

Jerome Bruner and the process of education

Jerome Bruner has made a profound contribution to our appreciation of the process of education and to the development of curriculum theory. We explore his work and draw out some important lessons for informal educators and those concerned with the practice of lifelong learning.

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It is surely the case that schooling is only one small part of how a culture inducts the young into its canonical ways. Indeed, schooling may even be at odds with a culture's other ways of inducting the young into the requirements of communal living.... What has become increasingly clear... is that education is not just about conventional school matters like curriculum or standards or testing. What we resolve to do in school only makes sense when considered in the broader context of what the society intends to accomplish through its educational investment in the young. How one conceives of education, we have finally come to recognize, is a function of how one conceives of culture and its aims, professed and otherwise. (Jerome S. Bruner 1996: ix-x)

Jerome S. Bruner (1915-) is one of the best known and influential psychologists of the twentieth century. He was one of the key figures in the so called 'cognitive revolution' - but it is the field of education that his influence has been especially felt. His books *The Process of Education* and *Towards a Theory of Instruction* have been widely read and become recognized as classics, and his work on the social studies programme - Man: A Course of Study (MACOS) - in the mid-1960s is a landmark in curriculum development. More recently Bruner has come to be critical of the 'cognitive revolution' and has looked to the building of a cultural psychology that takes proper account of the historical and social context of participants. In his 1996 book *The Culture of Education* these arguments were developed with respect to schooling (and education more generally). 'How one conceives of education', he wrote, 'we have finally come to recognize, is a function of how one conceives of the culture and its aims, professed and otherwise' (Bruner 1996: ix-x).

Jerome S. Bruner - life

Bruner was born in New York City and later educated at Duke University and Harvard (from which he was awarded a PhD in 1947). During World War II, Bruner worked as a social psychologist exploring propaganda public opinion and social attitudes for U.S. Army intelligence. After obtaining his PhD he became a member of faculty, serving as professor of psychology, as well as cofounder and director of the Center for Cognitive Studies.

Beginning in the 1940s, Jerome Bruner, along with Leo Postman, worked on the ways in which needs, motivations, and expectations (or 'mental sets') influence perception. Sometimes dubbed as the 'New Look', they explored perception from a functional

orientation (as against a process to separate from the world around it). In addition to this work, Bruner began to look at the role of strategies in the process of human categorization, and more generally, the development of human cognition. This concern with cognitive psychology led to a particular interest in the cognitive development of children (and their modes of representation) and just what the appropriate forms of education might be.

From the late 1950s on Jerome Bruner became interested in schooling in the USA - and was invited to chair an influential ten day meeting of scholars and educators at Woods Hole on Cape Cod in 1959 (under the auspices of the National Academy of Sciences and the National Science Foundation). One result was Bruner's landmark book *The Process of Education* (1960). It developed some of the key themes of that meeting and was an crucial factor in the generation of a range of educational programmes and experiments in the 1960s. Jerome Bruner subsequently joined a number of key panels and committees (including the President's Advisory Panel of Education). In 1963, he received the Distinguished Scientific Award from the American Psychological Association, and in 1965 he served as its president.

Jerome S. Bruner also became involved in the design and implementation of the influential MACOS project (which sought to produce a comprehensive curriculum drawing upon the behavioural sciences). The curriculum famously aimed to address three questions:

What is uniquely human about human beings?

How did they get that way?

How could they be made more so? (Bruner 1976: 74)

The project involved a number of young researchers, including [Howard Gardner](#), who subsequently have made an impact on educational thinking and practice. MACOS was attacked by conservatives (especially the cross-cultural nature of the materials). It was also difficult to implement - requiring a degree of sophistication and learning on the part of teachers, and ability and motivation on the part of students. The educational tide had begun to move away from more liberal and progressive thinkers like Jerome Bruner.

In the 1960s Jerome Bruner developed a theory of cognitive growth. His approach (in contrast to Piaget) looked to environmental and experiential factors. Bruner suggested that intellectual ability developed in stages through step-by-step changes in how the mind is used. Bruner's thinking became increasingly influenced by writers like Lev Vygotsky and he began to be critical of the intrapersonal focus he had taken, and the lack of attention paid to social and political context. In the early 1970s Bruner left Harvard to teach for several years at the university of Oxford. There he continued his research into questions of agency in infants and began a series of explorations of children's language. He returned to Harvard as a visiting professor in 1979 and then, two years later, joined the faculty of the new School for Social Research in New York City. He became critical

of the 'cognitive revolution' and began to argue for the building of a cultural psychology. This 'cultural turn' was then reflected in his work on education - most especially in his 1996 book: *The Culture of Education*.

The process of education

The Process of Education (1960) was a landmark text. It had a direct impact on policy formation in the United States and influenced the thinking and orientation of a wide group of teachers and scholars, Its view of children as active problem-solvers who are ready to explore 'difficult' subjects while being out of step with the dominant view in education at that time, struck a chord with many. 'It was a surprise', Jerome Bruner was later to write (in the preface to the 1977 edition), that a book expressing so structuralist a view of knowledge and so intuitionist an approach to the process of knowing should attract so much attention in America, where empiricism had long been the dominant voice and 'learning theory' its amplifier' (*ibid.*: vii).

