

# THE DISABLED NEED MORE THAN JUST RAMPS

BY PAUL HEDE

*Over the last ten years building regulations have increasingly lifted the level of design requirements that accommodate things such as low vision, confusion in colour contrasts and material destructions. These more sophisticated design issues are satisfying the physical needs of all citizens including the aged, who need to have greater indicators to allow them to move around a building.*

The design for the disabled has focused on the physical access issues as this was seen as the barrier that needed to be overcome. However, many students whether disabled or fully abled, still do not cope well in schools and often progress through the school system in isolation with poor communication skills, no friends and lacking education in life skills.

A training centre in Copenhagen, Denmark works with adults up to 23 years of age, identified as autistic after they had become severely isolated living at home with their parents, rarely venturing outside their room, having no friendships and sometimes becoming fixated with their computer. After careful counseling and diagnosis, this former factory space began a program seeking to re-engage the individual, educate them about their disability and assist them in developing skills that would give them self-confidence. They were given support in accommodation and employment, if they were hired. The program involved fashion design, music recording, graphic design for CD publication and digital and print workshops. They managed their own radio station featuring their music and produced CD's they sold online.

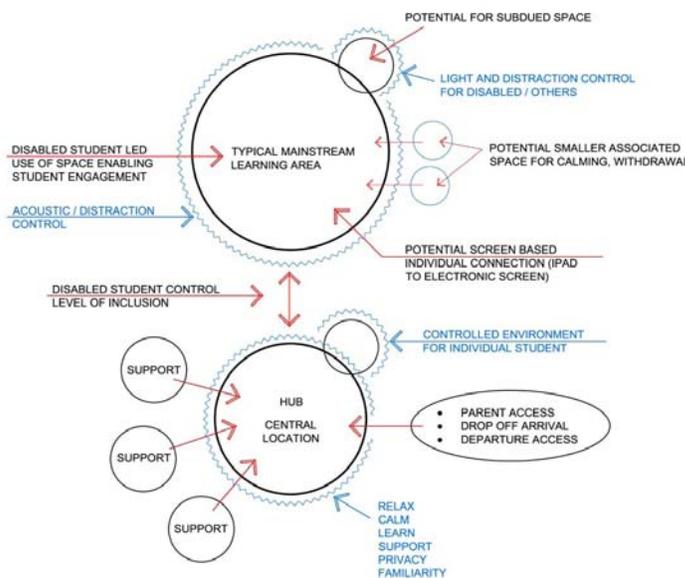
Students with autism spectrum disorder can move silently through the school system and never be noticed or diagnosed. Their skill level enabled them to get through, but when left to life beyond the school doors, they retreated into isolation. This can actually occur with any student and has led to the encouragement of student initiated learning. It is important to find out where a student's interest lies, how they wish to learn, what they want to learn, and connect them to their community.

The traditional design of schools, based on a uniform class population observing a teacher, may not engage students, particularly disabled students. Designing for the disabled person needs to move beyond ramps and into an effective learning environment designed for them – in all schools, not just specialized settings.

The primary need for the disabled person is to feel they have some control over their learning. Many students with an intellectual disability can be greatly affected by the lack of order in a school environment. A routine and space they are comfortable with is essential to their success. These learning

spaces can be a personal area separate from class activities, a smaller group space supported by teachers and therapists if necessary and finally, a space within the general learning area where they feel ready to learn.

## SPACE PLANNING FOR INCLUSION FOR MAINSTREAM SCHOOL RECOMMENDED SUB SCHOOL STRUCTURE



*The suggested space planning for inclusion for disabled students into mainstream schools is as shown in the attached diagram.*

In mainstream schools, these are usually not too purpose built as that would reduce the benefits of mainstream inclusion for disabled students. However, the notion that all disabled students should be expected to meet the standard education achievement, just by adding a teacher's aide, is not allowing the environment to assist them in any way.

The start of the day for disabled students, particularly students with autism spectrum disorder, can be stressful, whether brought to school by parents, care-givers or the school bus. The school must have a comforting centrally located space close to the arrival and departure point of the school allowing disabled students to recover from the journey to school, wind down and

prepare themselves for the day.

