

Engaging Voices. How Participatory Research Transforms School Development at Bergen Christi Krybbe

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Summary and Acknowledgement

This paper explores the role of participatory school research in promoting socially sustainable educational environments by integrating the perspectives of both teachers and students in decision-making processes. Based on a case study of Bergen Christi Krybbe, the analysis is in line with the Bergen Municipality's school development guidelines, which emphasise schools as community hubs and the importance of student participation in learning processes.

Despite its success, Bergen Christi Krybbe faces several key challenges: limited indoor sports space, anti-social behaviour in the schoolyard during off-hours, inadequate accessibility, lack of green space and the physical separation of the school sites. In response, the authors draw on their expertise in architecture and planning to propose recommendations aimed at enhancing both the educational and community functions of the school.

The recommendations are divided into three main areas: (1) facilitating increased community use, where school spaces are shared with local groups for activities; (2) improving accessibility to ensure that facilities are inclusive of all users; and (3) establishing management frameworks for a community facility, with options for direct provision, hosted activities or shared management between the school and local authorities.

These recommendations are not intended to provide specific physical solutions but rather to outline strategies that could promote community cohesion, reduce anti-social behaviour and ensure that the school remains a central, multifunctional space within the community.

This research was planned and conducted by a team of highly skilled and diverse professionals. The authors would like to express their gratitude to the school for their outstanding support and continuous esteem, in particular Headmaster Martin Aas and Deputy Head Benedikte Heldal. The authors would like to thank the following colleagues from HVL who made significant contributions to this project: Ingjald Pilskog played a pivotal role as the initiator of the collaboration, facilitating the connection between Christi Krybbe School and HVL. Sasha Brown contributed to the planning of the participatory project, the research design, carrying out the participatory research, and the analysis of the findings. Yngvild Bjørlykke contributed to translating and preparing the research material and carrying out the participatory research.

KEYWORDS: school development, participatory research, space syntax, policy recommendations



Figure 1: Students showing their drawing for how they would like to see their school changed.

1 The Role of Participatory Research

Participatory school research, involving teachers and pupils is crucial for successful and socially sustainable schools. This approach ensures that the insights and experiences of all stakeholders are integrated into the decision-making process, leading to more effective and sustainable improvements in educational outcomes.

The recommendations drawn from this case research build on the above rationale, but also correspond to the Bergen Municipality's most recent guidelines for school building development. More specifically, it deals with guidelines concerning exterior parts of the learning environment, which requires development of schools as the "heart of the local environment" (cf. Skolebruksplan for Bergen 2021-2030, p. 22) as well as interior parts of the learning environment in which "increased student participation in the entire learning process" is emphasized (ibid, p.21).

1a Bergen Municipality's School development policy

Bergen Municipality's current school planning and development policies emphasise that the schools have to "act as a heart in their local environment". The municipality urges schools to follow six general principles in development of new, or upgrading and rehabilitation of existing schools. These include:

- Having central location in the local community
Clear visual and accessible connection to the footpath networks.
- Appropriate placement of central multifunctional areas within the school.
- Playful outdoor areas that suit various user groups, being a clear meeting point.
- Good spatial relationships and visual connections among rooms and places within the school.

(Bergen Kommune, n.d.).

In line with these principles, the municipality's program for school facilities requires that schools have to have a "zoning plan" to "ensure that the parts of the school that are supposed to be able to be used by the local environment and other externals are given an appropriate location in the facility." (Bergen Kommune, 2023, p. 6). Consequently, the document urges early involvement of representatives

of the school as well as other users in the planning and design of this zoning plan in order to achieve solutions that meet the needs of the community and are socially sustainable.

Bergen Municipality has also adopted a "school use plan" (Skolebruksplan) for Bergen 2021-2030 which is "the municipality's most important document for planning and designing school buildings and future school structure". The document has a section dedicated to future school structure in each of the municipality districts, where Christi Krybbe School is mentioned as part of the Bergenhus district. The documents indicate that currently a rehabilitation plan is being investigated for the school, specifically in relation to the school's spatial limitations to meet the pupil capacity requirements in the coming years.

