

Personal views of learning

Mathematics Teaching. 162. March 1998.

For the learner, recognising what one can do will be strongly influenced by personal theories of learning and dispositions. From birth children strive to master skills and understand their world. As understanding grows, their social encounters with others contribute to these theories and attitudes. Before they begin school, children will have a personal view of themselves, including their ability to respond to challenges either in a helpless or skilful way. There is little doubt that these beliefs are pliant during the early years of development and clearly children bring these personal views of themselves into school. The most successful educational settings in the early years will be those that foster positive views of self worth and ability in all aspects of the children's time spent there.

Recent research by Dweck and Leggett (1) has shown that the teachers working with children in the early years contribute to children's construction of understanding of their ability to succeed. Studies of children's orientation to academic tasks showed that when meeting problems or likely failure, children responded with one of two different patterns of behaviour: either of "helplessness" or "mastery". Dweck and Leggett use the term 'mastery' to describe positive attitudes to learning exhibited by some children. The use of the term mastery in this context is not related to its earlier association with learners' expected achievement of a pre-determined level or mastery of a skill, if given sufficient time. Children exhibiting patterns of "helpless" behaviour responded negatively to their situation. Their behaviour was off the task and they avoided challenge; they also reported negative feelings and views of themselves.

Teachers' beliefs about learning appear also to contribute to children's altered perceptions in learning situations, suggesting that children are vulnerable to adverse critics. For children who view intelligence as fixed, mistakes are viewed as "bad", rather than features that can inform both the learner and teacher of the child's current understanding. For these "helpless" children, further mistakes and criticism continue to reinforce negative feelings about learning at school and develop a personal view of inability; effort is only considered worthwhile when extrinsic rewards from adults are offered.

"Mastery" children were found to monitor their strategies and persist when faced with difficulties: such behaviour made them task-oriented and resilient in the face of difficulties. For these children rewards were intrinsic.

By focusing on learning goals (mastery), teachers can help children to view themselves as successful, creating a culture of thinkers and contributing to

success. The challenge for teachers must be to develop a climate where children take risks and value challenge, where children seek alternative ways of approaching a problem and develop creative and flexible ways of working.

During a period of more than seven years as members of the Emergent Mathematics Teachers' Group, we have learnt that we can teach best by learning from the children what they need to support their current level of cognitive development. What has been especially exciting, has been our realisation that using an emergent approach to learning fosters mastery learning goals. If established in the children's early years of learning, such an approach is likely to develop deeper understanding and establish positive attitudes towards learning, including mathematics - for life.

Reference

- 1 C Dweck & E Leggett, in K Sylva & J Wiltshire: *'The impact of early education on children's later development'*, A review prepared for the RSA inquiry 'Start right' in European Early Childhood Education Research Journal. Vol. 1. no. 1, 1993