

SUCCESSFUL INTERIORS

# CLASSROOM ENVIRONMENT

**A STUDY ON THE IMPACT  
OF SPACES AND INTERIOR DESIGN  
ON STUDENTS AND TEACHERS**

*Kinnarps*<sup>®</sup>

# INTRODUCTION

The classroom is an important environment in which students and teachers meet during the school day, each with their own particular needs. A well-designed classroom is one that gives each student the opportunity to learn, develop and reach their full potential, based on their own conditions. Therefore, it is important to design classrooms to meet the varying needs and learning situations that arise during a school day. Classroom environments must support and facilitate students and teachers in learning in all activities, whether it be working independently, group work or presentations. Such classrooms cannot be designed using a one-size-fits-all template but rather with the activity's and individuals' needs in mind. The first step in creating inspiring, functional classrooms that invigorate the learning process is to analyse work methods, activities and the physical environment of the classroom.

## PURPOSE AND QUESTIONS POSED

The purpose of the study was to analyse and evaluate how the room and furnishings impact students and teachers in their work. The focus of the study was to identify how interior design impacts learning and teaching. The study also aimed to test a select number of products in the classroom environment. This resulted in a number of questions:

- How does the interior influence learning?
- How does the interior influence teaching?
- How do particular products impact the classroom environment?

## METHOD AND IMPLEMENTATION

The study was conducted in collaboration with Prolympia, an independent elementary school in Jönköping, Sweden. The year 8 classroom was chosen as the test classroom. To create a well-functioning physical environment it was necessary to conduct a preparatory analysis and identification of the current state, work patterns and future needs. The preparatory analysis was conducted according to Kinnarps' Next Education concept by Kinnarps staff and selected teachers and students from the classes that utilised the test classroom. The results of the preparatory analysis were used to create a situational customisation of classroom furniture to be implemented in the test classroom and adjacent hallway and group room. After five months, qualitative interviews were conducted with the teachers and students who participated in the preparatory analysis. These interviews, and the discussions had during the preparatory analysis, were then summarised in this report.

## PRE-STUDY

# KINNARPS NEXT EDUCATION® LEARNING SPACE ANALYSIS

The study started with a Kinnarps Next Education learning space analysis. The purpose was to identify the type of furnishing that would best support the students and teachers who spend time in the classroom. A group of selected teachers and students participated in the learning environment analysis, which started with a lecture on learning spaces of the future, followed by a workshop. The purpose of the workshop was to understand the current situation, which activities take place in the classroom, the challenges, opportunities and wishes for how they want to work in the future. With the help of the tools and techniques used in the workshop, a number of key values were identified and summarised into a vision.

### VISION

**The new Prolympia classroom shall offer all individuals a place in which they can feel well. The interior design of the classroom shall offer variety and be flexible enough to make it easy to choose a place according to activity. The classroom shall be self-explanatory. How the classroom works and what can be done, and where, should be obvious.**

The analysis showed that students and teachers alike wanted something other than the existing interior design, which consisted of traditional classroom furnishings with desks in rows facing a whiteboard. The classroom was considered boring and uninspiring.

### EXISTING FURNISHINGS

- The opinion of the furnishings was that they lacked variety and were inflexible.
- There were no opportunities to stand up and work.
- The students thought the chairs were uncomfortable and hard, which disrupted their concentration.
- The chairs were not customised to the tallest students meaning their knees would hit the desk.
- Alternative, soft seating was lacking for activities such as reading.
- The existing tables were not easy to adjust in height as they required the use of a screwdriver and janitorial help.
- Storage units were in bad shape with substandard locks.

## CURRENT ACOUSTICS, LIGHTING AND COLOURS

- Unsatisfactory acoustic environment. Everyone we asked said there was an echo in the classroom and that the chairs scraped on the floor.
- Unsatisfactory light blocking. There were no shades and the curtains were difficult to handle.
- Disturbing lighting in varying colour temperatures, from cold to warm.
- Bold colours on the walls contributed to an anxious environment.

*The analysis started with a lecture on learning spaces of the future, followed by a workshop. The purpose of the workshop was to understand the current situation, which activities take place in the classroom, the challenges, opportunities and wishes for how they want to work in the future.*



# RESULTS

## FROM TRADITIONAL ROWS TO ACTIVATING ZONES

The pre-study showed a need for being able to divide the classroom into zones, furnished to support different types of activities. Therefore, an interior design was proposed with furnishings that support activity-based learning and that is flexible enough to change at pace with changing needs. The interior design solution was also expanded to include the adjacent hallway and group room so they could be naturally integrated into the study environment. All walls were painted in light colours to create a sense of calm.