The participatory research conducted at Christi Krybbe School serves the aforementioned aims of the municipality regarding school development by involving the school's pupils as well as its management in the ongoing regeneration plans for the school. Furthermore, the findings and the recommendations of the research will improve the integration of the school in its local environment through introducing more spaces that will be shared between the school and its surrounding community.

Figure 2: Students recording their 'favourite' space as part of a frottage exercise.



1b Key benefits of Participatory Research

Why it is important

1. Context-specific solutions:

- Participatory research allows for the development of solutions that are tailored to the specific needs and contexts of individual schools. This results in interventions that are more relevant and practical.
- Measures that improve and deepen the professional cooperation between the teachers
- Real-world insights: Stakeholders provide valuable, first-hand insights into the challenges and opportunities within the school, ensuring that the research addresses relevant issues.

2. Increased engagement and ownership:

- Stakeholder buy-in: When stakeholders are involved in the research process, they are more likely to feel a sense of ownership of the findings and recommendations, increasing their commitment.
- Empowerment: Participation empowers students, teachers and parents, fostering a shared sense of agency and responsibility for school improvement.
- Measures that help to facilitate interdisciplinary and in-depth learning

3. Capacity Building:

- Skills development: Involving stakeholders in research builds their skills in data collection, analysis and interpretation, increasing their ability to contribute to school improvement.
- Empowered Stakeholders: Capacity building ensures that all stakeholders are well equipped to engage in meaningful research activities, leading to more effective and impactful outcomes.

4. Improved data quality:

- Rich, diverse perspectives: Diverse stakeholder involvement leads to the collection of rich, multifaceted data, providing a more comprehensive understanding of schools social dynamics.
- Greater accuracy: Involving those directly affected by school policies and practices can increase the accuracy and validity of the data collected.

5. Sustainable development:

- Long-term impact: Participatory approaches are more likely to lead to sustainable change because they build on the active involvement and ongoing support of the school community.
- Adaptive capacity: Schools become more adaptive and resilient, capable of continuous improvement based on continuous feedback and collaborative problem solving.
- Measures that can contribute to an improved school environment

2 Observations & Recommendations

Education has a transformative effect on the lives of young people, feeling heard and a part of the wider community is imperative on a local and global level. To ensure the next generation are empowered to bring about change and work towards a more cohesive society, we must spend time listening when shaping their future. We believe that good education policy can be complemented by the personal experience and anecdotal evidence of first-hand conversations. This process aims to provide recommendations based on impartial independent research by Hawkins\Brown who have long standing experience in educational design and community engagement. The qualitative data driven recommendations in this paper aim to identify key opportunity areas for the regeneration of Christi Krybbe Skole.



2a Observations Sliding Scales

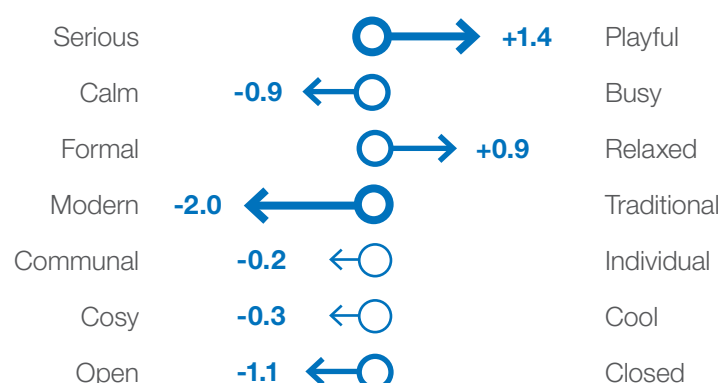


Figure 1: Sliding Scales Analysis.

Hawkins Brown actively engage with future users as part of a holistic design process. This way, evidence-based research informs design decisions that will achieve optimum outcomes for pupils, teachers, and the local community. This section provides a summary of observations from 2 days of consultation with students and staff at Christi Krybbe.

Sliding scales were used to analyse how students viewed their school, and how they may wish for it to change in the future. The above Figure 1 shows that students on average did not show significant preference to change the mix of communal/individual spaces with only moderate sway to create calmer and more relaxed spaces. The most significant observation from this exercise is the preference for more 'playful' and 'modern' spaces, as opposed to the perceived 'serious' and 'traditional' context of the existing school. This is of note at Christi Krybbe, the oldest school in Scandinavia. The sway on these scales demonstrate the appetite for children to evolve the spaces they see around them to suit changing needs despite the continued pride in traditional and legacy of this school community which was noted from conversations with students.

