

Human Learning

Learning is something of which we all have an understanding and in which we have all participated. This participation has been in a very wide range of settings, both formal and informal, ranging from the relative confines of a school classroom, to the wide open spaces of the countryside or a quiet corner where a chance conversation led to deeper understanding of some topic or another.

Learning is not exclusive to the domain of an education system. Learning begins a very long time before school; continues for even longer after school; and happens rapidly, and in parallel with school, in a great number of different ways and settings. Learning proceeds in a number of different ways, and has been described and explained by many different interested researchers and opinion-makers over many years.

How is learning currently defined?

Without looking for too long, and without delving too deeply into learnt sources, it is possible to find a range of definitions of the process of learning. Table 1.1 contains a sample of these definitions. Each of us will identify more or less strongly with different definitions from the list presented. In everyday terms, it is supposed that learning is the process of gaining more knowledge, or of learning how to do something – ride a bike, for example. As we will see, learning is viewed differently by those who have spent time investigating and experimenting in the field, according to the context of their work and other factors exerting influence at the time. We will look at the work of both behaviourist and cognitive psychologists and consider the very different approaches that each takes and the very different definitions that each might offer of a process which, for most of us, comes very naturally.

A basic understanding of processes of learning is essential for those who intend to develop activities that will have the potential to lead to effective learning taking place in classrooms, that is teachers. In more recent times, there has been a reduction in the emphasis given to learning about 'learning', from a theoretical standpoint, in initial courses for teacher education in the United Kingdom for example. This has been for a variety of reasons.

TABLE 1.1 Definitions of learning

A change in behaviour as a result of experience or practice.

The acquisition of knowledge.

Knowledge gained through study.

To gain knowledge of, or skill in, something through study, teaching, instruction or experience.

The process of gaining knowledge.

A process by which behaviour is changed, shaped or controlled.

The individual process of constructing understanding based on experience from a wide range of sources.

A brief historical perspective

Although the history of a philosophical interest in learning can be traced back to Ancient Greece (Plato and Aristotle), the modern history of the psychology of learning dates back to the late nineteenth and early twentieth centuries. Ebbinghaus (German psychologist) and William James, an American philosopher and physician, are considered to have been in at the very beginning of the serious study of mental processes. James said, in 1890, that psychology was the 'science of mental life'. It is from this approximate starting point that the study of the mind and of human behaviour, and in particular the study of learning, began to grow.

Early interest in learning, or training, was centred purely on behaviour. As we will see, the followers of this work developed the area of learning psychology referred to as 'behaviourism'. Behaviourism developed rapidly through the early years of the twentieth century and almost, but not quite, alongside this growing interest in observable behaviour and the modification of behavior came the growing realisation that the unseen mental processes involved in learning, and the contribution of factors apart from environmental rewards or gratification, had an important bearing on the understanding of how we learn.

So, in very general terms, two branches of the psychology of learning developed and have made important inroads into the practice of teaching over the last decades. First there is behaviourism, and second 'constructivism', which is an aspect of a very much larger field of understanding and study, that of cognitive psychology. Both of these branches have a series of sub-branches, but it is reasonably fair to divide learning theory in this way. As we will see, behaviourism is concerned with what can be seen happening – behaviour. Constructivism rests on the idea that knowledge and, more importantly, understanding are constructed by individual learners and an understanding of the mental processes involved; the underlying structures relating to knowledge and understanding are deemed to be of prime importance.

Other Developments

An aspect of the learning process that in relative terms has only recently come to the fore is that of individual learning preferences. The ideas that lie behind the notion that we as individual learners have preferred approaches to our learning are based upon research which identifies humans as more or less receptive to different stimuli. For example, one learner might find it particularly straightforward to take in information through one particular medium and another learner would find this quite difficult. This leads to a classification of learning types which describes learners in such terms as 'visual' or 'auditory' learners, to name but two. Other researchers have developed other types of classifications which emphasise other characteristics.

This whole area of individual preference or propensity for different approaches to learning has the potential to make a big impact on what happens in classrooms. An important development in our understanding of how learning proceeds was the publication of Howard Gardner's work on what he has called 'multiple intelligences'. He describes a picture of a set of different intelligence strengths, including areas such as linguistic, mathematical, physical and more (eight types of intelligence, according to Howard Gardner), which we all have in different proportions, giving each of us a different profile of intelligences which will affect the way in which we approach problems and the ease with which we might understand new ideas according to how they are presented.

Metacognition is another example of the development of our realisation that learning is a vast and complex subject. 'Metacognition' refers to knowledge and thought about learning itself. It is proposed that if an individual learner is able to gain insight into their own thought processes and come to understand better the ways in which they learn then they are better equipped as learners and likely to make good progress at times when they might otherwise find learning less straightforward.

In conclusion, human learning is complex and involves many variables throughout life that make it difficult to propose one and a single agreed-upon definition of it. The nature of learning has been investigated from antiquity through the middle ages and renaissance and still continues to be in the present; there is much more to learn about how and why humans are (in)capable of learning complex things quickly/slowly and easily/hard. Because the complexity of the nature of learning (and its motivation), theories in modern investigations are important in that they provide tentative and scientific explanations about how some aspects of learning take place—be it physical learning or mental and highly abstract such as mathematical or linguistic reasoning.