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The Netherlands' Firebird  
School: Clusters for A  
Flexible Learning  
Environment

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The results of this five-year project will be revealed at an exhibition at London's Victoria and Albert Museum from 21 February to 18 March 2005. The exhibition will be accompanied by children's workshops and a lecture programme with architects and designers, pupils, government ministers, business and commercial spokespeople, and leading educationalists. *Joinedupdesignforschools*, a fully illustrated, 192-page book to accompany the exhibition, will be published by Merrell in February at GBP 29.95.

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## THE NETHERLANDS' FIREBIRD SCHOOL: CLUSTERS FOR A FLEXIBLE LEARNING ENVIRONMENT

Innovative teaching methods and organisational change make new demands on our future learning environments. The Brink and the Laak Clusters are two related examples of a new type of building for a community in the Netherlands. The Firebird School (*Vuurvogel*), a primary school for students from ages 4 to 12, is currently housed in the Brink Cluster and will move to the Laak when it opens in 2006. The Firebird School's needs and the resulting flexible building design are described here along with useful characteristics for creating flexibility in the learning environment.

Flexibility is the key concern for designing these new cluster buildings, taking into account concerns for future changes including:

- Community growth.
- Changes in school enrolment.
- Expanding use of information technology.
- Team teaching and new approaches to learning.
- Community learning and changing facilities needs for social use.

The Firebird along with another school, the City of Amersfoort and the architects *Frencken Scholl Architecten* have developed an innovative building to accommodate

The Brink Cluster in Vathorst

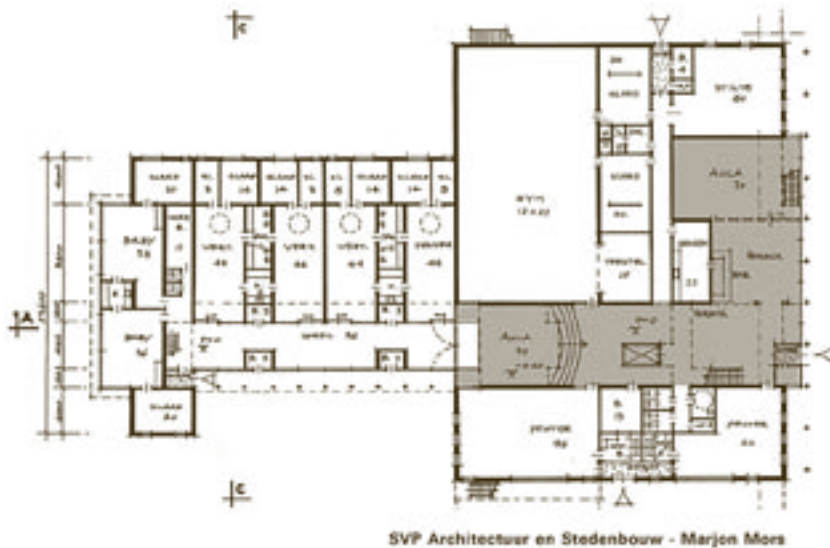


multiple uses and many types of learners. The decisions taken for Firebird's future school were based on the lessons learned at their existing, temporary location, the Brink Cluster. Based on the experiences of the Brink (opened in February 2004), the design of this type of community building continues to evolve.

The Brink is considered a "cluster building" rather than a school building. The cluster houses five primary schools, a child-care centre, a pre-school and a community centre with a café. The overall concept was to combine the schools and community centre under one roof to share large group spaces and an active café which serves as a welcoming point for visitors. The Brink Cluster (designed by SVP Architects, Amersfoort, and Atelier PRO, The Hague) is located in Amersfoort's recent development of Vathorst, a greenfield where nearly everyone is a new resident.

The Brink Cluster accommodates community use as seen here on opening day in February 2004.





Plan of the community area and child-care centre of the Brink Cluster (courtesy of SVP Architects)

Student models depict the new community in Amersfoort.



By 2006, the Firebird and another school (also temporarily housed in the Brink) will move to a new building specifically designed for their programme in Amersfoort's de Laak neighbourhood within the same community. At that time, the three schools remaining in the Brink Cluster will take over the vacated space, in anticipation of increased enrolment as the new community grows. Similar to the Brink, the Laak Cluster building will include a child-care centre, an after-school programme and a kindergarten as well as the two primary schools.

### Flexibility

The curriculum for the Firebird School is based on team-teaching and an individual approach to learning. Like the philosophy of many contemporary schools, the overall development of the child is central to the curriculum. Children are challenged, stimulated and guided to become independent learners. This also means the students work in groups to solve problems and search for solutions.

According to the director, Lettie Kuijvenhoven, their team-teaching approach "makes more learning professionals responsible for more students." The teachers work with educational assistants and helpers, as well as with other teachers. This approach has the added advantage of offering opportunities for professional growth within the school.

The curriculum is organised thematically and could not be adequately accomplished in traditional classrooms. New study themes are introduced every four to six weeks, with the entire school working on the same theme. All of the classes are involved, and at the end of a theme they present their work to their parents. The new school is designed to support these presentations by making use of flexible open spaces. Included in the school are special areas for large group and small group presentations. A presentation to the entire school and larger community would make use of the aula (an open space which can serve as an auditorium) and special rooms for dance, drama, and artwork. In the children's kitchen, some children may choose to cook food which relates to their study and offer samples as part of the event's refreshments.

