

How children learn

Educational theories and approaches – from Comenius the father of modern education to giants such as Piaget, Vygotsky and Malaguzzi

by Linda Pound

Contents

Introduction	2	Jerome Bruner	63
John Comenius	4	Chris Athey and schema theory	67
Jean-Jacques Rousseau	6	Loris Malaguzzi and early education in Reggio Emilia	71
Johann Pestalozzi	9	Paulo Freire	75
Robert Owen	13	David Weikart and the HighScope approach	78
Friedrich Froebel	17	Margaret Donaldson and post-Piagetian theories	83
Sigmund Freud and psychoanalytic theories	21	Howard Gardner and multiple intelligence theory	87
John Dewey	27	Te Whāriki	92
Margaret McMillan	31	Forest schools	96
Rudolf Steiner and Steiner Waldorf education	34	Learning through play	100
Maria Montessori and the Montessori method	38	Research into brain development	105
Susan Isaacs	42	Emotional intelligence	110
Jean Piaget	46	References and where to find out more	114
Lev Vygotsky	51	Index	120
Burrhus Skinner and behaviourism	55	Acknowledgements	124
John Bowlby and attachment theory	59		

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- too much emphasis on logic and mathematical thinking, at the expense of consideration of the role of feelings;
- play and imagination were seen as leading children to mature thought rather than having a long-term intrinsic role in learning;
- the findings from both the observations of his own children and his experiments are over-generalised. His results are criticised for their reliance on data collected from a small number of white, privileged Swiss children;
- the stages offer a snapshot of development. Observations could be interpreted to show continuous development as opposed to the quantitative shifts in thinking which Piaget described;
- insufficient emphasis on the importance of social and emotional aspects of thought;
- some experiments have shown that when what we ask children to do, or respond to, makes 'human sense'¹ – they are able to take another's point of view and to conserve quantities. When a naughty child hiding from a policeman is substituted for mountains or when a naughty teddy bear spreads out the row of buttons, children are more likely to give the correct answers;
- Piaget's description of 'the child' is often criticised as being essentially male – marginalising female behaviour.



Piaget believed that young children were egocentric

GLOSSARY

Accommodation: rethinking which occurs as learners reconcile old and new learning.

Assimilation: the process by which learners take in new information, but at this stage it exists alongside old learning.

Conservation: understanding that two similar amounts or quantities remain the same even though their appearance may have changed.

Disequilibrium: the state that exists when new learning has been assimilated, but not accommodated.

Egocentrism: unable to take another's point of view.

Equilibrium: the state that exists when new information has simply been accommodated.

Object permanence: realisation that objects exist in their own right and that the fact that we cannot see them does not mean that they do not exist.

Schemas: repeated patterns of behaviour which reflect children's preferred modes of exploration.

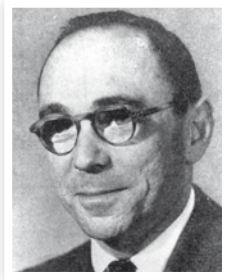
Stage theory: an approach which claims that there are distinct stages through which all children pass in a particular order, according to a timetable set by nature.

POINTS FOR REFLECTION

- What evidence have you seen of Piaget's influence on practice in the early years?
- Do you think that there are distinct stages of development or is development simply one long continuum?
- Are young children egocentric as Piaget described them or do they show signs of being able to take someone else's point of view?

Jerome Bruner

PROFILE



Jerome Bruner is a cognitive and developmental psychologist who has been influential in education, bringing together the work of many psychologists, in particular Vygotsky and Piaget. Some dissatisfaction with his own early work led him to focus on the importance of culture in learning and to look at ways of improving education.

KEY DATES

1915	Born in New York City, USA
1959	Chairs joint conference of the National Academy of Sciences and the National Science Foundation in Massachusetts
1970	Joins Oxford University
1980	Oxford Pre-School Research is published
1991	Returns to Harvard University

LINKS

Donaldson
Gardner
Vygotsky
Athey
Piaget
Skinner

His life

The son of Polish immigrants, Bruner was born in New York in 1915. He received his first degree in psychology in 1937, and subsequently was awarded a PhD in Psychology from Harvard University in 1941. After a period at Oxford University, Bruner returned to Harvard in 1991, still teaching at the age of 98.

