

**Emilce Rees**

**Draft copy**

**Essay 1. "The goal of psychology is to explain, understand and predict.. behaviour"  
Illustrate how psychologists have tried to realise this goal.**

If we have to depart from the premise that "The goal of psychology is to explain, understand and predict.. behaviour" we should first clarify that for psychologists, the usual parents' admonition to a child "to behave" doesn't apply, as everyone "behaves" - that is both humans and animals have "behaviour". Psychology is therefore the scientific study of human (and animal) behaviour and mental processes. Psychologists' goal is to see how these have affected in the past or affect individuals or group's mental and physical state, and external environment, and, where relevant, psychologists intervene to modify behaviour (Dockerell, 2004).

Psychology's "objects of study" divide themselves between those which are observable, such as gestures, speech and physiological changes, and processes that can only be inferred, such as cognition, thoughts and (in some branches of the subject), dreams (Gross, 1990).

The impact of behaviourism on psychology as a whole (mainly in America in the 1950s), meant that learning was understood as conditioning (including learning related to cognitive processes, such as language and perception). In the same decade, cognitive processes, or the study of the "mind" rose in importance due to the rise in computer developments, and new areas in the subject began to emerge as the object of study such as *memory, perception, language, thinking, problem-solving and reasoning*. The analogy between the "Mind" and a Computer was central for the cognitive psychologist to this new work. Experimental Psychology encompasses the study of cognitive processes, physiological processes, comparative psychology, and learning, that is cognitive or mental processes refer to the way knowledge of the world is attained, the type of knowledge which can only be inferred. Introspection is irrefutable, and as cognitive processes are essentially private, they cannot be proved or disproved. Mental processes are nowadays a valid object of study in psychology, as they can be validated in memory tests and problem solving tasks.

Psychology is governed by theories. A theory is a systematic general principle or set of principles that explains how separate facts are related to one another, which may be used to predict behaviour or to have some control over phenomena. Some theoretical approaches (such as Freud's notion that the mind consists of three parts: ego, superego, and id) are unfalsifiable, that is, findings could not prove or disprove this theory because of its vague theoretical position. Some psychologists call Freud's approach "pseudoscience". Applied research in psychology is carried out with the purpose of solving practical problems - most typically to control behaviour - hence the degree of success would be judged by the extent the applied psychologist has succeeded in controlling behaviour.

Phenomena such as *déjà-vu* (French for "*already seen*") (a feeling that one has been in a situation before and that one can almost remember what will happen next) can be used by

psychologists to attempt to explain what causes this, and how reliable is this as a sign that a memory trace exists to match the perception that the subject has already experienced or is familiar with a situation. 60 to 70% of the general population has occasionally had déjà-vu . (Dockell 2004). **H.J. Eysenck** put forward a theory in 1967 in which he found correlations between subjects who scored high in neuroticism (anxiety and depression) with a higher physiological response to déjà-vu than those subjects who scored low in neuroticism. However, the theory was falsified (proved wrong) as numerous studies since have tested this theory, with the great majority failing to support it. Today, we know that some déjà-vu may be caused by a momentary disruption in cortical functioning (such as under epilepsy) so that these temporary electrical disturbances in the brain's cortex can cause whatever a person is perceiving at a given moment to seem familiar.

Historically, psychology has always attracted a great deal of attention. Whether scientific or not, there have been varied approaches by which those with some intellectual curiosity have tried to "explain" the human character and mind. For example, in the early 1930s, **Phrenology**, the theory that emotions, perception, intellect, were seated in different parts of the brain, responsible for different mental functions, was very much in vogue. Although this approach is redolent of a Victorian funfair attraction, there's a revival of theories that support the notion that mental functions reside in certain parts of the brain (not, as the phrenologists would have had it, determined by the contour of the skulls, but by the specialisation of certain parts of the brain for some specific functions). In modern linguistics, Fodor (1983) and other MIT linguists since, have argued in favour of the modularity of mind for language and other mental functions, being language as a biologically determined faculty. Fodor's modules are not organs which can be localised in the brain, but abstract faculties defined by the functions they perform. They are "individuated by its characteristic operations, it being left open whether there are distinct areas of the brain that are specific to the function that the system carries out" (Fodor 1983 p.13).

In psychology, however, the contemporary position is to recognise that specific parts of the brain are active for specific tasks. For example infants have a visual preference for face-like stimuli, so one area of study is devoted to find evidence that human infants have an innate capacity to detect socially relevant information.

