

Appendix Four

How children learn: implications for practice

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Adapted from Gultig (2010). Learners and learning: Reading 6 downloaded from https://www.oerafrica.org/sites/default/files/Portals/33/L%20&%20L%20reader_section%20two-Reading%206.pdf

How children learn

The topic of how children learn is a complex one and no attempt is made here to provide a full and critical exposition. The aim of this section is to capture the essence of learning by identifying core issues, and by considering the ideas of the different theorists in the debate.

The first point to note is that what children learn in the classroom will depend to a large extent on what they already know. Irrespective of their age, children will have some knowledge and some conception of the classroom topic they are faced with, which they have acquired from books, television, talking to parents and friends, visits to places of interest, previous work in school, and so on. However, these conceptions, or schemata as they are generally called, are likely to be incomplete, hazy, or even plain wrong. They are, nevertheless, the children's current ideas, which they use to make sense of everyday experiences.

In other words, children do not come to any lesson empty-headed; they come with partial schemata.

For example, a top junior teacher we observed recently asked her class, 'What are clouds made of?' The responses were many and varied. Some thought they were made of smoke, some had fuzzy notions about them being made over the sea but they were unclear of the process. On the other hand, another child, the son of a local meteorologist, was able to talk about evaporation and had a clear schema of the water cycle.

There was tremendous variation in the schemata held by the children in that class. The teacher's job there, as in any classroom, was to find effective ways of modifying, extending, or elaborating the children's schemata.

Indeed, we can define learning in these terms as the extension, modification, or elaboration of existing cognitive schemata.

That children have different schemata is, of course, one reason for the stress on individualisation of learning. But this should not be taken too far. Ideas or schemata are often shared, and this is not surprising. Children who come from the same school catchment area will, for example, have shared experiences in their local environment as well as in their school; another powerful shared experience is that of television.

So, children have schemata that are differentially complete or correct, some of which are shared. But how do their schemata change in school?

Teachers offer knowledge in the form of telling, demonstrating and explaining, and pupils work on different kinds of tasks or activities designed to allow the practice, development or generation of a wide range of knowledge and understanding. Most importantly, it is the child who makes sense of these inputs, by constructing links with his or her prior knowledge. It is assumed that the construction of links is an

active intellectual process involving the generation, checking and restructuring of ideas in the light of those already held.

Construction of meaning is a continuous process and this view of learning is often referred to as *constructivist*.

Two views of learning

There is little argument among theorists that learning involves the construction of knowledge through experience. Arguments occur in relation to the conditions under which such learning is optimised – should learning be individual or social? Bruner and Haste (1987) capture this argument well when contrasting children as *social beings* and *lone scientists*.

A quiet revolution has taken place in developmental psychology in the last decade. We have begun to think again of the child as a social being – someone who plays and talks with others and learns through interactions with parents and teachers. We have also come once more to appreciate that through such social life, the child acquires a framework for interpreting experience and learning how to negotiate meaning in a manner congruent with the requirements of the culture.

We understand that *making sense* is a social process; it is an activity that is always situated within a cultural and historical context.

Before we understood that *making sense* is a social process, we had fallen into the habit of thinking of the child as an *active scientist*, constructing hypotheses about the world, reflecting upon experience, interacting with the physical environment, and formulating increasingly complex structures of thought. But this active, constructing child had been conceived as a rather isolated being, working alone at her or his problem-solving. Increasingly, we see now that, given an appropriate, shared social context, the child seems more competent as an intelligent social operator than she or he is as a *lone scientist* coping with a world of unknowns.

This support for the child as a social being rather than as a lone scientist constitutes an attack on Piaget's views of learning, which assume that genuine intellectual competence is a manifestation of a child's largely unassisted activities.

Bruner (1986) stresses far more the importance of the social setting in learning:

I have come increasingly to recognize that most learning in most settings is a communal activity, a sharing of the culture. It is not just that the child must make his knowledge his own, but that he must make it his own in a community of those who share his sense of belonging to a culture.

This belief leads Bruner to emphasise the role of negotiating and sharing in children's classroom learning and, in this, he has been influenced by the work of Vygotsky.

Vygotsky assigned a much greater significance to the social environment than Piaget:

Learning awakens a variety of internal developmental processes that are able to operate only when the child is interacting – with people in his environment and in co-operation with his peers. (Vygotsky, 1978)

Social interaction is thus assigned a central role in facilitating learning. For Vygotsky, a child's potential for learning is revealed and indeed is often realised in interactions with more knowledgeable others. These *more knowledgeable others* can be anybody – peers, siblings, the teacher, parents, grandparents and so on.

One of Vygotsky's main contributions to our understanding of learning is his concept of the zone of proximal development, which refers to the gap between what an individual can do alone and unaided, and what can be achieved with the help of more knowledgeable others. Vygotsky (1962) described it as 'what a child can do today in co-operation, tomorrow he will be able to do on his own.'

For Vygotsky, the foundation of learning and development is co-operatively achieved success, and the basis of that success is language and communication. He said, 'Children solve practical tasks with the help of their speech, as well as with their eyes and their hands' (Vygotsky, 1962).

Through speech to themselves (inner speech) and others, children begin to organise their experiences into thought. Hence, a constructivist view of learning perceives children as intellectually active learners already holding ideas or schemata which they use to make sense of their everyday experiences.

Learning in classrooms involves the extension, elaboration, or modification of their schemata. This process is one by which learners actively make sense of the world by constructing meanings. Learning is optimised in settings where social interaction, particularly between a learner and more knowledgeable others, is encouraged, and where co-operatively achieved success is a major aim. The medium for this success is talk, which is now widely accepted as a means of promoting pupils' understandings and of evaluating their progress.

