Tool: Survey on Students' School Spaces (S3S)

Range of contexts of use

S3S has been used in three schools – two schools in Portugal (Eugénio de Castro School and Rainha Santa Isabel School) and one school in the UK (Ponteland High School). In addition to their diversity on geographical contexts and age range, these schools are particularly different on their building conditions and design phases.

The Portuguese schools are both located in the centre of the country, in Coimbra, and are both Basic schools with students from Year 5 to 9 (with ages between 10 and 15 years old). Nevertheless, they clearly vary in their location - whereas Eugénio de Castro School is located in the city centre in a sector predominantly inhabited by the upper and upper-middle social classes; Rainha Santa Isabel School is situated in a peri-urban area, socially and economically deprived, encompassing a large rural area to the north of the municipality.

It was assumed that comparing the use of the same tool in two social and economic distinctive contexts, it would portray a more effective conclusion on its validity and a more straightforward comparison between students' wishes and spatial needs for each school.

Both school settings differ from that of Ponteland High School, located in a semi-rural area in Northumberland, UK, apart from the city centre and with students from 11 to 18 years old (Year 7-13).

Even though all these schools used S3S as a Post-Occupancy Evaluation tool to enable reflection on the existing building and to consider possible spatial and organisational interventions, the most striking differences between the three schools are their condition, construction date and building type. The use of S3S in these three schools enabled the research team to assess whether the tool is flexible enough to identify the spatial needs in a wide array of building types and conditions, and whether it is user-friendly and accessible to students from several age ranges and social contexts.

Schools dating from the 1970s (top left), 1999 (bottom left) and 2020 (below): very different designs but all were interested in students' views of their spaces.

Rationale for activities and tool adopted

Overall, the application of S3S in all these schools was decided by motivated school leaders who sought both to make students' voices be heard and to make the best for their schools, recognising that bettering school space is a means to accomplish student motivation and success.

S3S aims to gather student feedback on a wide array of school spaces and to enable an inclusive design approach for the co-creation or co-rehabilitation of learning environments. For such purposes it questions the students on their uses and appropriation of their school spaces and their feelings there.

This tool has a bipartite approach: first, it uses an online survey that can question all students of the school in a very wide-ranging way; and then it uses smaller focus groups that detail and justify the previous data. This provides general information on each of the spaces from the survey and then focus on each ones' specificities and potential for change.

Furthermore, the fact that the first phase uses a digital platform overcomes the difficulty of entering the school and dismisses the need for a face-to-face contact with each student or class. This is triangulated with the focus groups on-site that are less time-consuming or disruptive for the overall daily activities of the school, because they are composed of a smaller sample of students.

This school stands on a bland paved area and lacks comfortable student communal space indoors or outside

Nature of starting environments

Eugénio de Castro School is the oldest building from these case studies and the one with more pressing needs for spatial intervention. It dates from the 1970s and has a pavilion layout, which is very frequent on the schools from that period that were constructed in Portugal, disregarding local and geographical specificities. Although several of these schools have naturally been refurbished in the meanwhile, and despite site-specific changes that this particular school has undertaken, it still lacks a more extensive design proposal for a large-scale intervention that will enable it to answer comfort, material, functional and curricular contemporary educational needs.

Rainha Santa Isabel School dates from 1999 and is composed by three parallel blocks, each with two floorplans, and another building for the canteen, all standing on a very bland paved area. It currently has around 500 students, which is approximately half of the students from Eugénio de Castro School. Although it does not suffer from major functional or material issues, its more noticeable problem is the lack of comfortable communal indoor, but especially outdoor, spaces for the students.

Ponteland High School is different from these schools in terms of age, size and some design features. It opened in 2020; holds other community facilities on site such as swimming pool, sports hall, café and library; and it has 1600 students. Here, the use of S3S was intended to gather student feedback on the various spaces of the new school in order to continuously improve the school, its appropriateness and the comfort provided by its spaces.