### **How Psychologists have tried to realise the goal of explaining, understanding and predict behaviour: the role of educational psychology.**

Educational Psychologists mainly assess and support children with special educational needs. This strand of applied psychology has been defined as “. . . an independent applied discipline dealing with the nature, outcomes and evaluation of school learning, and with the various variables of cognitive structure, development, intellectual ability, practice, motivation, personality, instructional material, society and teachers that influence it.” (Ausubel, 1978, quoted by Ireson 2004).

The educational psychologist, who might come from a teaching background and may have a postgraduate qualification in educational or child psychology, is involved with

varied areas of applied research, which are closely related to cognitive processes and development; learning and motivation; individuality: personality, abilities, intelligence; social processes and development; language and literacy, numeracy; special educational needs; and also the psychological and educational design of learning environments (with the rise of the internet and online communication, pioneer work is being carried out in the area of computer-aided learning at all levels of education). Educational psychologists are usually employed by the Local Education Authority or work in conjunction with other educational psychologists, social workers, child psychotherapists, and, sometimes, a speech therapist). The age of clients is up to 19 years, but most will fall into the 5 to 16 age-group (May 2004, BPS, 2004). The areas mentioned above are too wide-ranging to discuss in detail the success rate of the educational psychologist in each of them. Therefore some specific examples will be used for illustration purposes with provisos attached.

### **Understanding behaviour: assessing children's maths as Psychology's contribution**

Assessing children's maths is argued by some researchers as the contribution of psychology to "opening Pandora's Box" (Cowan, 2004). Number Conservation for example tests whether children understand that one-to-one correspondence is what determines numerical equivalence. The experiments involve establishing one-to-one correspondence between two sets and then changing appearance of one set, which exposes children to conflict. However, it has been argued to be controversial as some research indicated that children's failures may reflect features of the interaction between the child and the tester. It may be that the child fails to understand the tester's intentions and language (Gelman & Meck, 1983, quoted by Cowan, 2004). It might be, therefore, that errors of application are errors of comprehension. For example, using a soft toy during a test to interact with a child makes it more likely that the child will say when they notice an error. Hence differences in accuracy, fluency, and consistency are likely to reflect differences in experience but may also reflect other skills (comprehension, memory, etc). Hence, educational psychologists might find that assessing counting might not be just a methodological question and a more complex task than it is assumed to be.

### **Psychology's role in modifying classroom behaviour**

Research has been carried out that demonstrates that classroom behaviour can be changed. In an English primary school it was observed that children are usually seated in groups although most of their work is individual rather than collaborative group work. An experiment was carried out in which tables were changed to rows and back again. The results showed that by changing the seating arrangement, the time spent on a specific task was higher when children were in rows - studies in 10 classrooms show that the average percentage increases in time on task ranged from 16% to 124% (**Hastings, N. and Schwieso, J., 1995**). In this case, the intervention was successful, proving that group seating is beneficial in making pupils more productive. It also shows that behaviour can be predicted by modifying the environment (just by changing the seating arrangement).

There are cases in which grouping is counter-productive or has no effect. Many schools place students in ability groups or 'sets' for some subjects. This type of setting is *perceived* to make it easier for teachers to match work to students' learning needs, and here educational psychologists can investigate in a scientific manner whether this practice influences students' attainment. A longitudinal study, following students from year 9 when they took national Key Stage 3 tests, to year 11 when they sat national GCSE examinations, showed that setting had no significant effect on GCSE attainment in English, science or mathematics, when students' gender, prior attainment and social disadvantage were controlled. Setting, therefore, as currently practised, is not an effective means of raising attainment.

### **Educational Psychology in practice**

In practice, inclusive classrooms depend on successful professional development for subject or class teachers, supported by professional development from specialists from outside school. Law et al (2000) argue that the greater part of the provision for school-aged children with speech and language needs should be embedded within the curriculum, taking the child's educational context into consideration, and not be granted outside the school's context. Peacey (2004) argues in favour of "teacher support teams" that is, in-house peer support and for permission not to teach everything to everyone. The SENCO (Special Needs Co-ordinator)'s role should involve fewer routine tasks (with LEA support) and increased time for curriculum work. Teachers and support staff working collaboratively (e.g. White Hart Lane School vocabulary presentations). Specific available techniques would then enable teachers of children with difficulties and disabilities in mainstream schools to carry out their work effectively. Since the 1997 Green Paper, *Excellence for All Children*, a firm commitment was made to high quality education for pupils with special educational needs (SEN). It has been recognised that building the capacity of teachers and schools to teach pupils with a diverse range of SEN raises the achievement of these pupils. Some possible techniques involve behavioural, emotional and social development. In addition, the use of peers is a valuable resource either as part of a behaviour management programme (e.g. peer-monitoring) or peer-oriented intervention (e.g. buddy system) (Majors, K. 2004).