Bruner's long life and career has encompassed work in many different areas of psychology. Much of his early work set out to challenge the views of behaviourists such as Skinner, and focused on perception. In 1959 he chaired a prestigious meeting of scientists, psychologists and educators who wanted to improve the quality of scientific education in the USA. The discussions that came from that conference were to lead to his seminal book *The Process of Education*.



Symbolic behaviour develops through learning to visualise

Bruner spent some time at Oxford University and led the Oxford Pre-School Research project in the 1980s. He was critical of some aspects of early childhood provision in this country. In the late 1990s, he began to work with the pre-schools of Reggio Emilia and other Italian communities. His work has been increasingly influenced by Vygotsky and the emphasis which he gives to the impact of culture on learning. This has led him to a continued interest in motivation, affect, creativity, intuition – all of which go far beyond and counter to behaviourist theories.

His writing

It would be hard to over-estimate the impact of Bruner's writing. Howard Gardner,¹ a psychologist and educationalist (see page 87), wrote about what he describes as 'Jerome Bruner's remarkable volume', *The Process of Education* as follows:

In the late 1980s, I attended an international conference on education in Paris. One evening I found myself having dinner with half a dozen persons, representing half a dozen different nations, none of whom I had known before. As we spoke, a remarkable fact emerged. All of us had been drawn to a life in education because of our reading, years before, of *The Process of Education*.

Bruner attributed that book's success to the fact that it addressed the concerns of educators about the role of knowledge in an age increasingly over-burdened by knowledge and sources of information. But it is by no means all that he has written and has continued to write well past the age of 90. The books listed below are but a tiny sample of Bruner's work:

- *The Process of Education* (Harvard University Press, 1960)
- *The Process of Education* (Harvard University Press, 1977). This edition has a new introduction by Bruner that attempts to examine the strengths and weaknesses of the original.
- *Play: its Role in Development and Evolution* edited in conjunction with Alison Jolly and Kathy Sylva (Penguin, 1976)
- *Under Five in Britain* (Grant McIntyre, 1980)
- *Child's Talk: Learning to Use Language* (Oxford University Press, 1983)
- *Actual Minds: Possible Worlds* (Harvard University Press, 1986)

- *Making stories: law, literature and life* (Harvard University Press, 2003)

His theory

Bruner has developed many theories, not all of which focus around education and development. *The Process of Education* included ideas which run throughout much of his work:

- 'Knowing how something is put together is worth a thousand facts about it.'
- The child is an active learner and problem-solver, struggling to make sense of the world.
- Intellectual activity is anywhere and everywhere – children are always learning.
- The spiral curriculum, described in Bruner's words² as 'any subject can be taught effectively in some intellectually honest form to any child at any stage of development'.



Rich socio-cultural experience supports learning

What does practice look like?

Bruner's idea of a LASS (see glossary) can be seen in many interactions between adults and babies – as the caregiver tries to find ways to draw the baby into language and communication. Peek-a-boo games are a good example of this since they introduce the baby to the turn-taking necessary for good communication.

A spiral curriculum can also be seen in everyday practice. This is linked to the notion of constructing knowledge and of building on existing knowledge. Educationalists know that children learn best if we begin from prior knowledge and from interests. A spiral curriculum enables children to return and develop learning over time. Rather than pressing on with too much knowledge in a particular area, the wise practitioner comes back to particular ideas and concepts over a period of time.

The emphasis on a wide range of materials with which children may represent ideas, events or feelings is firmly linked to Bruner's idea of stages. At first, children represent things with their bodies – thinking begins with the physical – an idea that is borne out by increased understanding of the importance of physical development. As experience increases, children (or indeed adult learners) begin to visualise or develop mental images. Gradually, these mental images (or icons) give way to symbols which may not seem to be like the thing they stand for. In order to allow children to develop towards abstract or symbolic thinking, practitioners encourage choice and provide opportunities to translate their ideas from one type of media to another. As in Reggio Emilia, practitioners emphasise the Hundred Languages of Children, so encouraging children to sing about, draw about, make models and act out their ideas or experiences helps them to move toward symbolic thought.

His influence

Howard Gardner¹ has described Jerome Bruner as having no peers when it comes to enlarging our sense of how children learn and what educators could aspire to. He has developed the skills of many leading educationalists and developmental psychologists. Professor Kathy Sylva, from the Institute of Education, University of London, has worked with him. She is known for her involvement with the Effective Provision of Pre-school Education (EPPE) Project. So have Howard Gardner (see page 87) and Margaret Donaldson (see page 83). Gardner describes Bruner as a 'communicator, model and identification figure'.

