

[1] In New Zealand, schools are the central focal point of many communities both in cities and in small rural towns. Although these schools have to address the needs of different communities in terms of the social and cultural mixes, until recently they have often been very similar in building design – and if you looked inside the classrooms the layout and the furniture used would be very similar as well. This is because at the time the schools were built the Government had the major say both in the design that would be used and the type of furniture which would go in the classrooms.

There has been a steady rise in the number of new schools being built due to the size of population growing through increases in birth rates and immigration. There has also been a movement of people from country towns into the cities. Although these changes have meant that the demand for school furniture has increased until fairly recently the design of the furniture has changed very little. This has been because the design was seen to meet the needs of the schools very well. The desks and chairs were easy and cheap to manufacture, lasted a long time and were easy to move around and able to be stacked up and stored when they needed to be.



Although the furniture met the needs of the school very well, it wasn't designed to meet the needs of the different sizes of students who had to sit on the same size of chair at desks which were the same height for a long period of time and concentrate on schoolwork. Learning wasn't a comfortable experience and this caused behaviour problems in many classes.

Some changes did occur in the design to improve things in the classroom - for example the tilting desk lids on the box-desks were replaced by a shelf under the desk. This made it easier for students because you didn't have to clear the desk to get something out of the storage part and also easier for teachers because there was less noise made in getting stuff in and out of the desk.

When the government gave schools more control over the design of buildings they also got more freedom in the choice of furniture they could use and this encouraged more competition among furniture manufacturers. So there was more incentive for them to change the design of the furniture to make them more attractive to the schools to buy.

Furnware, a Hastings based school furniture manufacturer, decided that to increase its sales it would have to try to produce a range of furniture that was better for the students. But the new furniture could not be too expensive and would still have to be easy to maintain and last a reasonable length of time.

Furnware decided to invest money to find out how classroom furniture was being designed and used in other parts of the world and also looked at research findings that clearly showed that the mismatch between the classroom furniture currently in use in schools and the differing body sizes of students was affecting the way students learn and also causing physical problems later in life.

They decided that they would have to go inside schools and get alongside not only the teachers and students that used the furniture every day but also the people responsible for maintaining the furniture and cleaning the classrooms and the people who were responsible for buying the furniture. Focus groups involving all of these people were set up and the differing and often competing needs of each group identified, for example students wanted lots of different sizes of desks and chairs to fit their differing heights and weights but the school caretakers wanted them to be easy to clean, stack and maintain and the school principals wanted to keep the costs low enough to be able to afford the new designs.

Furnware then moved into a design phase in which they would try to meet all these differing needs.

[2] The outcome of the development work was the Bodyfurn classroom furniture system providing a range of desks and chairs matched to student size using a six tiered height banding system. The chairs are designed to allow students to lean backwards and forwards and to shift the way they sit in the chair on a regular basis. This allows them to be more settled at the desk and free to concentrate on class work for longer periods. These improvements in student comfort did not come at the expense of any of the traditional features required of them – they still had the required strength and stability and met the caretakers need to be easily cleaned and repaired.

One design problem initially raised by teachers was the lack of storage space at the desk. So a lot of experimentation with alternative systems was carried out however further design changes to the desk enabled a clip on side storage unit to be developed which seems to have solved the problem to everyone's satisfaction.



To make sure the cost of the finished products still fitted in with the available school budgets changes were made to the manufacturing process to ensure that efficiencies could be produced. These included the use of robot welders to speed up the manufacture of the metal frames and reduce the labour requirements. The company also gained Environmental Choice certification which enabled it to be able to bid more competitively for supplying furnishings to the increasing number of new schools looking to attain 'green building' classification.