### CLASSROOM FURNISHINGS

#### **Sitting and standing work**

The classroom has been flexibly furnished to accommodate sitting and standing work.

There are two circular "islands" comprised of Origo tables on castors that can be separated into half moons. The castors make it easy to regroup them based on the activity at hand. In addition to the islands is another set of rectangular tables. To go with the tables, the Xact chairs, adjustable in height and seating depth and with adjustable weight resistance in the backrest, were chosen. The chair, adjustable to short and tall students, is designed to move with the body and encourage movement. The chair was equipped with castors and upholstered seat for extra comfort and flexibility. Further back in the classroom is a height-adjustable Origo table paired with tall Xpect chairs with adjustable footrests and flexible backrests. This gives a nice opportunity to move one's back and relieve one's feet - ergonomically sound for students regardless of height. Here, you can choose whether to work sitting or standing.

#### **Soft seating**

Several soft seating options were added to the classroom, inviting you to read and talk. There are also two Clip easy chairs with a writing table that allow you to work efficiently while sitting comfortably. In the middle of the room there are two high-backed sofas from the Fields series and a coffee table that create a safe space in the room.

#### **Acoustics**

The wall-mounted Oktav sound absorber and sound-dampening Zonit screen wall contribute to better acoustics. Zonit also functions as a room divider.

#### **Storage**

The Space storage unit on castors offers flexibility and the ability to screen off the room when needed. The storage units have backs covered with sound-absorbing material or whiteboards. The classroom has also been equipped with lockable storage units from the same series.

### Flexible seating

Stackable Cap and Frisbee can easily be pulled out when needed and only takes up a minimum amount of space when not used. To encourage more active sitting, there are also two Boullée exercise balls in the classroom.

### HALLWAY FURNISHING

The adjacent hallway has increased functionality with the Lean In sound absorber, which both contributes to better acoustics and functions as furniture to lean against. The Deep Forest sound absorber mounted to the wall adds to this.

Sofas from the Longo series paired with Fields coffee tables work as side tables for placing computers, books and writing material. A tall Origo table and tall Plockepinn stools give the opportunity for standing and sitting work. The hallway also offers soft seating in the form of Libra benches.

### ADJACENT GROUP ROOM FURNISHINGS

The group room directly adjacent to the classroom has been furnished with a project area with a hexagonal table from the Trixagon series. Its shape encourages collaboration. In addition, upholstered Xact chairs on castors have been added.

### PRODUCTS

---

#### CLASSROOM



Xact



Xpect



Oberon



Origo



Origo



Fields



Fields



Clip



Space



Space



Space



Space

---

## CLASSROOM



*Frisbee*



*Cap*



*Libra*



*Boullée*



*Rezon*



*Oktav*

---

## GROUP ROOM



*Leia*



*Trixagon*



*Frisbee*



*Oktav*

---

## HALLWAY



*Fields*



*Nestor*



*Cap*



*Deep Forest*



*Plockepinn*



*Lean In*

## EVALUATION

# IMPRESSIONS OF THE NEW ENVIRONMENT

The new classroom environment was inaugurated in the autumn of 2018. After being used for a semester, it was evaluated by educators and pupils following the same principles as the initial pre-study.

*"It's fun to go to class now. It does so much for your mood at the beginning of the day!"*

PROLYMPIA YEAR 8 PUPILS



## DANA JOHANSSON, TEACHER OF SWEDISH AND ENGLISH, YEAR 8, PROLYMPIA

"My first thought was that things were going to get disorderly. How should I act, and who would sit where? So I started by getting a feel for the classroom and moving around to different places in the room to see what interaction with my students would be like. It was no longer assumed that my place was "in the front at the whiteboard". And that was a good thing! I feel like I get closer to my students now that I move around more in the room. Before, there was a distance between us. We also work better together since the furnishings encourage it.

It took us a couple of weeks to get used to and know the room. So it was good that we had two reviews with Kinnarps; one when the furniture was delivered, and another after using the classroom for a couple of weeks. This helped us feel more secure in using the environment. And we are still learning! For example, we often forget that there is a whiteboard on the back of one of the storage units. It's perfect when we work in small groups.

*"The furniture is great from a teaching perspective, especially for group work. One major benefit is that the tables can be easily divided and placed in different constellations."*

The new chairs have meant a lot to us. Half the class consists of boys around 180 cm tall and I see that they sit comfortably on their chairs now and that they can finally focus on learning. My impression is that they find it easier to concentrate and that they take in information better.

We don't often rearrange the furniture, but it's nice to know it's possible. Having tables and chairs on castors makes better acoustics. No more scraping against the floor, and it's easier for the students to turn toward whoever is talking. I have also noticed just how important it is to have rooms within the room and different zones in the classroom. The students feel safe and have an easier time of focussing in the corners that these zones create.