### **Conclusion**

Approaches that encourage children to regulate their behaviour by teaching them self-monitoring, self-instruction and self-reinforcement skills are effective in producing adaptive behaviour change (reductions in anti-social behaviour). Other approaches which also appear to be successful are the use positive reinforcement (where appropriate behaviour is immediately rewarded), behaviour reduction strategies (such as reprimands and redirection), and response cost (a form of punishment in which something important is taken away) (Davis et al, 2004).

It is unhelpful to seek a separate special education pedagogy. Given the current policy context, the emphasis seems to rely on the development of a pedagogy that is inclusive of all learners. There is little evidence of the need for distinctive teaching approaches for

children with specific learning difficulties although responding to individual differences is crucial. Research is necessary to advance knowledge about teaching and learning, and to understand how *combinations of teaching approaches* might be used in different contexts and for different purposes. Such a research programme should examine teaching and learning in real settings as it will need to take account of the ways in which teachers do their work in relation to the wide variety of situations they face. Psychologists might want to argue in favour of a holistic approach, in which the whole learning environment is improved, so that it benefits all children, and not just those identified as having special educational needs.

All in all, Psychology seems to be successful at attracting a new audience, as it remains one of the greatest growth subjects, judging by the increase in A level uptake in the 1990s (May 2004). As educational psychology has been the focus of the research and evidence presented during the course, we might want to state that a combination of approaches (e.g. cognitive-behavioural *with* family therapy) should be favoured as they are more effective in facilitating positive social, emotional and behavioural outcomes than single approaches. Moreover, the interventions are more effective when parents are actively involved in their child's education.

## **Bibliography**

BPS (2004) *So You Want to Be a Psychologist*. Leicester: BPS Publications. BPS Website: [www.bps.org.uk](http://www.bps.org.uk)

Cowan, R. (2004) The role of psychology in assessing the needs of individual children: mathematics. Psychology in Education - the practical contribution of leading-edge research Module, Summer Term 2004, Institute of Education.

Davis, P. (2004) *Teaching strategies and approaches for pupils with special educational needs: a scoping study*. Executive Summary. Department for Education and Skills, Research Report 516.

Department of Education and Skills (1997) *Green Paper, Excellence for All Children* <http://www.dfes.gov.uk/sengp/index.shtml>

Dockrell, J. and Ireson, J. (2004) *What is psychology, and what is its role in education? Policy, practice and opportunities*. Psychology in Education - the practical contribution of leading-edge research Module, Summer Term 2004, Institute of Education.

Eysenck, M. W. (1996) *Simply Psychology*. Hove: Psychology Press.

Fodor, J. (1983) *The modularity of Mind*. Cambridge, MA: MIT Press.

Francis, H. (1995) *Reflections on Psychology and Education*. London: Institute of Education

- Gross, R. (1990) *Psychology: the science of mind and behaviour*. London: Hodder & Stoughton.
- Hayes, N. (2000) *Foundations of Psychology: An Introductory Text*. London: Thomson Learning.
- Hastings, N. and Schwieso, J. (1995) Tasks and tables. *Educational research*, 37(3), 279-291.
- Ireson, J., & Hallam, S. (2001) *Ability Grouping in Education*. London: Paul Chapman Publishing.
- Law, J., Lindsay G., Peacey, N. (2000) *Provision for Children with Speech and Language Needs in England and Wales: DfEE Research Report 239* DfEE publications.
- Majors, K. (2004) Understanding the role of the Educational Psychologist. Psychology in Education - the practical contribution of leading-edge research Module, Summer Term 2004, Institute of Education.
- May, D. (2004) How to become a psychologist. Psychology in Education - the practical contribution of leading-edge research Module, Summer Term 2004, Institute of Education.
- Peacey, N. (2004) *Working with mainstream teachers of children with difficulties and disabilities*. Psychology in Education - the practical contribution of leading-edge research Module, Summer Term 2004, Institute of Education.
- Slater, L. (2004) *Opening Skinner's Box: Great Psychological Experiments of the 20th Century*. London: Bloomsbury Publishing.