The second stage of this consultation process asked students to map and draw how school spaces may be redesigned in the future. Examples of the drawings created are shown overleaf.

Through conversations with each group key ideas emerged. These have been mapped on Figure 3, based on recordings of the conversations between researchers, students and teachers.

The most repeated conversations fell into two distinct categories both relating to the use of external space. This confirmed an observation made during the visit where the teaching spaces were generous, bright and successful at facilitating learning. Where the school struggles to meet the pupils needs are through the activation of external spaces and provision of sports and extra curricular activities. Students have a strong desire for open space for team sports such as football as well as spaces to congregate externally with amphitheatres and staging. These moments are vital for children when developing confidence and social connections and something which Christi Krybbe cannot fully provide in its current state.

The other notable element is the ambition to bring other community activities onto the school site. Many of the uses mentioned by the children do not relate to school functions, such as banks, cinemas and shops. These spaces are key community uses which shows an appetite for their school to become closer to the heart and centre of the local community.

2b Observations Mapping Change

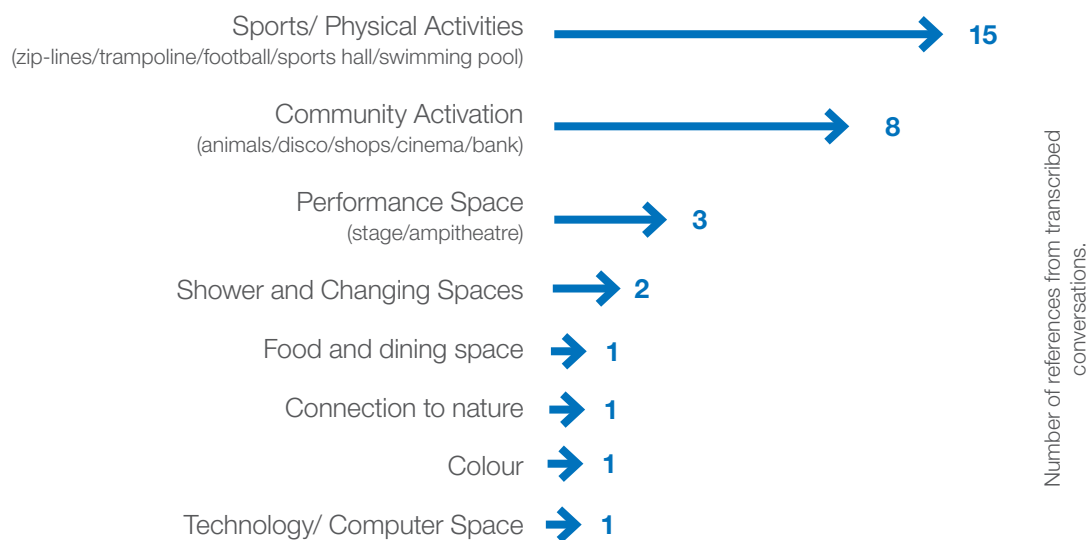


Figure 3: Mapping, Conversation Matrix



Figure 4: Collection of drawings made during the 'Din Skole' exercise.

2c Space Syntax Spatial Analysis

Space syntax analyses (spatial configurative analyses) and registrations were conducted on how the school yard was used. The results from the workshop with the pupils and the how the school yard was used, is as follows:

The Christi Krybbe school yard area's size is a fifth of the minimum requirements for school yards according to the Norwegian planning and building act. The space is small in comparison with the number of children of the school. It is an urban school for city children. However, with a 5 min trip with the pendula train (Fløybanen) the children can be right into the forest about 350 meters above the school.

Figures 1 & 2 overleaf visualise static snapshots taken throughout the days of study. These illustrate the use of space by gender type.

Boys pointed out during the workshop the football field as the most important spaces. Both genders pointed out the swing. The tennis tables were hardly

mentioned in the workshop. The older girls wanted to have areas where they can socialise, whereas the younger girls wanted more places for having animals at school. The boys wanted larger and more football fields. Therefore, the challenge is to design new school grounds that shape equal opportunities for both genders.

