

Are the theories of how children think and learn still relevant in educational settings today?

During my career I have worked and observed children across a range of childcare and education settings. My career began working with babies at only a few weeks old in a local day nursery and has travelled up the ages to the present day where I work in a secondary school with young people up to the age of eighteen. During this time, I have had the opportunity to observe how different settings, and even different teachers manage their classrooms. In this blog I will be looking at the theorists that I studied when I first started my work with children to see if their research is still relevant in classrooms and our work with children and young people today.

Jean Piaget

First, I looked at the work of Jean Piaget. Piaget's theory of development believed that children's intelligence changes as children grow. He had a cognitive approach to learning and his work was based around what children think and learn. Piaget developed his own set of assumptions about children's intelligence. He thought that children thought differently to adults and that they see the world differently. He also believed that children are active learners, not passive learners waiting for someone to give them information and that the best way to understand children's thinking was to see things from their point of view.



Piaget did not just want to see how well children could count, spell or problem solve to measure their cognitive development, but wanted to look at their understanding of concepts such as number, time, and language. To do this Piaget studied children from infancy to adolescence by conducting both naturalistic observations and controlled observations of his own three children. From this he wrote diary entries following the children's development.

From these observations Piaget concluded that children pass through four stages of development:

The sensory motor stage-

This stage is from birth until around 2 years of age. This is the stage when children learn about the world around them through their senses and through moving around to explore their environment. During the sensory motor stage, a range of cognitive skills develop, these include object permanence. Piaget found that at about eight months that the child understands the permanence of objects, so they understand that objects still exist even if they cannot see them. For example, when playing with a child if you take the toy and hide it the child will know that the object is hidden and will look for it which shows that the child has formed a schema for the object.

During this stage infants live in the present, they do not yet have concept of the past or the future. Towards the end of this stage children develop general symbolic function which then shows in their play. This is shown where children can use one object but have it represent another. An example of this would be a child using a stick to represent a spoon and using it to 'mix' something. This is also when language begins to develop as they understand that each word represents an object or feeling.

By the end of this stage children are able to recall information that they have stored about the world.

The Preoperational Stage

This stage is from around two years until seven years old. Piaget believed that during this stage young children think about things symbolically and have the ability to think of one thing as something else. He did not believe that at this stage that children were capable of logical thinking and problem solving.

At this age Piaget observed that children could demonstrate animism, where they think that non-living objects, such as toys, have thoughts and feelings in the same way that they do. It is during this age that Piaget also thought that children gain the ability to represent the world through language and imagery.

It is also during this stage that Piaget thought that thinking was still intuitive and that children were still egocentric in their view of the world.

The concrete operational stage

This stage is from the ages of round seven to eleven years. Piaget believed that during this stage children start to think logically and begin to be less egocentric and more empathetic about how others may think or feel.

Piaget marked the concrete operational stage as a turning point in a child's development as it when children are able to understand concepts and have logical thoughts. It is also at this stage that children can work things out in their heads rather than physically, for example in a classroom a child being able to work out sums in their head and understanding the concept rather than having to use physical objects to help with the sums.

At this stage, Piaget observed that children are prone to making mistakes and that problem solving including abstract thought or hypothetical thinking may be over whelming for the child.

The formal operational stage

This stage if from the age of twelve and over. During this stag Piaget believed that adolescents could deal with abstract thinking and ideas and can manage hypothetical questions where there may be multiple possible solutions or answers. It is during this stage that Piaget believed that children begin to think logically and can, for example, follow along with an argument and come to their own conclusions.

Lev Vygotsky



Lev Vygotsky was born in Russia in 1896. His interest in how children learn came from his work teaching literature in a secondary school. Vygotsky had an interest in children's cognitive and language development and their relationship to how children learn which led him into the field of psychology and its impact on education theory.

Vygotsky believed that children's primary source of learning behaviours is from the family and the community in which they are raised, he believed that this was the way that children acquire behaviours and

cognitive processes relevant to the society and culture that they belong. Vygotsky believed that this theory was an essential part of the child's developmental process. He believed that the first interactions that the child had with the people around them, mainly their family, triggered the child's initial development but as they grown the learning becomes more individual.

Vygotsky thought of children as little apprentices learning and gaining all of their knowledge from those around them until they were skilled enough to gain knowledge for themselves. This theory led to Vygotsky's term of the more knowledgeable other. This is where Vygotsky used his beliefs that children learn from more knowledgeable others, such as more knowledgeable peers, teachers, support staff, families or anybody who had a greater understanding of what the child needs to learn, and how the child uses these people to aid in their own learning.

This theory then links to Vygotsky's zone of proximal development, which is the idea that relates to the difference between the most difficult task that the child can do alone, and the most difficult task that the child can do with the assistance of a more knowledgeable other. The zone of proximal development refers to the help that a more knowledgeable other can offer the child as scaffolding to support them to reach their goal of a new concept or skill. Vygotsky believed that in order for scaffolding to work, the classroom teacher needs to be a good observer, they need to be able to observe where the child's knowledge is currently

and where they are capable of going. He thought that only through observation could teachers support children's learning.

Vygotsky believed that infants were born with the basic abilities needed for cognitive development which he called 'elementary mental functions', they include sensation, perception and memory. Vygotsky believed that with interactions with others these develop into more sophisticated mental processes which Vygotsky refers to as 'higher mental functions'.

The culture in which the child grows up, Vygotsky believed, provides the child with tools of intellectual adaptation, such as cognitive thinking skills and problem solving, that allow them to use the basic mental functions that they have developed effectively. As a result of this Vygotsky believed that all cognitive functions are affected by the beliefs and culture that the child grows up in and so therefore intelligence is culturally defined.