What happened?

This tool has two phases, which the three schools have implemented. The first phase consists of an online survey and comes with a tutorial that comprehensively explains the task at hand. This can be done by a teacher, a school leader, or a team.

In Ponteland, UK, the Deputy Head Teacher worked with the team from Newcastle University in a shared approach between the researchers and the school. In Portugal, each school arranged a team composed by the School Director and an appointed teacher that led the process. Particularly in Eugénio de Castro School they were also assisted by the Class Teachers of each of the participating classes.

At this moment, the Portuguese research team developed a tutorial for the tasks needed for each phase, in order to ensure that the tool became user-friendly and easy to implement by the school, rather than by the researchers. Nevertheless, the team from the University of Coimbra accompanied all the developments in Coimbra and facilitated the process overall. This proved to be mutually beneficial to all, since the school's assignments were supported by the researchers, and the researchers assisted the schools and adjusted the sequential development of the tasks to improve and validate the tool.

Phase 1: online survey
The online survey from phase 1, enables to assess a wide range of school spaces and is divided by default in the following five types:


- Outdoor spaces
- Formal learning spaces
- Study spaces
- Eating spaces
- Communal and circulation spaces
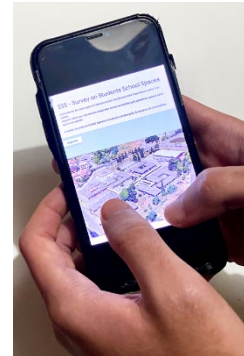
Nevertheless, it is up to each school to choose the spaces to photograph and to analyse on the survey. The Portuguese schools chose respectively: the outdoor area near their entrances, a regular classroom, the library, the cafeteria, and the students' communal living room. Ponteland School chose the following areas: dining facilities, outdoor social spaces, classroom environments, specialist teaching rooms (technology and science labs), indoor social spaces, and wider learning resource spaces (library).

In Portugal each school chose two classes: one from older students who had attended the school for longer, and one from younger students, respectively from Year 7 and 9. In Ponteland the survey was completed by 674 students from Years 7-10.

Just from this point, it is possible to conclude that the survey is far-reaching and enables either a smaller sample, or all the classes to be involved in this participatory process. Furthermore, it is not restrictive to the spaces listed by default, it is adjustable, simply by making a copy of the existing template and developing a specific version for each school. This enables each school to modify it according to their needs and specific spaces, and also according to their objectives in using this tool. E.g.: A school may want the survey to depict the school overall with all its different spaces, it may prefer to focus on a specific one, or to change one type of space that is listed into another more relevant space for that school.
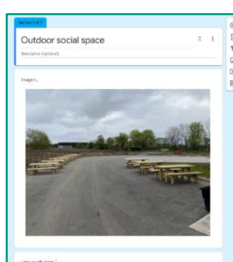
The phase 1 online survey (left) can be redesigned according to each school's needs and with images of their spaces. The results (right) are used to plan the phase 2 focus groups.

Phase 2: focus groups

As S3S uses a google form, it can very easily export the data into tables and charts that systematise all the information gathered and that can act as the basis for phase 2. In this phase a small sample of students is selected to participate in the focus groups.

In Portugal, each of the contributing classes organised a focus group, whose participants were chosen by their Class Teacher. These teachers also led the focus groups, as they know these students better and can facilitate an open discussion with them about the spaces visited along these walkthroughs.

In Ponteland it was older students (aged 17-18 years) who led the focus groups, which was an innovative approach to this phase. It proved very positive, since students were able to directly engage with their peers and, in addition, developed significant skills (data analysis, conducting focus groups, report writing, presenting information) that will be relevant for their future academic and professional paths.

Outcomes?

As seen, the online survey displays student feedback on each of the spaces analysed regarding their feelings and uses, but also their feedback on each space's dimension, comfort, light, equipment / furniture and location. This is intentionally focused on architecture and can be the basis for future interventions on these schools. Then, the focus groups enable to identify the reasons for these earlier findings and to detail the reported needs.