Seemingly, small school yards contribute to large possibilities for socialisation. Even though the school-yard is small, it consists of many spaces because the two school buildings are located in the middle of the school yard. This creates several spaces for a large variation of activities for the children. It is recommended that the municipality and the school should prioritise both spaces for all genders and vulnerable groups. The variation in the current school yard should be seen as a positive, however further consultation should be undertaken to ensure spaces are created where all members of the community feel safe.



Figure 5: Students recording their 'favourite' space as part of a frottage exercise.

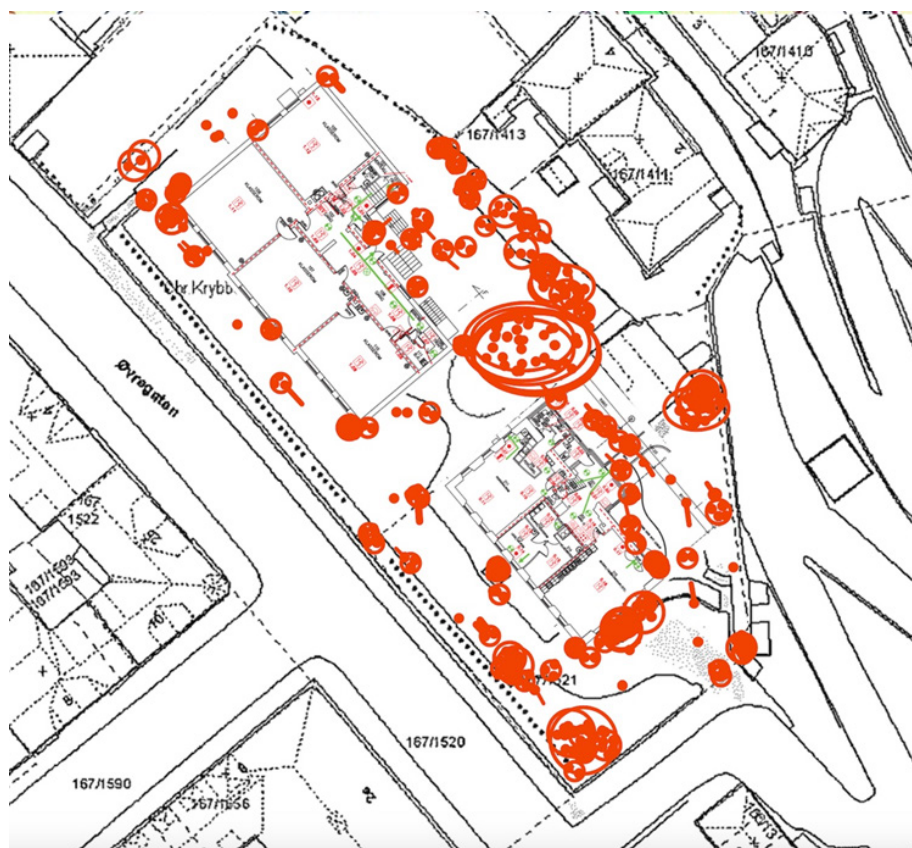


Figure 6: Static snapshots of all girls of the schoolyard

Figure 1 show the results of the behaviour of all the girls. Mostly they stand in groups along the buildings and on the edges of the school yard. The only places where they were playing in the middle of the spaces is at the climbing racks and at a centrally located playground designed for various types of games. The few girls moving in the middle of the other spaces were running or walking through the space.



Figure 7: Static snapshots of all boys of the schoolyard. All the boys. In comparison with the girls, the boys were using the whole spaces in their play.

