Will the coronavirus bring about a revival of open-air schools?

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Images Stadsarchief Amsterdam, Groninger Archieven

Jan Duiker, Open-air school for healthy children, Amsterdam, 1930, image: 1972, Stadsarchief Amsterdam

Schools are (partially) open again. With good ventilation as important advice for keeping the coronavirus outside. For many schools, this is easier said than done. Historian Dolf Broekhuizen looks back on the history of open-air schools and outlines the lessons we can learn from it for future design.

At the beginning of the last century, the first children's holiday colonies appeared in Europe. "At that time, there was a big problem with slums, especially in the cities," explains Dolf Broekhuizen. "Living conditions in those slums were bad, hygiene left much to be desired and many people died of tuberculosis. There was no cure for this yet, although doctors agreed that weak children could regain their strength through a so-called 'open-air cure'." A paediatrician and school inspector opened the very first open-air school in Germany in 1904. The Charlottenburg Waldschule was located in a wooded area near Berlin, a place where city children who grew up in poor conditions could breathe pure air and get exposure to sunlight. Other European countries, such as Belgium and the Netherlands, followed the German example. For example, children from The Hague travelled daily by tram to Scheveningen, where they received lessons and an open-air cure in a healthy environment not far from home at an outdoor school in the dunes.

Lessons on the roof

In the years that followed, the phenomenon of the open-air school grew. "Three different types emerged," says Broekhuizen. "There were open-air schools aimed specifically at sick children, but there were also schools for weak children – called 'pale-faces' – and even for healthy children. Open-air schools for sick and weak children combined education and care. This was also reflected in the design and furnishings. These schools included a dining room where children were given healthy food, a relaxation room where they were obliged to rest for a few hours a day and a bathing facility where they could wash, because hygiene was also an important part of the open-air philosophy." When the open-air school had proven itself for sick and weak children, the idea arose that healthy children could become even healthier by also attending open-air schools. Architect Jan Duiker designed the first open-air school for healthy children, which opened its doors in 1930.

(CHILDREN WORE HATS AGAINST THE SUN IN THE SUMMER AND BLANKETS AGAINST THE COLD IN WINTER)

Reading lesson, Charlottenburger Waldschule, Berlin

School benches at the rear of a public open-air school, Amsterdam, image: Stadsarchief Amsterdam

"The design of this Amsterdam school was aimed at providing children with healthy outdoor air in all weathers," says Broekhuizen. "The building had windows, which could be opened or closed depending on the direction of the wind and rain, there were balconies with canopies and even classrooms on the roof. Children who were taught here wore hats and glasses against the sun in summer and blankets and woollen hoods against the wind and cold in winter. Thanks to the panel heating system in the ceiling, the classrooms were evenly heated inside. This allowed the windows to remain open even when it was cold outside."

(IF YOU DON'T OPERATE A GOOD VENTILATION SYSTEM PROPERLY, IT'S OF NO USE)

Saving money over health

After the Second World War, prosperity levels in Europe increased. Slums started to be cleared, and antibiotics were developed that cured tuberculosis. The need to send children from slums to a holiday colony or open-air school disappeared, but the buildings remained in use. Broekhuizen: "The type of children who attended these schools changed. Now children with asthma or other health problems such as 'nervosity' were sent to these schools to recuperate. The 1950s also saw the emergence of light-and-air schools, which were ventilated on both sides so that pupils had as much exposure to fresh air and sun as possible during the day."

The end of this trend was heralded in the 1970s by the energy crisis. The large windows that typified the open-air and light-and-air schools meant that heating costs were too high. The priority shifted from health to saving money. School buildings designed at this time were characterised by small windows to keep heating costs down. In the years that followed, cost savings often played an important role in the construction of new school buildings. The positive effect of ventilation on the performance and health of pupils and teachers seemed to have been relegated to the background for years, but since the coronavirus crisis there has been renewed interest in ventilating classrooms properly.

High ceiling as air buffer

After years of shutting windows and doors, Broekhuizen believes it is time for an awareness campaign on ventilation. "A school can have a good ventilation system, but if the teacher doesn't operate it properly, it's of no use. It's therefore important that schools identify ways to allow fresh air to flow through the buildings. This can be done by opening internal and external doors and windows, but also by moving the teaching itself outside. If you're stuck with your building, you have to make do with the resources you have." What Broekhuizen laments is the lack of space that many schools have nowadays. Many extras offered by open-air schools have been cut, to the detriment of air quality. "I'm in favour of more spacious schools, with

Pupils in the class of Buitenschool Appelbergen, Glimmen, 1960, image: Fotobedrijf Piet Boonstra, Groninger Archieven

larger classrooms than the minimum currently designed. Then you can use those spaces more flexibly. This can also be achieved with large windows and sliding doors, which can be opened to allow fresh air in." Broekhuizen also believes that the ceilings in current school buildings are often too low. "Around 1880, the ceilings in many schools were 4.5 metres high. The advantage of this was that each room had a large air buffer, which meant that the air in the room was used up less quickly. So with high ceilings you can achieve a lot."

Buitenschool Appelbergen, Glimmen, 1960, image: Jos Pé, Groninger Archieven

Babies in the open air

According to Broekhuizen, the fact that the coronavirus has put air quality and ventilation high on the agenda provides opportunities for new designs. "At the Sint-Ludgardis school in Brasschaat, Belgium, children still receive open-air education. That's proving to be a godsend in these coronavirus times. In the Netherlands, I'm also seeing open-air trends emerging. There are already nurseries where young children and babies sleep outside. And people are beginning to realise once again that green spaces and outdoor air are healthy, too. This can be seen, for example, in the fact that concrete playgrounds are making way for green nature playgrounds and that school gardens are on the rise again. I think and hope that being outdoors will become more and more woven into the educational concept." In terms of architecture and interior design, the open-air schools of yesteryear can provide new inspiration. According to Broekhuizen, the Groningen city architect Jaap Wilhelm, who designed innovative schools in the 1950s and 1960s, was also full of innovative ideas that are relevant again today. "In the former open-air schools, the head of the school was not the principal, but the paediatrician. Jaap Wilhelm used this fact and always involved an educationalist and a doctor in the regular schools and outdoor schools he designed, so that he could make use of different insights and perspectives in his designs."

Pooling strengths

Broekhuizen also advocates multidisciplinary design teams for new school building designs. "I'm concerned that after the coronavirus, we still won't be rid of infectious diseases. Therefore, when designing, I'd put together a team of an architect, an interior designer, an educationalist, a doctor and a psychologist. Together you can think about what makes a good school building. Everyone based on their own expertise. Try to arrange and design part of the building in a flexible way. Provide windows that can be opened in various ways and large windows with sliding doors to the corridor or outdoor area. In current designs, the transition between inside and outside is often too harsh. They can flow into each other more naturally, so that you can use those transition areas flexibly for an activity. Then, as a teacher, you might choose to have groups work outside.

(I HOPE THAT BEING OUTDOORS WILL BECOME MORE WOVEN INTO THE EDUCATIONAL CONCEPT)

Outdoor areas such as terraces and balconies with canopies are ideal for this. Jaap Wilhelm also worked a lot with daylight in his designs. For example, you can divide classrooms according to the incidence of light; for example, you may not want sunlight on the IWB, but you can let fresh air in more easily if students are warmed by light. If you get experts to think about the design from different angles, you can arrive at the ideal layout together." Broekhuizen thinks the coronavirus crisis can bring about a new way of designing. "If you look to the past, you'll see that crises and social developments have always been the trigger for change. Let's hope that something positive will come out of the coronavirus crisis in that respect."