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The Process of Learning

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Biggs, J.B., and Moore, P.J. (1993). *Processes of Learning* (3rd ed). Sydney: Prentice Hall.

The typical introductory educational psychology text is a North American concoction. Themes from developmental psychology, cognitive psychology, personality theory and social psychology are expounded in these books, and much else besides. Research from US classrooms predominates nearly all interpretations of the teaching-learning matrix. The authors of these volumes pander to every taste and the texts contain a little of everything to satisfy the dispositions of teachers and students. These tomes are usually given copious space on the library shelves of most academics working in the field.

Even so, all is not well in this area. The American version of the reality of educational psychology typically lacks subtlety and coherence, possibly because the subject matter is so diverse. The authors are often scathing of those who have written previously about educational psychology (Piaget and Burt are usually criticised at length) and the views of practising teachers are also discredited (they are said not to understand what research has to say about critical issues). The standard text is a pedestrian account of elementary psychology packaged in a colourful magazine-style layout. All this is a pity because the American journals (particularly the *Journal of Educational Psychology* published by The American Psychological Association) reveal the lively and resilient nature of the subject area.

Is this text any different? Do Biggs and Moore accomplish more than our cultural cousins? Do they do better than the Americans at their own game? I believe they do. The text is lively and critical. In many ways the book's organisation is traditional (the topics learning, memory and intelligence dominate many pages), in other ways less so especially in the treatment of metacognition and motivation. Overall, the arguments in the book are well stated and supported by important research findings.

The most admirable aspect of this book is its focus on current issues of interest to novice students of education. The authors are sympathetic to the needs of beginning teachers in the everyday work environment. The work is closely tied to psychological issues that are of concern to teachers in primary and secondary classes. The authors have experience in the field and don't presume to preach to the uninitiated. The chapters on motivation and teaching for better learning are particularly challenging. The book also contains a useful and ground-breaking emphasis on the

psychology of reading, a topic much neglected in books of this type. The chapters on intelligence and learning are comprehensive and cover the most contentious topics. Biggs's preference for simultaneous and successive processing models is evident, but the issue is not pressed unduly and other points of view are given fair treatment. The componential theory is given due attention and its educational implications of this view are discussed at length.

The book has a lively style. It has been written with university students in mind and the authors have used an informal language to explain much of the content. There are many inserts in the text (boxes, motivational diversions and accounts of relevant research) to keep a reader's interest. The text has advanced organisers at the beginning of each chapter to focus the attention of instructors and students. Some of this material in the text can be adapted to form the basis of a good visual presentations (which may be used as overheads for class). The chapter summaries are particularly well done and a useful guide to the arguments presented in the text. The activities at the end of chapters are clearly organised and of good value to the university staff member looking for tutorial material to guide learners in class. The instructor's manual has also been compiled with care and should be a real help to the busy lecturer. The latter is a comprehensive package and contains much that will be helpful in interpreting the major themes of the book.

One or two other features may influence the book's selection as a text. Students in their first year of university will not find it an easy read. There is an expectation (implied or otherwise) that the students of this text have a sound understanding of basic psychological concepts. For example, the book contains rather pointed criticisms of Piaget's theory, but it does not include a comprehensive exposition of his theory. If Piaget had been treated previously in other courses the approach is justified. If not, students may flounder in trying to understand the complexities of the authors' arguments. In my view it is a text for upper-level undergraduate and Dip Ed courses and not a book for first year undergraduate students.

Some aspects of the text may cause irritation. I was somewhat concerned by the uncritical adoption of constructivism as a theoretical direction for much of the book. This doctrine (in part derived from the views of Kuhn) had received almost total acceptance in many fields of education and psychology. Constructivism extends into matters of primitive epistemology (What can children know of the world? and What is their view of

reality?) with implications for matters of philosophical concern. Admittedly, novice teachers need to understand that children will construct a personal reality that may be very different from a mature adult's views (Piaget's basic insight), but this does not mean that the developing child is fabricating a view of world that is totally discrepant from an adult's perceptions of everyday phenomena. One key fact about cognitive development is that children do make progressive gains in perceptual and cognitive maturity over time (ie from stage to stage, in terms of Piaget's theory). With maturity children do get a better and more realistic view of the world and its wonders. The views of the scientific realists do need better representation in texts of this type. The debate between scientific realism and constructivism (prevalent in current work in the philosophy of science, such as that by Boyd, Gasper & Trout (1991) and others) needs better representation in this and other educational psychological texts. The recent work of Flavell, Miller and Miller (1993) in the cognitive psychology field could be used to counterbalance this doctrine.

My concern is with the chapter on exceptional children. The authors expound the view that one should define this subject matter in terms of the definition of creativity and high intelligence. They concentrate on divergent and convergent abilities and then use this framework to analyse the needs of children with disabilities. In this they have not succeeded. The resulting chapter is a distortion of reality (my preference for scientific realism is not clearly apparent) and will not assist the students to understand the basic concepts and legitimate solutions to major problems in the field of educational psychology. As well, there is no meaningful distinction between the concepts of learning disability and intellectual handicap. I found this chapter the weakest in the book.

Overall, this text falls into the highly recommended category. It is probably the best book on educational psychology available in print and is ideally suited to Australian students. The third edition is immeasurably better than earlier editions. It is not without fault, but the few weaknesses it does possess are compensated for by the high quality of the exposition and exemplary coverage of psychological concepts. Students of education will gain a great deal from this book if they delve into its pages and critically analyse the content.

References:

Boyd, R., Gasper, P., and Trout, J.D. (eds). (1991). *The philosophy of science*. Cambridge: The MIT Press.

Flavell, J.H., Miller, P.H. and Miller, S.A. (1993). *Cognitive development* (3rd ed). Englewood Cliffs: Prentice Hall.

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