Four key themes emerge out of the work around *The Process of Education* (1960: 11-16):

The role of structure in learning and how it may be made central in teaching. The approach taken should be a practical one. 'The teaching and learning of structure, rather than simply the mastery of facts and techniques, is at the center of the classic problem of transfer... If earlier learning is to render later learning easier, it must do so by providing a general picture in terms of which the relations between things encountered earlier and later are made as clear as possible' (*ibid.*: 12).

Readiness for learning. Here the argument is that schools have wasted a great deal of people's time by postponing the teaching of important areas because they are deemed 'too difficult'.

We begin with the hypothesis that any subject can be taught effectively in some intellectually honest form to any child at any stage of development. (*ibid.*: 33)

This notion underpins the idea of the **spiral curriculum** - 'A curriculum as it develops should revisit this basic ideas repeatedly, building upon them until the student has grasped the full formal apparatus that goes with them' (*ibid.*: 13).

Intuitive and analytical thinking. Intuition ('the intellectual technique of arriving and plausible but tentative formulations without going through the analytical steps by which such formulations would be found to be valid or invalid conclusions' *ibid.*: 13) is a much neglected but essential feature of productive thinking. Here Bruner notes how experts in different fields appear 'to leap intuitively into a decision or to a solution to a problem' (*ibid.*: 62) - a phenomenon that [Donald Schön](#) was to explore some years later - and looked to how teachers and schools might create the conditions for intuition to flourish.

Motives for learning. 'Ideally', Jerome Bruner writes, interest in the material to be learned is the best stimulus to learning, rather than such external goals as grades or later

competitive advantage' (*ibid.*: 14). In an age of increasing spectatorship, 'motives for learning must be kept from going passive... they must be based as much as possible upon the arousal of interest in what there is to be learned, and they must be kept broad and diverse in expression' (*ibid.*: 80).

Bruner was to write two 'postscripts' to *The Process of Education: Towards a theory of instruction* (1966) and *The Relevance of Education* (1971). In these books Bruner 'put forth his evolving ideas about the ways in which instruction actually affects the mental models of the world that students construct, elaborate on and transform' (Gardner 2001: 93). In the first book the various essays deal with matters such as patterns of growth, the will to learn, and on making and judging (including some helpful material around evaluation). Two essays are of particular interest - his reflections on MACOS (see above), and his 'notes on a theory of instruction'. The latter essay makes the case for taking into account questions of predisposition, structure, sequence, and reinforcement in preparing curricula and programmes. He makes the case for education as a knowledge-getting process:

To instruct someone... is not a matter of getting him to commit results to mind. Rather, it is to teach him to participate in the process that makes possible the establishment of knowledge. We teach a subject not to produce little living libraries on that subject, but rather to get a student to think mathematically for himself, to consider matters as an historian does, to take part in the process of knowledge-getting. Knowing is a process not a product. (1966: 72)

The essays in *The Relevance of Education* (1971) apply his theories to infant development.

The culture of education

Jerome Bruner's reflections on education in *The Culture of Education* (1996) show the impact of the changes in his thinking since the 1960s. He now placed his work within a thorough appreciation of culture: 'culture shapes the mind... it provides us with the toolkit by which we construct not only our worlds but our very conception of our selves and our powers' (*ibid.*: x). This orientation 'presupposes that human mental activity is neither solo nor conducted unassisted, even when it goes on "inside the head" (*ibid.*: xi). It also takes Bruner well beyond the confines of schooling.

Conclusion

Jerome S. Bruner has had a profound effect on education - and upon those researchers and students he has worked with. [Howard Gardner](#) has commented:

Jerome Bruner is not merely one of the foremost educational thinkers of the era; he is also an inspired learner and teacher. His infectious curiosity inspires all who are not completely jaded. Individuals of every age and background are invited to join in. Logical analyses, technical dissertations, rich and wide knowledge of diverse subject matters,

asides to an ever wider orbit of information, intuitive leaps, pregnant enigmas pour forth from his indefatigable mouth and pen. In his words, 'Intellectual activity is anywhere and everywhere, whether at the frontier of knowledge or in a third-grade classroom'. To those who know him, Bruner remains the Compleat Educator in the flesh... (Gardner 2001: 94)

To be completed

Further reading and references

Bruner, J (1960) *The Process of Education*, Cambridge, Mass.: Harvard University Press. 97 + xxvi pages. Rightly recognized as a twentieth century educational 'classic', this book argues that schooling and curricula should be constructed to foster intuitive 'graspings'. Bruner makes the case for a 'spiral curriculum'. The second edition, 1977, has a new preface that reassesses the book.

Bruner, J. S. (1966) *Toward a Theory of Instruction*, Cambridge, Mass.: Belkapp Press. 176 + x pages.

Bruner, J. S. (1971) *The Relevance of Education*, New York: Norton. In this book Bruner applied his theories to infant development.

Bruner, J. (1996) *The Culture of Education*, Cambridge, Mass.: Harvard University Press. 224 + xvi pages.

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Links

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