ESP AND THE THEORIES OF LEARNING

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Abstract

Until the twentieth century there was no coherent theory of learning available to the language teacher. Certainly there were empirical observations, such as Comenius' studies made in the sixtieth century and the percepts of the Direct Method at the end of the nineteenth century (see, for example, Stern, 1983). But no coherent theory of learning emerged until psychology had been established as a respectable subject of scientific enquiry in the early twentieth century. According to Littlewood, five main stages of development, which are relevant to the modern language teacher, can be identified: behaviourism, mentalism, the cognitive approach, the affective theory and the motivation theory.

Key words: theory, learning, approach, behaviourism, mentalism, motivation

1. Behaviourism: learning as habit formation

The first coherent theory of learning was the behaviourist theory based mainly on the work of Pavlov in the Soviet Union and of Skinner in the United States. This simple but powerful theory stated that learning is a mechanical process of habit formation and proceeds by means of the frequent reinforcement of a stimulus-response sequence.

The simplicity and directness of this theory had a great impact on learning psychology and on language teaching. In fact, it provided the theoretical support of the widely used Audio lingual Method of the 1950s and 1960s. This method, familiar to most language teachers, laid down a set of guiding methodological principles, based firstly on the behaviourist stimulus-response concept and secondly on an assumption that second language learning should reflect and imitate the perceived process of mother tongue learning. Some of these percepts were:
Never translate.

Frequent repetition is essential to effective learning.

All errors must be immediately corrected.

The basic exercise technique of a behaviourist methodology is pattern practice, particularly in the form of language laboratory drills. Such drills are still widely used in ESP. Of course, modern ESP books have looked for ways of handling pattern practice and a number of useful variations on the basic idea have been developed. Most modern authors of courses have tried to provide more meaningful contexts for the drills.

Pattern practice exercises still have a useful role to play in language teaching, but only as one part of the whole learning process. Subsequent developments have shown that learning is much more complex than just imitative habit formation. But this does not mean that there is no place for pattern practice in a modern methodology (see Stevick, 1982). The mistake is to consider it as the only kind of activity required.

2. Mentalism: thinking as rule-governed activity

The first successful assault on the behaviourist theory came from Chomsky (1964). He tackled behaviourism on the question on how the mind was able to transfer what was learned in one stimulus-response sequence to other novel situations. Chomsky dismissed the 'generalization' in behaviourist theory, he thought that the idea was unworkable, because it simply could not explain how from a finite range of experience, the human mind was able to cope with an infinite range of possible situations. His conclusion was that thinking must be rule-governed: a finite, and fairly small, set of rules enables the mind to deal with the potentially infinite range of experiences it may encounter.

Having established thinking as rule-governed behaviour, it is one short step to the conclusion that learning consists not of forming habits but to acquiring rules – a process in which individual experiences are used by the mind to formulate a hypothesis. The mind, in other words, does not just respond to a stimulus, it uses the individual stimuli in order to find the underlying pattern or system. It can then use this knowledge of the system in a novel situation to predict what is likely to happen, what is an appropriate answer, etc.

The mentalist view of the mind as a rule-seeker led naturally to the next important stage – the cognitive theory of learning.

3. The cognitive approach: learners as thinking beings

Whereas the behaviourist theory of learning portrayed the learner as a passive receiver of information, the cognitive view takes the learner to be an active processor of information. Learning and using a rule require learners to think, and so to apply their mental powers in order to distil a workable generative rule from the mass of data presented, and then to analyse the situations where the application of the rule would be useful or appropriate. It results that learning is, according to this theory, a process in which the learner actively tries to make sense of data, and learning can be said to have taken place when the learner has managed to impose some sort of meaningful interpretation or pattern on the data. In simple terms this means that we learn by thinking about and trying to make sense of what we see, feel, hear.

The basic teaching technique associated with a cognitive theory of language learning is the problem solving task. In ESP such exercises have often been modeled on activities associated with the learners' subject specialism.

More recently, the cognitive view of learning has had a significant impact on ESP through the development of courses to teach reading strategies. A number of ESP projects have concentrated on making students aware of their reading strategies so that they can consciously apply them to understanding texts in a foreign language.

The cognitive code view of learning seems to answer many of the theoretical and practical problems raised by behaviourism. It treats learners as thinking beings and puts them firmly at the centre of the learning process, by stressing that learning will only take place when the matter to be learned is meaningful to the learners. But in itself a cognitive view is not sufficient, we need an affective view too in order to make the picture complete (see Hutchinson and Waters, 1994).

