

COGNITIVE DEVELOPMENT

a) Describe a theory into Cognitive Development and

b) Critically evaluate and discuss how it is applied to education.

Vygotsky believed that children's cognitive development took place as the result of social interactions between children and other people. He identified two forms of mental functions: - elementary mental functions (innate capacities such as sensation) and higher mental functions (problem solving). He believed that cultural influences transform elementary functions into higher mental functions, so without culture, a child could not progress from elementary mental functions. According to Vygotsky, culture is transmitted via language and the help of persons with greater knowledge.

Adults, who have more knowledge, can provide a supportive context within which the child is guided towards the solution of problems. This is the idea behind Vygotsky's Zone of Proximal Development (ZPD), the developmental process where children move from an initial stage at which children are able to do things independently. For example, at first, a child is unable to swim on its own but with an adult's help, they are able to learn to do it alone. So achievements are initially beyond a child's unassisted grasp, but are attainable given help and support from an adult. Intelligence is the capacity to learn from instruction, according to Vygotsky.

Vygotsky argued that children learn best from instruction, where expert knowledge is shared through interaction and instruction so that a child can move from their present stage of development into the Zone of Proximal Development. Vygotsky encourages teachers to assist children in their learning and give a lot of attention to teaching methods that involve instruction. This allows a child to move to higher mental functions, but Piaget would argue that children are 'solitary explorers' and should be allowed to discover things on their own. It was Piaget's belief that by teaching a child something, you are preventing them from learning it for their self.

Vygotsky's theory also encourages teachers to treat children as individuals as a teacher must assess a child's readiness to learn. Not only in their present ability, but in their capacity to learn with help. This means that although two children may have similar present abilities, they may differ in the amount that they could improve if given help (eg, Vygotsky suggested that children from working class backgrounds often had large zones of proximal development while children from middle class families had narrower zones of proximal development). This approach does not imply universality in development like Piaget does, so children are tested individually rather than being taken through universal stages. Brown and Ferrara (1985) support this. They found that in the teaching of reading and mathematics, children with 'wide zones' were being held back because their teachers expected too little of them. Teachers should establish very early the size of the ZPD and subtly alter strategies to suit the child.

If children learn best from expert guidance and instruction, more advanced children can be experts too, helping lesser able children. According to Vygotsky, this could benefit both parties as the less able child receives instruction while the advanced child could clarify the issue in their own minds, just by teaching it. This can be applied to education, because teachers can let children work together to solve problems, drawing from their own expertise and teaching each other. Norman-Jackson (1982) found that children who learned to read easily at school were likely to have older siblings who had played 'school' with them supporting the idea that more advanced children can teach less able children.

Vygotsky believed that culture was transmitted via language, so language is very important for cognitive development. So, in education, language should be emphasised, especially as it was proposed that language training would speed up intellectual development. However Piaget argued that language development had just a supportive role in cognitive development, not an instructed one. But even if development is largely independent of language, it is still an important aspect of education.

Bruner developed on the importance of culture in the role of cognitive development and proposed Man: a course of study (MACOS), a 'curriculum' capable of huge variation and development in relation to child and culture.

The principle application to education of Vygotsky's theory of education is that teachers should help, guide and instruct their students. Bruner provided a lot of support for this as he argued that teachers should support the child in the classroom until the child is able to continue that skill alone and that instruction is necessary for children to develop higher forms of thinking.