Bruner's work on stage development has been widely taken up because it matches practitioners' perceptions of how learning and thought actually occur. Similarly, the notion of a spiral curriculum is popular since it chimes with current ideas about how the brain develops – concepts are gradually modified as experience increases. Overall, Bruner has successfully influenced thinking and practice in many fundamental ways.

Common criticisms of his theory

Bruner criticised his programme *Man: a course of study* as being too elitist or intellectual and too much concerned with non-American issues. He claimed that it worked best with well prepared teachers working with advantaged pupils and that it had an excessive focus on the learner as an individual rather than as a member of a culture or society. The Oxford Pre-School Research was criticised by early childhood practitioners in Britain when it was published in the 1980s. This may be because Bruner appeared to not entirely understand what practitioners were aiming to do. Despite this, thirty or more years on, his comments on early childhood education still ring true. He argues that we know how to improve young children's life chances, and that although the economy is stretched the benefits of offering nursery education "would not be costly. The return in kindling human hope for the future would be great"⁵.

GLOSSARY

Scaffolding: process by which an adult or more experienced learner helps a child to take small supported steps towards his or her intended goal.

Spiral curriculum: a curriculum that revisits ideas repeatedly, building upon earlier learning each time they are met again.

Enactive representation: understanding is developed in action as children handle objects, play and move.

Iconic representation: children begin to create mental images and may not need physical reminders.

Symbolic representation: abstract ideas, including language use, can be used to represent the world around.

LASS: language acquisition support system or, more simply, a mother.

POINTS FOR REFLECTION

- Collect some examples of children representing experiences or ideas physically or through a variety of media, such as blocks, paint, dressing up etc. Are these enactive, iconic or symbolic in your view?
- Ask one of your colleagues to observe you when you are attempting to scaffold a child's learning. Discuss how effective you think you were.
- Why have we not been more successful in helping policy makers to value high quality early education more? How can we do better?

Chris Athey and schema theory

PROFILE



Chris Athey changed the way in which the cognitive development of children between the ages of 2 and 5 is understood. Her writing, together with other notables including Tina Bruce and Cathy Nutbrown, continues to influence practice.

KEY DATES

1924	Born in South Shields
1973-1978	Froebel Early Education Project
1990	<i>Extending Thought in Young Children</i> is published
2011	Dies, following a series of operations

LINKS

Piaget
Bruner

Her life

Christine Athey was born in South Shields in north-east England, in 1924. She left school at 13, taking up a variety of odd jobs. When war broke out, she moved to Croydon and attended a series of workers' education classes extending both her general education and her knowledge of psychology. At the end of the war, Athey trained as a teacher and taught in east London where she met many challenges – lack of resources; and classes of up to 60 children, many of whom had faced serious trauma and deprivation during the war years. Even at this early stage in her career she had a firm belief in the importance of working with the parents of young children.

Athey began to teach at Ibstock Place, the school linked to the Froebel Educational Institute (now part of Roehampton University). While there,



Trajectory schema?

she studied for the Froebel training diploma, and subsequently completed a master's degree. In 1973, she was appointed as director of The Froebel Educational Institute Project the results of which were to have a significant impact on early childhood education. Tina Bruce (now emeritus professor in early childhood studies at the University of Roehampton, based at Froebel College) worked as her research assistant. Athey continued as principal lecturer for many years at the Froebel Institute.

Chris Athey continued to be active and vociferous in the field of early childhood in her latter years. She worked with staff at the Pen Green Children's Centre and Research Base as a pedagogue, guiding practice there. After a period of ill health and a series of operations, Chris Athey died in 2011.

Her writing

Chris Athey was not a prolific writer but she was meticulous.

educators value all aspects of children's development. Children are viewed in terms of their strengths, not weaknesses, and are given credit for their capacity to learn. The results are seen in the aesthetic environments of the schools, the spirit of co-operation between staff, parents and children and in the quality of children's representational work.

His writing

Malaguzzi may have been engaged in writing numerous policy documents but there is very little available in his own words.

The seminal work on Reggio Emilia is *The Hundred Languages of Children* and in the first edition published in 1995 included an interview with him, recorded by Gandini. That is no longer included in the more recent third edition.