And no, it didn't get disorderly! Everyone finds their place. We have a clear routine of starting with fixed places at the start of a lesson and then choosing a place based on the activity. Now we use not only the classroom, but the group room and spaces in the hallway outside. This has resulted in fewer cliques forming and less competition for spaces. I have six special needs students in this class and, for them, this furnishing works really well. The light colours and sound absorbers have also contributed to a quieter environment."

*"The students want to be in the classroom. They are happy and think it's cosy. Everyone can find a place that makes them feel safe."*

DANA JOHANSSON, TEACHER

## MARTIN SALOMONSSON, TEACHER OF SOCIAL ORIENTATION, YEAR 8, PROLYMPIA:

**"IF I GOT TO CHOOSE, ALL CLASSROOMS WOULD BE LIKE THIS. IT IS FLEXIBLE AND WORKS FOR DIFFERENT TYPES OF LEARNING SITUATIONS."**

"All the classrooms I've ever worked in were always furnished in rows or groups, so it is exciting to try something new. We all agree that we are very happy with the areas that are furnished as 'rooms within the room'. We always start our lessons with fixed places as many find security in knowing where they are to sit when they enter the classroom. It takes the pressure off. But then they choose their places based on what they are doing at the moment. It's perfectly okay to lie down on the sofa and work, or go out to the group room. The way we can now utilise the group room (a room you can see into and have an overview of) is also really good. The classroom has built-in movement, which is positive. You can move around, swivel and know what is happening around you. Many students take the initiative to find or create places of their own to sit in. Students who have difficulty concentrating like the Clip easy chairs as they are enclosed. Most choose to sit, even at the high tables. If there is a chair, they sit, which makes me wonder what would have happened if we opted not to have chairs? Regarding technology, I would personally prefer to have had a mobile projector. Now, it is fixed in place and has its limitations.

Some students can have difficulty concentrating if they don't know how the environment is supposed to be used. So it is vital to train the students in how to use the environment and that they get guidance and support from us teachers. After a week, they had found their favourite places based on their social groups, though perhaps not the places that were to the student's greatest benefit. This is just another reason why guidance is so important. In my experience, I think it would have been optimal to make this change when they were in year 7 as they were at a more formative age and would have got used to the environment more quickly.

In itself, changing the furnishings has no pedagogical benefits. You have to practise and know your role. Availability in the physical environment requires availability in the psychosocial learning environment. They need to work together. If the atmosphere and sense of security in the class is poor, the furniture won't work. Which is why the work on values is so important.

I think many people choose traditional furnishings out of pure habit. An important lesson is that teachers need to make a strategy from the perspective of teaching. How should the new environment be used? It is vital to view the change as an ongoing process."



*"I can move around more in the new classroom, and my impression is that my students are more on their toes. I can get closer to my students and can stop negative situations before they arise."*

*"By furnishing more areas with functional spaces, the classroom has grown out into the adjacent hallway and group room."*

MARTIN SALOMONSSON, EDUCATOR

# CLASSROOM

BEFORE



Traditional rows of desks with fixed tables and fixed height chairs. Teachers and students felt the room was inflexible and unpleasant. Chairs and tables would scrape on the floor when moved, making noise in a room that was lacking an acoustic solution.

AFTER



The new classroom was designed with zones for different types of work. The Origo table and Xact chairs on castors make it easy to rearrange furniture. "It's great that we can create rooms within the room. It gives a feeling of security," says Martin Salomonsson, teacher. His colleague, Dana Johansson, appreciates the half-moon shaped tables that are easily moved. "It's really good that the round tables can be separated and put back together again." High-backed sofas from the Kinnarps Fields series create a room in the middle of the room. The Boullée exercise balls allow active sitting and the Clip chair with writing table gives an enclosed feel with greater opportunities for concentrating. Flexible storage solutions and new lockable cabinets from the Space series. The Oktav sound absorber on the walls and Zonit partition screen contribute to better acoustics and the light walls create a sense of calm.