Vygotsky's theory suggests that children learn from those around them, in both a cognitive and behavioural sense, he believed that social relationships were at the heart of a child's learning. The child may not always acknowledge or demonstrate what they have learnt from others straight away, instead they may internalise what they have learnt but that knowledge may influence them in the future.

Lev Vygotsky also put a huge emphasis on play for children, he believed that it gave the children the opportunity to do things that they would not be able to do in real life, for example driving a car. Vygotsky believed that this is another way that children reached their zone of potential development. He put a lot of emphasis on the importance of play because it helps children to make sense of what they have learnt.

Piaget vs Vygotsky which theory was right

Both Piaget and Vygotsky were conducting their studies at around the same time but had very different ideas about children and the way that they learn.

Piaget takes a Constructivist approach, which comes under the idea of cognitive science. Piaget viewed children as a lone learner, or a lone scientist, believing that children learn by making discoveries on their own. Bruce (2002) stated that “he did not dwell on social relationships”, therefore showing that Piaget put more importance on intellectual and cognitive development and learning. This is very much in contrast to Vygotsky who takes a social constructivist approach where children learn from those around them, not just a teacher or family but also from their peers and the community and thinks of the children as little apprentices.

Piaget places a strong emphasis on his stages as development whereas Vygotsky does not put children and their cognitive development into stages, instead it is thought of as a continuous journey.

Vygotsky also put a lot of emphasis on language and language development in relation to a child's cognitive development. It is through language, that the role of the more knowledgeable other can assist in scaffolding the learning for the child. Piaget on the other hand put little importance on the use of language in the child's development. He thought that children used language for labelling objects, feelings and as they get older concepts but as the child is seen as a lone scientist the role of language is not key to Piaget's theories.

Vygotsky also put the culture and community in which the child grown up as a key feature of his theories, he believed that the culture that the child grows up in has an impact on how the child learns, not just with cognitive development but also with behavioural development. Piaget on the other hand does not see the child's culture and community as an influence on their development as he believes that the child oversees their own learning. This nature verses nurture debate is a topic that there does not seem to be a clear answer to, is the child a product of their upbringing, community and culture or is a child pre-programmed by biology and the genes that are handed down to them by their parents.

I cannot see a clear answer as to which of the two theorists correct in their thinking, although both theories are completely different and focus on the different ways of learning I feel that both Piaget and Vygotsky have a clear arguments and evidence to support their theories. The question however is, are these theories still relevant today in the care and education of children and young people and how do their theories impact care and education settings?

Influence on education settings today

The work of both Piaget and Vygotsky can both be seen in today's education settings. One of the most obvious comparisons are the ages that Piaget put upon the four stages of development with each stage corresponding with a stage in a child school life, from pre-school, infant school, junior school, and then secondary schools all corresponding to Piaget's stages of development. When looking at the four stages and what Piaget believed that the child achieves in these four stages then you see a clear link to today's educational system.

With Vygotsky the education system also aligns with his research, for example in Wales children under the age of seven are considered to be part of the foundation phase, which is based around learning through play, Vygotsky put a high emphasis on the importance of play for children as a way of learning. The foundation phase states that "active learning opportunities that build on prior experiences and support them to become independent thinkers and learners" (Government, 2015), this follows Vygotsky's ideas of building on prior experience and knowledge, or scaffolding.

Vygotsky's work can be seen more clearly in the way that young people experience secondary school. A lot of the learning that takes place in secondary schools is building on prior knowledge, as Vygotsky refers to it as scaffolding. The use of scaffolding as a form of learning is a vital part of the education system in schools. Even in new subjects that they may not have learnt before, such as French or Spanish, teachers often link the work back to the knowledge that the children already have from learning a second language, Welsh, and use it to support them in their work going forward.

This can also be seen in other subjects where, rather than introducing new concepts and ideas they use what the children have learnt in the past as a platform to introduce something new. An example of this is in English where the teachers are aware that though primary school that the children would have learnt how to write stories but when they reach secondary school they are writing in more detail, are now introducing literary techniques, and expanding their stories to add more interest and depth.

Vygotsky's theory of the more knowledgeable other is also very prominent in secondary schools, teachers, and support staff in the classroom act as more knowledgeable others for the young people, but their peers are also a big influence on their learning at this stage of

their education. Often teachers will encourage working in group or pair work to encourage learning between the groups. When seating plans are done for the classroom often teachers will also pair up a pupil who needs a little support from one who is more able to encourage peer learning. This also happens with behaviour in the classroom where pupils who are known as disruptive will be sat among well behaved children in the hope that the pupil's good behaviour influences them.

Piaget's theory that children are active learners and that they learn by experiences can also be seen clearly in the curriculum for children in secondary schools. Pupils take part in lessons like science and design technology where they learn through experimentation and learning. This can also be seen in more traditional subjects where many teachers use interactive learning as a technique when teaching to engage pupils, by getting pupils involved and allowing them to experience things for themselves they are more likely to benefit from the class.

Looking at the two theorists and their studies as to how children develop, I have come to the conclusion that both Piaget and Vygotsky are as relevant today than they ever have been. With the ever-changing curriculum the theories and beliefs of both of these theorists can still be seen in all aspects of care and education for children and young people and in all different settings. With the new curriculum coming into Wales, more and more of the beliefs of Vygotsky and Piaget shine through. We will have to wait to see how the education of children develops but I feel we will be talking about the theories put forward by Piaget and Vygotsky for a long time.

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