

Furniture, fittings and equipment in a modern learning environment

FACTSHEET

This factsheet summarises research aimed at better understanding the impact of furniture, fittings and equipment (FF&E) on teaching and learning within the context of a modern learning environment (MLE). It is intended to act as a guide for those involved in the visioning and design stages of any form of educational facility.

MLEs recognise that advancing technology and the needs and learning styles of different student groups mean that learning spaces within schools need to become more flexible and adaptable to meet individual student needs and to support the delivery of different teaching and learning programmes.

Using FF&E effectively

FF&E can contribute to more flexible and adaptable teaching and learning spaces through utilising different types of FF&E for different types of learning activities and teaching styles. This may mean that different areas within a traditional classroom space are configured in different ways.

Examples:

- Soft seating, bean bags or floor cushions might be used for quiet reading or individual work
- Cluster arrangements of seating around a table can support students to work on collaborative tasks
- Horseshoe arrangements allow students to easily see the teacher and each other, and are acoustically effective because they minimise the distance between the teacher and the students
- Different learning areas able to be offered in a MLE may support different opportunities for students to choose to work individually in a quiet area of the learning space, rather than the teacher configuring the whole space into an arrangement of rows
- Storage units can be used to define spaces for different activities and can provide acoustic isolation
- Storage units can provide additional vertical and horizontal display space

The research noted that, psychologically, seating arrangements may signal to students that a certain type of learning is expected of them, for example, tables arranged in clusters suggesting collaborative learning. It is therefore important that learning spaces are configured so that individual and group learning areas are clearly distinguished.



Higher levels of flexibility and adaptability also create additional opportunities for a range of inclusive practices.

In order to support this level of adaptability, furniture must be durable enough to last despite frequent rearranging and lightweight enough to enable ease of movement around the teaching space. If tables are heat and water resistant this will allow them to be used for a variety of activities.

Consideration will need to be given to FF&E configurations for specialist teaching spaces to enable more specialist activities to occur.

Flexibility and adaptability

Some key considerations in relation to flexibility and adaptability of FF&E:

- Flexibility is increased by limiting built-in furniture and increasing the mobility of non-fixed furniture
- Classroom configurations may include different types of spaces or seating (soft seating, bean bags etc)
- Students and teachers may move chairs, desks and tables to create different configurations depending on the activity
- Castors assist in ease of movement, but the floor covering should be considered, because different castors are needed for use on different surfaces
- If furniture is to be non-fixed and moveable, it should not be too heavy or prone to tipping during regular usage or in an emergency
- Different seating configurations may cause line of sight difficulties, such as students struggling to see the teacher or other students
- Lighting within the learning space should be designed to ensure that different lighting levels are possible in different learning areas, and that glare does not become an issue in certain configurations
- Chairs and desks should be adjustable in a range of heights to fit different student heights, and consideration should be given to accommodating students in wheelchairs or standing frames
- Research suggests that ergonomically suitable workstations and computers lead to higher levels of comfort and increased task performance

Supporting technology

Some key considerations in relation to supporting technologies:

- Design of the learning space should allow for future changes in technologies as much as possible
- Flexibility in configurations and technology use will be increased by careful consideration of the location of fixed wiring and power supplies
- Multiple technology devices in the classroom can impact heating and ventilation systems
- Ceiling mounted projectors are less flexible than mobile projectors, but multiple screens around the room allow multiple viewing points and the screens can be retracted when not in use



Value for money

Inexpensive FF&E, while initially saving money, may be more expensive long-term due to requiring replacement or repair. More durable FF&E will be required in frequent use spaces, and particularly spaces where it will be exposed to light and heat, or will be moved and reconfigured frequently.

If possible, it is important to try the FF&E before purchasing. One school set up a test classroom, which allowed teachers and students a chance to try out the FF&E, and the school was able to make informed decisions about the construction, strength and durability of the products.

Sustainability is another important feature to be considered as part of FF&E purchases, with products that are able to be recycled or reused preferable to those that are not. There are obvious environmental benefits of purchasing FF&E that is able to be recycled, but there are also logistical and financial advantages, so that schools do not have to pay for disposal or store FF&E that is no longer used. Another aspect of sustainability is the potential impact of some types of FF&E on student health. Volatile organic compounds are released from some furniture materials, and this lowers indoor air quality and may cause health issues such as asthma or allergic reaction.



“if properly designed and placed, furniture is more than a place to sit, it can be a strategic asset”

Cornell, P (2002) The impact of changes in teaching and learning on furniture and the learning environment.