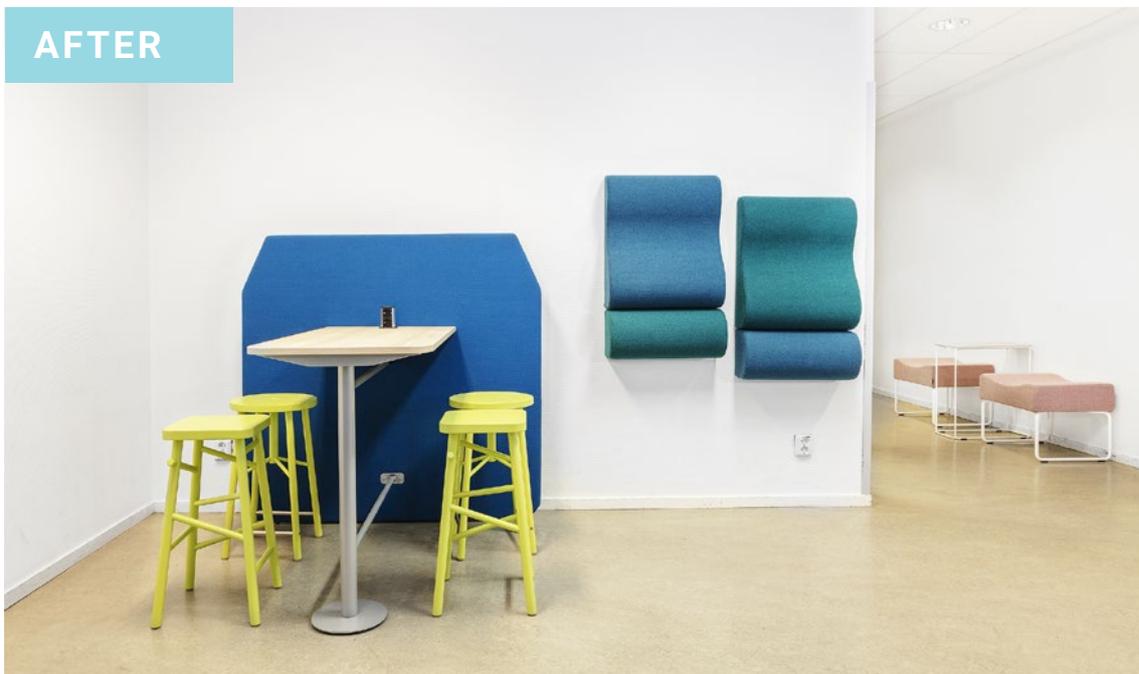
# HALLWAY

BEFORE



The adjacent hallway was previously underutilised space and the walls, which were painted in bold colours, had an anxious feel.

AFTER



The hallway was painted in light colours and furnished to better integrate with the classroom. The high Origo table and Plockepinn stools allow working standing up or sitting down. The wall-mounted sound absorbers provide good acoustics and can be leaned against. The Frisbee stools and Fields tables allow the communication spaces to be ideally used.



## GROUP ROOM



The group room was originally painted in intense colours and insufficiently furnished with a few tables and chairs that were difficult to move.



The hexagonal Triagon table makes an inviting project place. Upholstered seats offer comfort. The stackable Frisbee stools contribute flexibility when there are a lot of people in the room. The wall-mounted Oktav sound absorbers give good acoustics.

# SUMMARY

## HOW DOES THE INTERIOR INFLUENCE LEARNING?

The new environment results in increased cooperation between students and between students and teachers. Having diversity in environments and flexible furniture makes it easy to choose the place that best supports the activity at hand. It also makes movement natural, contributing to better health and well-being. The light colours and sound absorbers give a cosier feel and better acoustics.

## HOW DOES THE INTERIOR INFLUENCE TEACHING?

Teachers feel they get closer to their students in the new environment. The room is also utilised more efficiently than before.

## HOW DO PARTICULAR PRODUCTS IMPACT THE CLASSROOM ENVIRONMENT?

Both the teachers and students feel that students sit more comfortably on the new chairs and that it increases their concentration. It is important that students sit on chairs that are adapted to their bodies. With varied furniture, students can find a place that suits their particular needs. Furniture that creates corners provides the students with a sense of security.

## IMPORTANT TO REMEMBER:

**Changing a learning environment is an ongoing process and requires a strategy and continuous maintenance. It is important that students and teachers are given a good introduction to the new environment and that they learn how to use it correctly. Ergonomically designed school furniture contributes to better concentration and learning. Furniture on castors increases flexibility and improves acoustics. Availability in the physical environment requires availability in the psychosocial learning environment.**

**ABOUT PROLYMPIA** Prolympia is Sweden's leading sports school at elementary school level with operations from Gothenburg in the south to Umeå in the north. In Jönköping the school is centrally located and within walking distance from Vätterstranden beach, sports arenas and green areas. This independent elementary school focus on knowledge, security, sport and health for students from preschool age to school year nine with room for up to 600 students.

**KINNARPS NEXT EDUCATION®** Next Education is a method for creating active learning spaces. Carefully-conducted analyses and workshops are used to develop unique, customised environments with the school. The result is a fact-based, sustainable, flexible and attractive environment that supports students and teachers in their learning and teaching.

[www.kinnarps.com/nexteducation](http://www.kinnarps.com/nexteducation)

