CoReD Collaborative Redesign with schools

Cross case synthesis: SES

Tool: Stories of Educational Spaces (SES)

Past, present, and potential future design and adaptive reuse of educational spaces

Range of contexts of use

Schools: The tool has been used in four school contexts:
1. Nørre Fælled School: A Danish primary and secondary school under reconstruction. Built 1932.
2. Vesturbaejarskolí: A reconstructed Icelandic primary school. Built 1988//1999/2018.
3. George Stephenson High School: An English secondary school with outdoor facilities. Built 1970.
4. Danish School of Education: A higher education institution as part of a teaching program. Built 1941-1948.

Participants:
Nørre Fælled School: 4 students from year 6, 3 teachers, the school leader, and a municipal employee assigned to help mainly with practical tasks during the reconstruction process.
Vesturbaejarskolí: Close to 20 teachers, five focus groups.
George Stephenson High School: 10 students, age 11-12.
Danish School of Education: 7 master students in the programme Educational Theory and Curriculum Studies (Material Culture).

Building type and condition:
Nørre Fælled School: Old brick buildings from 1932, about to undergo reconstruction due to a bad ventilation system.
Vesturbaejarskolí: Concrete building, erected and taken into use in three steps, in 1988, 1999, and 2018.
George Stephenson High School: 1970s build with more recent extension; split into several 'blocks' some of which are freestanding buildings and others are attached by an interconnecting corridor.
Danish School of Education: Red brick building from the 1940s, redesigned interior in 2021 by architects from Arkitema.

Design phases – planning/inhabit/reflection:
Nørre Fælled School: Between planning and reconstruction, in use reflection.
Vesturbaejarskolí: Post-occupancy evaluation after recent extensions.
George Stephenson High School: Planning.
Danish School of Education: Under reconstruction (almost finished), in use reflection.

Looking across the four cases, we saw a differentiated use of the tool along three aspects. The first aspect was regarding the use of the tool on different educational levels: primary, secondary, high school, and higher education. The second aspect had to do with the focus on indoor or/and outdoor environments. The facilitator in the workshop in George Stephenson High School, Vesturbaejarskolí and The Danish School of Education directed the tool towards either outdoor or indoor environments. In Nørre Fælled School there were given no restrictions and the participants spontaneously chose both indoor and outdoor spaces giving way for discussion of the relation of indoor /outdoor. The third aspect dealt with whether the tool was used in homogeneous groups (e.g. students or teachers only) or in mixed groups (teachers, students etc. together).

Nørre Fælled School (left), built 1932 and George Stephenson High, built 1970

Rationale for activities and tool adopted

Why was SES used?

In all cases the tool was chosen for its combined focus on past, present, and future use as all schools had a history they wanted to relate to and bring with them into renovations, reconstructions, and redesigns, respectively.

Nørre Fælled School is an old school building with a lot of history and hidden/overlooked qualities. The school is about to enter a renovation project due to bad ventilation and sees an opportunity to use this renovation to adjust and improve the physical overall learning environment.

Vesturbaejarskolí's building is of a newer date. Here, SES served as a tool to address areas that did not work well or as intended. It was experienced to be helpful and served its purpose without difficulties.

George Stephenson High School: in September 2021 when a new cohort of Year 7 students (aged 11) transitioned to the High School from their primary schools, the staff noticed a group of students that were struggling to cope with the new larger environment (physical and social). It was decided that a 'nurture' group would be created with students invited to take part in two creative after-school clubs with a main activity: developing the outdoor space. For this process, the SES tool was selected. The aim was to encourage the students to think about past and current use and to reflect on how they would like to see it developed in the future.

Danish School of Education: the tool was used as part of a course program. It served the purpose of reflecting on the university space under re-construction, but it was also an invitation for the students to comment on the tool-design itself.

Who was leading?
Nørre Fælled School: the workshop was led by the Danish researchers in the CoReD project. The participants picked their own preferred places.

Vesturbaejarskolí: the places in focus were selected by the school principal in advance of the workshop. The workshop was led by the Icelandic researchers in the CoReD project.

George Stephenson High School: the workshop was led by the Design Technician at the school.

Danish School of Education: the workshop was led by one of the Danish researchers in the CoReD project. The participants picked their own preferred places.

The tool requires a facilitator, one who takes the lead in presenting the tool and structuring the workshop and the dialogue at the end of the workshop. Although many of the case study workshops were led by researchers, this was not necessary for all the schools. Furthermore, the researcher-led workshops enabled the SES instructions to be developed, including the addition of advice on sharing images and ideas digitally. This tool therefore requires no expert knowledge on the part of the facilitator.

Nature of starting environments

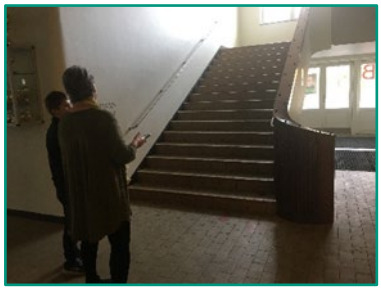
A survey about attributes of the school environment (adapted from Lackney 2008) was done in most of the participating groups in the case-schools. In this survey, the participants evaluated their school spaces at the time of the tool-trial workshops.

