also be noted that there is not one type of open-plan school as there is not one type of traditional classroom. To categorize classrooms in only these two groups may seem to be oversimplification. As Gisla-son (2015) suggested, coherence among learning organization, staff culture and student milieu also need to be taken into consideration. Although there is weak evidence confirming the physical environment as a factor to enhance pedagogical change, that is not to say that the design of school buildings is unimportant or that they should not be carefully planned as was evident in Sigurðardóttir and Hjartarson's (2016a) case study. School buildings are intended to last for many years, and it is important that their design has the flexibility to support pedagogical changes and respond to new knowledge about effective learning and the utilisation of new technologies.