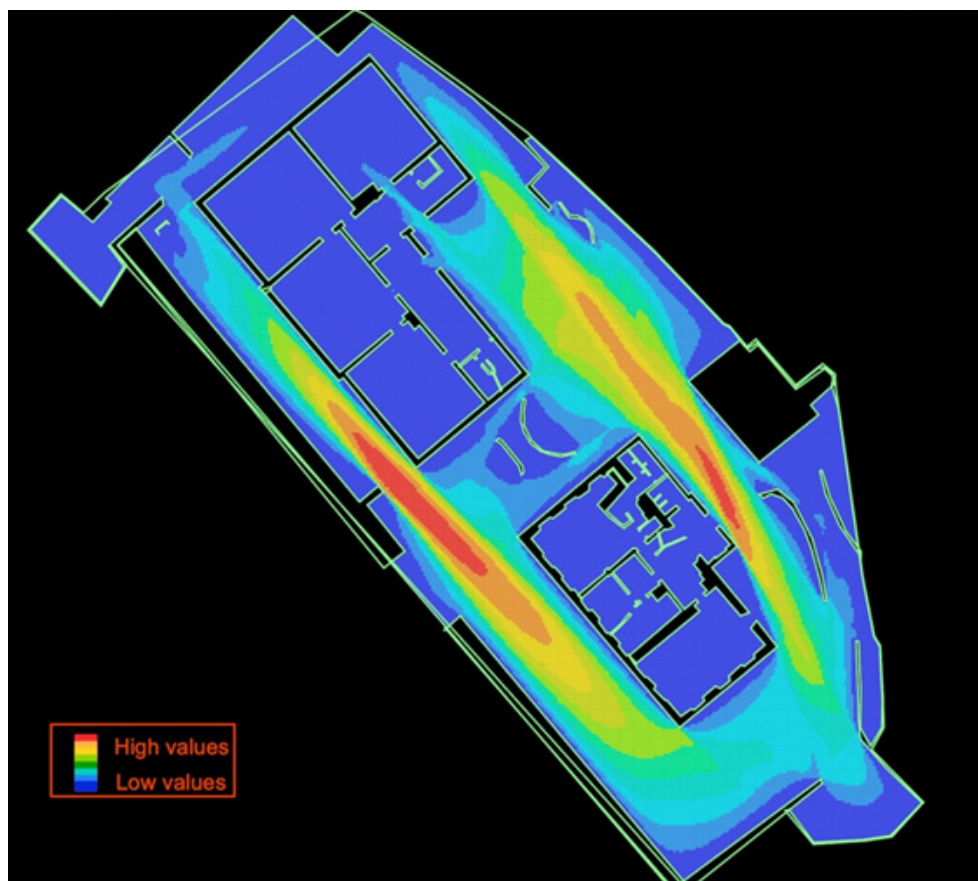


Figure 8: Through vision analysis of the schoolyard.

The through vision analyses, shown in Figure 3, indicate the areas where the largest movement takes place. It is in the area between the two buildings and between the two football fields. That is also where the largest mixture of gender takes place. The girls observed in the football field areas were mostly walking or running. They were on the way from one place to another on the school yard.