In Nørre Fælled School, the existing school space was rated relatively low on all parameters from accessibility to aesthetics, and crowdedness. The school had not been renovated for a long period of time and many of the facilities were worn down. The score was low on the physical comfort of the buildings, but higher on the physical comfort of furniture and resources. Recently, some of the layout had been changed and furniture replaced. Regarding ownership and personalisation, the score was higher. So was the score for legibility and wayfinding as well as spaces for social interaction.

At Vesturbaejarskolí in Iceland, the participants were quite positive in their answers to questions about their school building as an environment for teaching and learning, collaboration and organization. The teachers found it well aligned with school policies and well suited for their everyday teaching practices. Only two or three teachers out of eighteen respondents seemed to find the facilities collided with the school organisation, time schedules, or educational emphasis of administration and staff. Four teachers seemed to find the school building not adequate for teacher collaboration and half of the participants seemed to think that they might benefit from some direction on how to make the most of the educational spaces the building had to offer.

The CoReD researchers in Newcastle have summed up the situation at George Stephenson High School as 'a shared educational environment with which they had some concerns, but where they were broadly supportive of professional relationships.'

When asked about the nature of the starting environment, the students at the Danish School of Education rated most dimensions except the problem of crowded spaces in the higher end of the survey scale. Moreover, the survey's question about personalisation and ownership had a low score and was even left blank by many. The students' move between different teaching rooms, and they had also been away from campus for most of their study because of the Covid19-lockdown. Both may explain the answers to the questions about personalisation and ownership. At the time of the trial, the new common areas, part of the renovation project, were not ready. These areas have the purpose of facilitating the students belonging to the place. Finally, the participants were asked to rate meaning in the sense of whether the school had a recognisable history, story or collective memory. This was generally rated in the highest end of the scale.



Groups explore hallways: corridor and stairs in the older Danish school (left); teachers documenting thoughts and ideas about open areas in hallways within the newer Icelandic building (right)

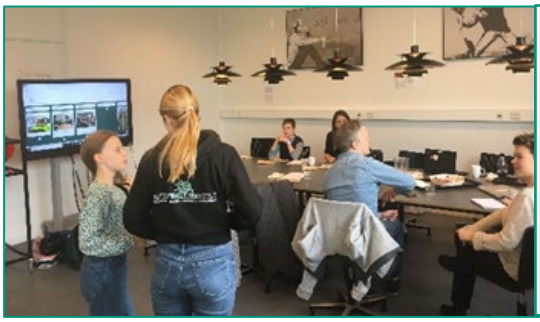
What happened?

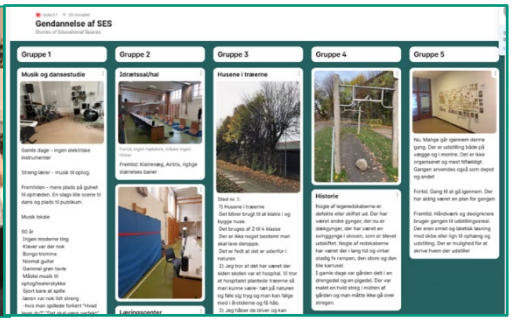
Process:
In all four projects, the tool trialling took place as a collaborative, participatory process with mutual knowledge exchange between the project partners and the education practitioners. As such, the outcome was beneficial for both projects and practitioners. In some schools, the groups were mixed between ages and professions (Nørre Fælled School), whereas in other schools the groups consisted only of teachers (Vesturbaejarskolí) or students (George Stephenson High School, Danish School of Education). Both constellations have been experienced as beneficial. It is worth mentioning that the tool in all cases served to even out potential hierarchical relations among the participants giving way for an open and equal dialogue.

Products of the tool:
Nørre Fælled School: A Padlet presenting the stories, photos, and drawings of the focus groups.
Vesturbaejarskolí: A Padlet presenting the stories, photos, and drawings of the focus groups.
George Stephenson High School: Physical papers with stories and suggestions from the focus groups.
Danish School of Education: Physical papers with stories and suggestions from the focus groups.

Notes from the participants' presentations in the last part of the workshop were written down and returned to the school leader for future use. The Padlet was a digital solution introduced after the first trials. It was asked for by the students as an easier – and more familiar - way to collect and share data.

In the meeting room sharing ideas with Padlet on large screen





Developing the tool:

The tool had not been tested before as it was developed for the CoReD project. During the four cases, it went through a substantial adjustment, particularly based on the experiences from George Stephenson High School and The Danish School of Education. In both schools, some of the participants expressed insecurity when asked to include what they understood as the historical facts of the building. As such, the historical element of the SES tool was experienced to be too difficult as it demanded prior knowledge about the actual architectural history. In the Icelandic trial, the participants were all teachers with some kind of knowledge about the history of the building, which made the original design of the tool manageable.