A small book entitled *A journey into the rights of children* is credited to Malaguzzi and his colleagues but was published in 1995, after his death. It mainly consists of children's thoughts, discussions and interpretations of their rights. The words are those of children aged five and six.

Malaguzzi comments² that "what made the greatest impression on us was the children's sense of justice and equality, the social maturity of their judgement, a real feeling of responsibility and solidarity".

His theory

Malaguzzi based the philosophy which he brought to the nurseries of Reggio Emilia on the work of Dewey, Piaget, Vygotsky and Erikson. Gardner adds to this list of influences, Froebel and Montessori. Over time, a theoretical underpinning has evolved which give the schools a distinctive style and approach. The key principles include³:

1. All children have potential;
2. Children are connected (to their family community, society, objects, symbols);
3. The reciprocity of children (meaning that they not only want to receive but to give);
4. Children are communicators;
5. The environment is the third teacher;
6. Educators are partners, nurturers and guides;



Painting is one of the hundred languages of children

Learning through play

PROFILE

Play has been talked about and written about since time immemorial. Although practitioners in England are now required to teach through play, there is no clear consensus about what it is or how it supports learning.

KEY DATES

1917	Publication of <i>The Play Way</i> by Caldwell Cook
2012	Requirement in England to support learning through play under the revised EYFS

LINKS

Rousseau
Pestalozzi
Froebel
McMillan
Steiner
Isaacs

This section includes material written by Margaret Edgington first published in Practical Pre-School magazine (Issue 36) as an article called 'The value of play'.

Background

Most practitioners understand that children learn through play, but it is still consistently undervalued. Many do not understand how to support its development effectively and extend children's learning. Some are anxious about the lack of control they may have in play situations and are uncertain about how to manage a playful environment. Others do not feel able to articulate the arguments which support play as a means of learning or do not feel confident about planning for play in ways which meet the demands of heads and Ofsted inspectors. Research¹ found that few early years practitioners could explain why play is an important vehicle for learning.

But this is not new. Even before the nineteenth century, Rousseau had been arguing for children's freedom. Froebel developed ideas of play but his gifts and occupations would look very different from the free-flow play advocated in the twenty first century by Froebelian Tina Bruce. In 1917, Caldwell Cook published a book entitled *The Play Way* in which he declared that his heart was set on a course of action which would ensure that play-based approaches to education would permeate all schools, including secondary schools. Sadly his dream has not yet come true.

For the first time in this country, the revised Early Years Foundation Stage (EYFS), published in 2012, requires practitioners to reflect three characteristics of children's learning in their teaching. The first of these is playing and exploring – which involves finding out; using play symbolically in role play and in pretending that objects are something other than they are. It also involves initiating new ideas, seeking challenge, taking risks and learning from failures. These ideas are not new and are reflected in curricula in Reggio Emilia, New Zealand's Te Whāriki and in Steiner Waldorf practice around the world. However they do signal that play is important in children's learning.

Underlying principles, theory or philosophy

Perhaps, one of the reasons why practitioners appear confused about play is that there is a confusing array of theories and explanations for it. Unable to identify one clear definition, it has been suggested that theories may be categorized as follows²:

- romantic theories – the child is considered as a whole; play is part of children's nature and children are happy when playing and learning. This view is linked to Rousseau's and to Froebel's theories;
- behaviourist theories – linked to Skinner's theory. It suggests that after learning, children deserve to play. Play is used as a reward;
- therapeutic theories – as in the psychoanalytical theories of Freud and others, children are seen as struggling with fears. Play helps children to deal with fears and anxieties but it can also help them to learn to empathise with others. This can help children to develop awareness of how others feel and how to manage their own emotions. Winnicott argued that play was essential to creativity, while fellow psychoanalytical theorist Melanie Klein saw play as a therapy in its own right. Susan Isaacs' practice was rooted in the idea that children use play to deal with fears and anxieties;
- cognitive theories – more recent theories of play, including those based on neuroscience and current developmental psychology, emphasise its contribution to the development of problem solving, creativity, communication and developing understanding of social rules. These ideas are most firmly linked to Piaget and Vygotsky. Isaacs also made rich provision for exploratory play as she understood the value of play in helping children to make sense of their world;
- biological theories – scientists and psychologists are coming to the view that since playfulness is present in all humans it must have a biological function. It has been suggested that play supports the development of creativity and imagination which is essential to the development of the flexible and adaptable human brain;