4. The affective view: learners as emotional beings

People think, but they also have feelings. It is one of the paradoxes of the human nature that, although we are all aware of our feelings and their effects on our actions, we invariably seek answers to our problems in rational terms. It is as if we believed that human beings always act in a logical and sensible manner. This attitude affects the way we see learners – more like machines to be programmed than people with likes and dislikes, fears, weaknesses and prejudices. But learners are human beings. Even ESP learners are people. They may be learning about machines

and economy, but they still learn as human beings. Learning, particularly the learning of a language, is an emotional experience, and the feelings that the learning process evokes will have a crucial bearing on the success or failure of the learning.

The importance of the emotional factor is easily seen if we take into account the relationship between the cognitive and the affective aspects of the learner. The cognitive theory tells us that learners will learn when they actively think about what they are learning. But this cognitive factor presupposes the affective factor of motivation. Before learners can actively think about something, they must *want* to think about it. The emotional reaction to the learning experience is the essential foundation for the initiation of the cognitive process. *How* the learning is perceived by the learner will affect *what* learning, if any, will take place.

The relationship between the cognitive and emotional aspects of learning is, therefore, one of significant importance to the success or failure of a language learning experience. This relates it to a matter that has been one of the most important elements in the development of ESP – motivation.

The most influential study of motivation in language learning has been Gardner and Lambert's (1972) study of bilingualism in French speaking Canada. They identified two forms of motivation: *instrumental* and *integrative*.

a) *Instrumental motivation* is the reflection of an external need. The learners are not learning a language because they want to, but rather because they need to. The need may derive from varying sources: the need to sell things to speakers of the target language: the need to pass an examination in the language; the need to read texts in the language for work or study. Whatever the need may be, what matters is that the motivation is an external one.

b) *Integrative motivation* derives from a desire on the part of the learners to be members of the speech community that uses a particular language. It is internally generated *want* rather than an externally imposed *need*.

It appears that motivation is a complex and highly individual matter. There can be no simple answers to the questions: 'What motivates my students?' Unfortunately, the ESP world, while recognizing the need to ask this question, has apparently assumed that there is a simple answer: relevance to target needs. In practice this has been interpreted as meaning. Medical texts for the student to Medicine, Business English for the economist and so on. We, as teachers, must not forget that ESP, as much as any good teaching, needs to be *intrinsically* motivating. It should

satisfy their needs as learners as well as their needs as potential target users of the language. In other words, they should get satisfaction from the actual experience of learning, not just from the prospect of eventually using what they have learned.

The distinction made by Stephen Krashen (1981) between learning and acquisition has raised much debate in the past. Learning is seen as a conscious process, while acquisition proceeds unconsciously. In our view, for the language learner both processes are likely to play a useful part and, obviously, a good ESP course will try to exploit both.

Conclusion

In this paper we have given a brief summary of the most important developments in approaches to learning and considered their relevance to ESP. To conclude, two points can be made:

a) We still do not know much about the learning process. It is important, therefore, not to base any approach too narrowly on one theory only. As with language descriptions, it is wise to take a complex and eclectic approach, taking what it is useful from each theory and trusting in the evidence of our personal experience as a teacher. It is possible that there are cognitive, affective and behaviourist aspects to learning, and each can be a resource to the ESP teacher. For example, one teacher may choose a cognitive approach to the teaching of grammar and use affective criteria in selecting the texts, and a behaviourist approach to the teaching of pronunciation.

b) Theories of learning and language descriptions are not casually linked. Corder (1973) says:

'There is no logical connection between a particular psychological theory of how of grammar is learned and any particular theory of language structure… there is, however, an undoubted *historical* connection between them.'

In other words, a behaviourist theory of learning does not have to accompany a structural view of language. Nor is there any casual relationship between a functional view of language and a cognitive learning theory. Indeed, it might be argued that structuralism with its emphasis on a finite set of rules lends itself more naturally to a cognitive approach, which stresses the importance of rules. A functional description, on the contrary, lacks a systematic grammar, so might be thought to be more suitable to accompany a behaviourist view of learning (Hutchinson, 1984). In practice, the implication is that both language description and learning theory should

be selected in accordance with Sweet's clever principle of 'whether or not the learning of the language will be facilitated thereby (quoted in Corder, 1973)'.

Bibiography

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