Therefore, an element of storytelling was added to the tool for the last trial (Nørre Fælled School). Instead of focusing on historical facts, the participants were asked to work together to make stories about the spaces they had picked as interesting, using their imagination, building on their curiosity and their fascination and perhaps bits of historical knowledge or myths of the school. In the storytelling part, they were asked to include people, practices, and descriptions of the space as it could have looked like or as it could come to look like. Introducing the aspect of storytelling at Nørre Fælled School removed the feeling of insecurity and served to start the process **'***where the participants are physically and mentally',* as suggested by the first heuristic principle to facilitating collaborative engagement about school spaces. It also helped to **'***facilitate the exploration of ideas and possibilities'* much more effectively than the original tool design. Based on these experiences, the tool was changed, and the manual was adjusted with the element of storytelling as a new possible focus.

It was interesting to experience how the participants sometimes chose surprising and less acknowledged spaces to explore in the use of the tool, e.g. a tree at the back of the school yard, explained as an excellent place to play, or an empty and overgrown atrium yard. The storytelling made it possible to share the fascination and experiences of these places. When sharing and making stories, some of the participants would even have knowledge about the former use of the chosen spaces, thus in a more subtle sense rediscovering the stories of the school. At Nørre Fælled School, the use of the old building as a hospital was rediscovered. In the young school, Vesturbaejarskolí, the participants had profound knowledge about the original idea behind the design and the first years of the school's life. Sharing the present use and future visions for the specific spaces in the final part of the workshop where all participants took part also gave way for a joint discussion of values and wishes related to teaching strategies and everyday school life.

The tool, with the element of storytelling introduced, was also used for rethinking spaces. Being able to relate to the specific space and each other's narratives made it an alternative to the difficult task of thinking out of the box. Relating and working on stories of the past, present and future created a safe platform for reflecting on the existing environment and the use of it but also for rethinking and coming up with new ideas. This took place in the participants' stories and drawings but also in the joint discussions at the end of the workshop.

Outcomes

At George Stephenson High School, the SES tool was combined with the Diamond Ranking tool. This pairing was experienced as complementary, with the tools working successfully together to enable the students to start thinking about the type of outdoor spaces they like more generally, and then to focus on their current space and ideas for the future. The tasks required collaboration and talking, both of which were important for this particular group of students who were struggling with the transition to the High School.

It is too early in the process to say if the tool has produced any actual physical changes in the other cases. At Nørre Fælled School, the re-construction process was about to begin at the time of the tool testing. At Vesturbaejarskolí, important discussions about the original intentions behind the school design were raised and reinserted into the awareness of new as well as old teachers. At the Danish School of Education, currently being refurbished, the students were getting actively engaged in the questions and potentials of the physical changes in their learning facilities, thus creating a sense of belonging and responsibility.

We would claim that working with the tool, focusing on physical areas of the learning environments, and connecting these with past, present, and future activities, the education practitioners and students have gained enhanced environmental awareness. It has even helped produce actual suggestions for school space (indoor and outdoor) developments, but also for better use of the existing facilities. Furthermore, it has created shared attachment to the school across groups in its material but also immaterial (and more historical) sense, making way for better wellbeing and enhanced engagement and attainment.

Icelandic Padlets: Group 1: Glass house and roof top balconies – Group 2: Glass house and roof top balconies – Group 3: School library and indoor balconies
Group 5: Hallway areas and corners outsides classrooms – Group 6: Hallway areas and corners outsides classrooms

Conclusions

Who should use this tool and when?

The tool supports the four heuristic principles to facilitating collaborative engagement about school spaces:

1. Start where people are (mentally and physically);
2. Understand the intertwining of physical, organisational and social aspects of school environment;
3. Facilitate the exploration of ideas and possibilities and;
4. Appreciate the complex lengthy process that is change.

The tool takes the actual physical school environment as its starting point, inviting the users of the spaces (teachers, students, and school management) to explore this from three perspectives - past, present, and future use - in collaboration. Through this, the tool supports the first and second principles. Furthermore, the tool invites the users to explore ideas and possibilities of the spaces (principle 3) by narrating stories about future uses and visualising these in drawings of the physical space and activity. The tool has been further developed during the tool testing based on the experiences from George Stephenson High School and The Danish School of Education. In both schools, the historical element of the SES tool was experienced to be too difficult as it demanded prior knowledge regarding the actual history of the spaces. For this reason, the tool was iterated and developed with the narrating part to fulfil the aim of starting where people are mentally and physically in a better way.

The tool is applicable in several stages of a design process, from planning to post-occupancy evaluation and in use reflection. It is suitable for use in relation to old school buildings but can even be used in newer schools to discuss intended pedagogical visions behind the design in relation to actual use as well as to develop malfunctioning areas.

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