

Kansei Engineering

In Japan, designing for the market has become known as 'Kansei Engineering'. According to Jordan (2000), Kansei Engineering translates roughly as 'Pleasure Engineering' and helps the investigator to understand the relationship between the 'formal properties' and the 'experiential properties' of a product. 'Formal properties' refer to a product's form – its shape, materials, etc. – and 'experiential properties' refer to the user's experience of the product – how it feels, looks, works, etc. It can also be used as a means of gaining an insight into the sorts of benefits that people wish to gain from products and the product properties through which these benefits can be delivered.

One approach to Kansei Engineering involves manipulating individual aspects of a product's formal properties in order to test the effect of the alteration on users' overall response to the product. This technique has been used to assist in the design of a diverse range of products. Examples range from automobiles through camcorders to clothing. Each of several different features of a product – its colour, the shape of a handle, the size of an in-set panel, etc. – are varied systematically and separately, and people are asked to make a response to each change, using a fixed-response questionnaire. Statistical analysis of the results indicates which changes (or sets of changes) produce the most favourable responses.

The other approach involves looking at the contexts in which the product is used and then drawing conclusions about the implications of this for the design. This second approach involves the gathering of qualitative data through field observations. In this case, the data is used to help establish the link between the formal properties of a design and the benefits associated with the product.

A Kansei Engineering approach to camcorder design was based on observing and understanding the context in which people tended to use the product. From looking at marketing data, it was realised that the biggest single user group for camcorders was families who had babies. This meant, for example, that users had to get down on their hands and knees in order to film a baby crawling. To alleviate this problem the researchers recommended a swivelling viewfinder. Another aspect of use that was noticed was that users would often enjoy showing

others what they had just filmed. In order to show this, the users would ask their friends to look through the viewfinder and would then play back what they had just filmed. To improve on this rather inelegant solution it was proposed to add a monitor screen to the back of the camcorder. This enabled others to view the playback without having to look through the viewfinder. The combined idea of a swivelling monitor screen is now a normal feature of camcorders.

Similar approaches have been adopted by car manufacturers. In a product renewal exercise for the 2003 model of its Micra, Nissan sent teams of researchers to supermarket and shopping mall carparks to observe how owners of older Micras and similar models stowed their shopping and other paraphernalia. One of the results was to change the design of the Micra's boot to facilitate their owners' needs and habits.