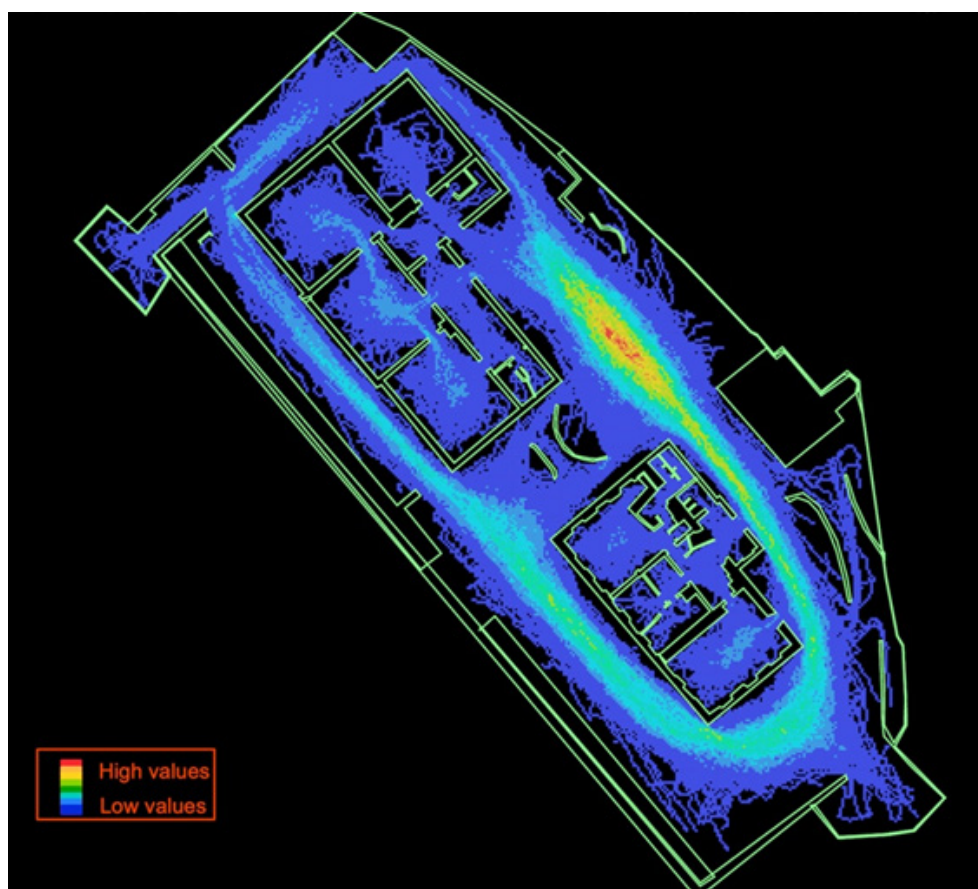


Figure 9: Agent based modelling of the schoolyard.

The highest flow is taking place between the building closest to the main entrance and between the entrances of the two school buildings. This comply with the static snapshots analyses, where the largest number of activities took place around the building closest to the main entrance and on the playground between the entrances of both buildings

3 Recommendations

Bergen Christi Krybbe is a successfully run school with an incredible community of young people and educators. However the school does face a number of challenges which require further consideration:

- Need for large indoor space for sports.
- School yard has reccuring anti-social behaviour out of hours
- School buildings are not accessible to all
- Lack of external green space
- Outdoor levels physically seperate the two main school sites

Hawkins Brown believes that from our experience as architects, planners and researchers, key principles could be adopted, supported by local policy to improve community benefit of school areas.

These recommendations aim to improve the safety of pupils and create spaces which benefit the wider community including the most disadvantaged and vulnerable members.



3a Recommendations

Evidence Based Research

Recommendation 1:

Facilitating increased community use.

In Norway there is a strong history of schools opening up their facilities for community use. The current school yard at Christi Krybbe is open to all at all times. This is a valuable community asset, however a lack of activation and concealed corners invites frequent anti-social behaviour which put children at risk. Christi Krybbe already has great connection to the wider community, however there is international experience which can be drawn upon to ensure the spaces are being used to their fullest potential and mitigate the risk of activities such as drug use occurring within school grounds.

There is evidence that out-hours activation and learning activities around schools can benefit children's personal development and social skills (Durlak et al., 2010; After-school Alliance, 2011 and 2014; MacBeath et al., 2001). This activation could be achieved in the short-term by improved lighting however this paper recommends steps are taken to make the play-space more open and ultimately used by the community, for longer before and after the school day, including late at night. This was highlighted during the consultation by students who expressed interest in their school becoming more 'communal' and 'open' in the sliding scale workshop, and community activation being the second highest ranked activity when designing their dream school. The connection between the adjacent street and play-space is currently limited, a new axis connecting the city to the playground would enhance visibility and welcome the community to use the space which is currently not intuitively 'open'. The greatest opportunity for activation would be the creation of a community facility, which is further described in recommendation 3.

Recommendation 2:

Accessibility

The school community and teaching staff provide excellent support for children with special educational needs. However the school buildings

and surrounding site have issues welcoming and allowing the safe movement of children or staff with disabilities. The site occupies a steeply sloped area of the city with buildings located across two areas at different heights. This makes it difficult for the youngest and oldest students to mix and limits how external spaces can be used. This was demonstrated when consulting staff at the school who prioritised accessibility as the highest priority and most urgent need for the school. See figure below.

Buildings are well maintained however are not equipped to allow students or staff with accessibility issues to access all areas. This paper recommends an external intervention which would tie together areas of the school and connect internal floors. This may be an external lift or walkway which would provide much needed accessible circulation while respecting the character of the existing buildings.