Being under one roof will allow the Firebird and its sister school to work together on special projects and teachers to team-teach across school-lines. The school building is divided between the two schools on all floors. In the centre of the building are a shared atrium and aula and other collective spaces including the media centre, the children's kitchen, dance, drama and art areas, and the personnel room. In addition to the two primary schools, other educational organisations share the building including a child-care centre, an after-school centre and a kindergarten.

Students studying in a workspace in the Brink's wide corridor



Like Herman Hertzberger's Montessori schools, the Brink uses a broad stairway for circulation and for seating during small presentations.



### Information technology

At its present location, the Firebird School has distributed two or three computers in each classroom and is currently introducing 20 portable computers with a limited range wireless network. A wireless network throughout the new school will allow for Internet to be used everywhere in the building. The media centre, located in the central open area between the two schools, will allow students to receive instruction as well as conduct independent study on the Internet. As well, the media centre is intended to be used for after-school use and adult learning in the evening.

Another successful idea originating from the experience of the Brink Cluster, the classrooms will be coupled and will be smaller than traditional classrooms. The Firebird School has had success with locating computers in the enlarged corridors in their current building; likewise the new building design will include small work spaces along the corridor to provide informal learning areas as an extension to the classrooms. Each classroom couple (sometimes three classrooms together) has an additional learning space which is shared. Large sliding doors (two meters wide) extend the classroom to open up to the circulation corridor and to make a visual connection with these small work areas. Teachers coordinate their use of these smaller spaces. As one teacher said, "In this way, we integrate the special help within the environment of the class, rather than have an office where students are separated from the class because they need more help."

Similarly, large spaces such as the personnel rooms can be subdivided with movable walls to create smaller work areas.

The Firebird's new building in de Laak will also include features to allow for decline in the school's enrolment. Parts of the school building have been designed to enable the building to be easily converted into townhouses within the school complex.



A small media area in a shared zone of the Brink School

Technology for learning includes the use of digital video cameras. The five existing schools at the Brink created a joint video project for their students to document their new community. The video became an important activity with the students contributing to the development of the community's civic identity. In the first year of operation, video projects were shared with the larger community. These videos will also be distributed to primary schools internationally such as through the Firebird's current Internet exchange with Glasgow, Scotland.

## Conclusion

By participating in the design of the Brink Cluster and learning from the experience of its use, the Firebird School was able to articulate its needs for the Laak Cluster to design a flexible community building. Building development and design as a learning process has reinforced the success of this building type, as witnessed in the Brink Cluster.

### *Characteristics of flexibility*

Four characteristics are useful when considering creating flexibility in the learning environment: change factors, opportunities for interaction, use of time, and set-up and control.<sup>1</sup>

To create **flexibility** within the learning environment, the first step is to consider the change factors involved. How rapidly will change take place in the school? Will people, equipment and use change on a regular basis? If so, the environment should be as flexible as possible to embrace this change. If not, then the need for flexibility is more modest, as people will adapt the environment over time to the conditions that work best for them. The same applies to activities within the classroom: are students moving from one activity to another, or are they working on the same activity?

Outlining the potential **opportunities for interaction** between users and user groups is one way to define an organisation's needs for flexibility. Interaction can be between teachers, students, learning assistants, parents and other guests to the school. Interaction can be individual, in small groups, in teams or between whole classes. Supported by networked technology, the teacher takes on the role of coach or "learning leader". A large part of the activities for the teacher may be to prepare and co-ordinate activities rather than to stand in front of the class presenting a lecture.



An open learning space shared between two classrooms at the Brink Cluster

Many educational communities are employing new approaches to **use of time** with longer working periods for students and more preparation time for teachers. Spending more time on one activity may require an environment with conditions that are of a higher standard and more stable. A highly utilised building must have some form of scheduling process, including someone who oversees the schedule and time for teachers to plan for their use of spaces.

Finally, **set-up and control** are key obstacles to making flexibility work. The best flexible solution is one where the user can make use of an opportunity with little or no set-up time and with little or no discussion with others. The set-up time to effect a flexible solution should not take as long as the activity itself. As well, having to ask permission to make use of space (other than to establish a regular schedule) diminishes the potential flexibility of a solution.

1. This work is based in part on the author's research at Delft Institute of Technology (1996-98) which is reported in *Tool Box Strategies* (Report TU Delft, 1998).

*Taken from a report prepared by Susan Stuebing for European Schoolnet entitled "Making Space for Change: Creating Flexibility in the Technology-Enhanced Learning Environment" in 2004. All photos were taken by the author.*

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Atelier Pro, The Hague: [www.atelierpro.nl](http://www.atelierpro.nl)

Frencken Scholl Architecten, Maastricht:  
[www.frenckenscholl.nl](http://www.frenckenscholl.nl)

SVP Architectuur en Stedenbouw, Amersfoort:  
[www.svp-svp.nl](http://www.svp-svp.nl)