Their school entry hub should also be where the student may stay until they are ready to join mainstream classes. They may get particular therapy here such as speech pathology, physiotherapy, counselling or training from other support staff. In some schools in Denmark this hub is the school for that student until they are sufficiently confident in themselves to move into mainstream learning. It offers a retreat from the mainstream as well.



*An improvised personal withdrawal space (open), Homehof School, Denmark*



*An improvised personal withdrawal space (closed), Homehof School Denmark*

In the hub, parents and carers are able to also get support, seek advice and gain feedback on strategies. This hub also contains the smaller space that a student may need where they can control their exposure to the environment by having a potential small 'office' or personal withdrawal space of their own.

Students, parents and support teachers therefore have a base where the student can be further trained in their disability and hone their skills to give them increasing capacity to successfully learn in normal classes in the mainstream learning areas.

The hub also acts as a resource for students who, although not disabled, need support and potential assistance to engage better in learning. These students may be identified by the support

*Variable student controlled spaces, Hellerod School, Denmark*

teachers as not fully engaging or coping in the mainstream. This support base builds confidence in the students and trains them to understand their disability and its effects on them.

The important education taking place here is not only the learning, but also the methods to deal with their disability such as mood control, coping with communication and the general needs of a student in mainstream spaces.

The balance of the school population should also be educated about the aspects of disability, the large range of differing abilities and the life and learning their fellow disabled students are experiencing. From the hub space a student needs to have control over the time and extent of involvement in the mainstream learning environment. With the support of teachers and aids they can decide to control the amount of time they spend in the mainstream classes. This would be affected by the nature of the learning spaces and their capacity to offer the right support to students.

The typical mainstream learning area needs to have potentially smaller associated spaces that disabled students can utilize if they wish. These may provide greater acoustic privacy or distraction control. They may be small pockets that give the disabled student an opportunity to easily communicate with the teacher or a smaller group. Visually challenged students may be closer with aids to assist. Some students may be more reliant on and at ease with tablet communication with the class through direct connection to an electronic whiteboard. The student experiences a feeling of being provided with their own tools for learning in an environment where they feel at ease. A relaxation space in all learning areas can also provide the means for students to adjust their environment.

The inclusion model for space planning to cater to the disabled should occur in all new school planning. However, there is also a great need to create these spaces in existing schools, to bring about greater inclusion and also to offer better outcomes for the many students who do not fit the mold or who may not be coping.

The most successful inclusion programs operate in converted spaces that are central to the existing schools and do not



## Award-Winning Best New School 2011 CEFPI Australasian Award



Photo courtesy of Hede Architects

### Western Autistic School - Laverton, Australia

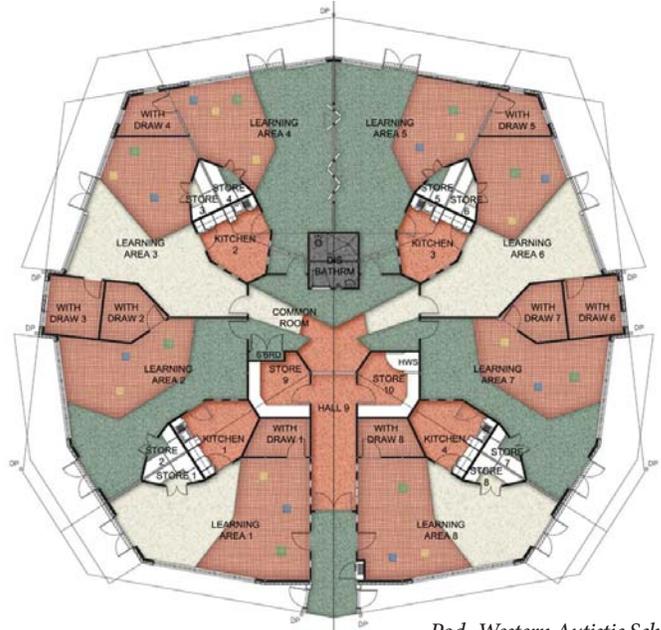
particularly differ in built form, but have been adapted to give the students a base, a sense of control and the capacity to move between environments that suit them.