Even though both Portuguese schools have distinct locations, configurations and ages, the most prominent comments from all the students reported the need to renovate the outdoor spaces, which are widely used by them, and which could be improved on their materiality, conform and furniture. Students transversally stated they would like to have dedicated spaces to play sports on their breaks, to have spaces to study and eat outdoors, and to have more green spaces to shelter then from the heat often felt in Portugal.

Another space that was highly mentioned in both schools was the students' communal room, which needs pressing spatial interventions, namely, to increase its comfort with appropriate tables and chairs, and other specific furniture and equipment that could allow leisure activities such as: art and crafts, informal conversations, and board games.

Students also concurred that the library is one of the most comfortable and the best equipped spaces in both schools, and a space not just for formal study activities, but also to play pedagogical games, to study with the peers and to read casually.

They also agreed that the canteen, and particularly both cafeterias would benefit from a wider dimension. Both schools also lack maintenance and better equipment and furniture overall. But as Eugénio de Castro School is an older school, students widely complained about the classrooms that need severe attention on their comfort, equipment, lighting conditions and technological devices.

Outcomes?

Opposite to these circumstances, the Ponteland High School, because it is very recent, has identified other weaknesses, often related to spatial configuration and the morphology of the overall building. This is related to the lack of comfort the students feel in larger and wide-open spaces, such as the library and the eating areas. The outdoor spaces have also been listed as spaces that need interventions for sheltering the students in the winter. The Deputy Head Teacher at Ponteland school welcomed the results from the tool implementation and has considered spatial alterations regarding the sight-lines in the science/technology laboratories, the possibilities of providing sheltered outdoor spaces, and a new outdoor serving area.

At this moment, the Municipality of Coimbra has accepted at large the outputs from S3S in Rainha Santa Isabel School and is considering its development by phases. Eugénio de Castro School will have to be subject of a deep refurbishment intervention. As this rehabilitation programme will have to be undertaken in stages, the use of S3S has enabled to identify the most pressing needs of the school and to discuss with the students the potential immediate interventions. In the future, the outputs conveyed by this tool and student feedback will enable to inform and monitor the various stages of that intervention.

Conclusions

Who should use this tool and when?

S3S aims to enable students to reflect on their school space and to empower them to participate in the co-creation or co-rehabilitation process. By using the tool students are able to express how they report to their school spaces, what are their feelings in each one, what are their uses and their overall feedback on the spatial condition such as light, dimension, location and comfort. This acts as significant input to a participatory design approach that is developed with the school community and stakeholders overall, in order to more fully answer their spatial needs and to increase the sense of belonging and appropriation of their school.

All in all, the process was conducted differently in the three schools, which helped to test and validate the tool. It is concluded that the tool is user-friendly, can be adjusted to each school's needs, and can also be implemented either with a small or a larger sample of participants.

In Ponteland, as the students conducted the focus groups, their role was increasingly more involved in the school. Because this also trains students' skills regarding communication, debating and critical analysis, it can be suggested that these tasks can be considered curricular activities for those involved and with dedicated time on their schedules. This would benefit student motivation and involvement, and would also strengthen the relevance of these participatory school activities for students.

The pilot study in Portugal has also taught us the relevance of planning a School Assembly as the last phase of this process. In this session, which was organised in both schools, the results from the tool are displayed and collectively discussed, and all the school community – students, teachers and stakeholders at large - can potentially agree on the most pressing spatial interventions. Hence, the tool description should emphasise the need for a final moment / session in which to present and discuss the outcomes to the wider school community and to analyse with the students the possibilities of refurbishment in a participatory approach to design.

This Assembly can also be considered an inclusive opportunity to gather all the community, to facilitate the exploration of ideas and co-creation towards a common goal, and to make all the stakeholders accountable for the decision-making concerning the shared space by all.