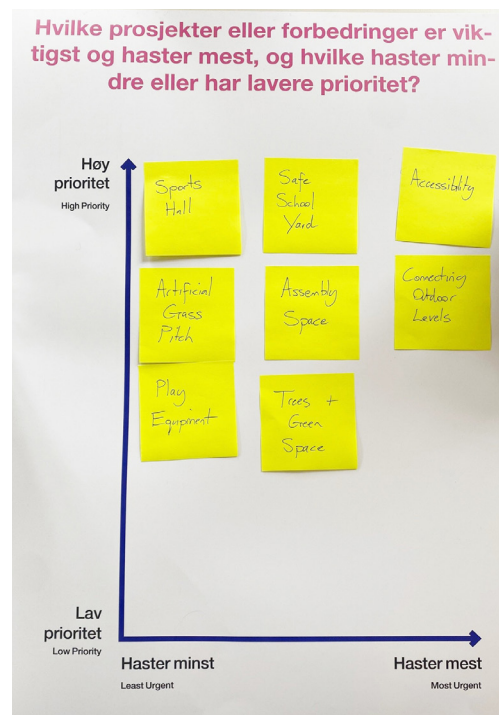


Figure 10: Priority matrix filled out with staff and senior leadership.

Recommendation 3:

Management Frameworks for a new Community Facility.

School leaders are pivotal to the success of any community driven approach. It is a credit to the headteacher and senior management of Christi Krybbe that the current issues with the school have not created a deficit-oriented view of community use, biased by the shortcoming of the current community 'use' of the school playground. Instead the teachers are driven to strengthen the offer to community, in turn creating a positive use of space which creates a safer space for all. This breadth of vision already exists, however require a supportive process of local decision making to enable their vision to be realised.

The hope for community use is ambitious, however the school must consider not only what they can physically achieve but what they hope to achieve as a result. Community use should compliment but not interfere with the current successful running of the school. It is clear from the consultation carried out, that students want their school to feel an integral part of community space, however there is a need for calm spaces to learn. The school has the opportunity to create spaces which enhance the lives of the local community through the creation of sports facilities which are currently limited in the local area. This move provides an obvious benefit without impacting the core academic work of the school. This paper suggests three potential models for how a community sports facility may be operated on this site, which are further explained overleaf.

Suggested management frameworks for a new community facility.

Direct Provision – A school hall is constructed within the mountain, directly opening onto the school play-space. The school is able to offer a service to the local community, for example by school staff running sports clubs, which may be free for school pupils and incur a charge for the wider community but creates a wider crossover between functions.

Hosting – Local sports clubs and community groups 'rent' spaces within the school demise. For example adult education lessons in classrooms,

physical activities in a new sports hall. These can be relatively low cost for both school and community.

Shared Facilities- Through careful planning the new facilities may be co-owned by the community and school (or local governance) as part of a fixed agreement. This enable a secondary party to take control and responsibility for all associated costs of running a community facility and potential broaden scope for use out of hours and at weekends, including evening performances and early morning adult sports classes which the school may not be able to facilitate alone.

Summary

This paper has not set out to suggest physical solutions to the issues highlighted however aims to provide recommendations for how solutions may be achieved and the positive change they may initiate.

These suggestions would improve community cohesion and social capital, reduce anti-social use of school playground use while ensuring that the spaces are maintained as central parts to the community for many generations to come.

The drawing over-leaf summarises these recommendations.

3b Recommendations

Sketch Proposal



01: Possible extension of school activity into the street in the form of a play/school street (which might only be activated before and after school, or for special events).

02: Shifting the school entrance creates opportunities for more green and physical activity spaces at the periphery.

03: Open up school yard to the street to better integrate the school with the urban environment and improve social control outside of school hours

04: Central space as the new main entrance to orientate the school towards the city. to be activated as a 24/7 play space and highly visible from the outside the school

05: New community/sports hall into the mountain, with an entrance lobby towards the central school yard, including a reactivated caretaker house

06: Create a cascade of new playground spaces that can be used for public events, too

07: Keep secondary entrance

Figure 11: Students recording their preferences on sliding scales.



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