The design for the disabled in specialist settings is also advancing and building on the need for space to enable the students to learn more effectively through their interest and self-motivated inquiry. Specialist settings have been pursuing these types of spaces for years, giving students the capacity to learn in a quieter, more nurturing environment. Digital communication using tablets is expanding dramatically in special education due to its capacity for personalized programming and differing levels of software aimed at particular student interests.

In many cases, the specialist setting includes smaller class sizes that offer students better connectedness. In recent buildings designed by Hede Architects, the school is broken down into separate sub-schools that provide access to controlled separated play areas via courtyards attached to their learning areas. Students are not immersed in one big school, but rather eased into their environment so that they build their learning skills gradually and expand their contact with the larger numbers of students as they are ready. These areas are separated from other student groups that may have behavioral issues for both students and teacher safety.

In the Western Autistic School, students remain in special settings until about nine years of age when they will potentially transfer to a mainstream school. The school has three pod groups with eight learning areas in them for 6-8 students grouped in junior, - 8 and 8+. Students have small learning

areas free from distraction, directly connected to internal and external exits and joined in pairs with a shared kitchen/eating area. Based on life skill training, they move from the early pod with its toilets in each learning area to the 8+ pod where toilets are separate as per a mainstream school and spaces are larger with a combined learning area for up to 16 students.



Pod- Western Autistic School

This school also has a teacher training area to develop teaching skills to deal with autistic students in mainstream. The skills of self-calming, concentration and capacity to use withdrawal would be stronger if mainstream schools included these hubs. This school also prepares students by using challenging colours to assist them in coping with environments they might face in mainstream schools.

The Northern School for Autism is a full spectrum school where students are not intended to attend a mainstream school, although some do as they develop sufficient skills. This school deals with the age range of 5 to 18 years old and the large



Central pod space and learning area,  
Western Autistic School, Laverton, Australia



Aerial view  
Northern School for Autism  
Reservoir, Australia

2013 Australasian  
CEFPI Award Winner

range of behaviours that occur. It is broken up into sub-schools to create smaller, more protected areas for the youngest students and give a sense of progression for students through the 13 years at the school. It is designed to give every learning area direct sun access to enable it to operate with no air-conditioning.



Central Protected Junior Play Courtyard

Students have an indoor and outdoor secure withdrawal as well as kitchens in all rooms. The building has split access routes for older and younger students, and a central play courtyard for the junior students.



Northern School of Autism Middle central junior play area

The shape for the design brought the school together with close access to therapy spaces, gymnasium, specialist access, music and life skills training areas. It also has teacher training areas which offer programs for parents as well.

These schools with their teacher training are seeking to expand their knowledge store of autistic students' needs through to the wider community via parents, caregivers and teachers in mainstream schools.

To transition from special settings, successfully mainstream schools must have the spaces to enable students to acquire and build on necessary skills. This applies to adult centres as well. Relationships between the teachers and students in early specialist schools and future mainstream schools

that a child may attend are vital. In many American specialist schools, students have been identified early in the mainstream. The Gateway School in New York City does this using similar spaces of small learning areas, small nooks where a student can concentrate, and larger spaces where students are trained in communicating with larger groups.

The outcome for students in both mainstream and specialist settings is greatly affected by the feeling of control they have over their learning environment, allowing them to cope with their disability as well as the capacity for them to receive the necessary support to learn both life skills and a general curriculum.



Reading nooks, Gateway School, New York

All students will benefit from a learning environment that responds to their needs rather than demanding they fit within a standardized environment. The lessons of design for disabled students needs to be embraced by all schools.

### About Paul Hede

Paul Hede is a director, Hede Architects Pty Ltd, Victoria, Australia and a Sir James Gobbo ISS Institute Fellow 2013. He has established a firm specializing in unique design for the disabled in education and housing.