AQA Psychology A-Level

Option 1: Cognition and Development

Essay Plans

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Describe and evaluate Piaget's theory of cognitive development. (16 MARKS)

AO1	• Piaget's theory is based on maturation, the idea that when children grow older the way that they think changes. Information is stored in the form of schemas, which are innate, but later develop for things and concepts. • But schemas can be insufficient and this creates an uncomfortable feeling of disequilibrium. We are then motivated to learn to try and reduce this feeling and achieve a pleasant state of balance- equilibrium. • Disequilibrium can be caused by new experiences, as they do not fit existing schema. But by assimilation, the experience can become part of an existing schema. • There are experiences which cannot be assimilated, this is because they are very different to existing schemas. These experiences therefore undergo accommodation- which is the formation of new schemas based on these experiences.
AO3	1. Howe (1992) did find that the level of children's knowledge about how objects move down a slope increased after a discussion. This suggests that the information was used to update existing or create new schemas, supporting Piaget's theory. 2. The role of others in learning was underestimated by Piaget, there are other theories like Vygotsky's which recognise the importance of learning. Vygotsky said that advanced learning is only possible with help, suggesting that Piaget's theory is limited. 3. Also, Piaget may have overstated the role of equilibration, not all children are motivated to learn to avoid disequilibrium, but can be motivated by the success of their peers. This weakens the validity of his theory. 4. Furthermore, Piaget does not acknowledge the importance of the role of language, which was not done by Vygotsky. If language is crucial to development and is neglected by Piaget, then his theory is invalidated. 5. That being said, his theory revolutionised teaching, activity-oriented classrooms allow children to learn in a natural way, allowing them to construct their own understanding of the curriculum. This is a strength of Piaget's theory, as it shows the positive impact that it has had on education.

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Describe and evaluate Piaget's stages of Intellectual Development. (16 MARKS)

AO1	• Piaget determined that there are four stages in the process of intellectual development, all children go through all of the stages, but the age at which they go through varies from child to child. • The first stage is the sensorimotor stage (0-2) and during this, children have a focus on physical sensations and develop object permanence, which is the idea that things still exist- even when they are out of view. • Pre-operational (2-7) is the second stage, and children in this stage display egocentrism- an inability to recognise viewpoints that are not their own. In addition to this, they have a lack of class inclusion, they fail to recognise that classifications can have subsets. • The third stage is the concrete operations stage (7-11) and children have mastered conservation, egocentrism and class inclusion. But can only focus on concrete objects. • The final stage is the formal operations stage, in which children develop abstract reasoning and are able to process syllogisms.
AO3	1. The studies that Piaget's theory of intellectual development was based on lack validity, which limits the validity of his theory as it calls into question the nature of the preoperational stage of development. 2. Piaget's theory of egocentrism has been questioned by Hughes, who found that children aged 3 were able to imagine other perspectives earlier than predicted by Piaget. This suggests that the methods Piaget used to study children's intellectual development were incorrect, resulting in him devising flawed stages. 3. The ability of children to achieve formal operations has been overestimated by Piaget, but he also seems to underestimate the age at which they achieve logical thinking- they do so earlier than predicted. This challenges his theory. 4. Intellectual development may actually be a single process, as found by studying children with ASD, this suggests that a basic assumption of Piaget's theory may not be applicable to development in all children.

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Uriah is an Ofsted Inspector. Over the years he has noticed that excellent learning happens when children who can do a task help children who cannot do it yet.

Discuss Vygotsky's theory of cognitive development. Refer to Uriah's experiences in your answer. (16 MARKS)

AO1	• Vygotsky believed that children develop skills sequentially, but that social processes play a key role in this development, this is because knowledge begins as intermental,(between an expert and a novice) then becomes intramental. • Vygotsky devised the 'zone of proximal development' to explain the gap between what a child is able to do alone and what they can do when they interact with someone with more experience. • Scaffolding can be used to help the learner cross the ZPD, and methods such as recruitment (engaging the learner's interest), reduction (focusing the learner) and direct maintenance (motivating the learner to persevere). Additional strategies were identified by Wood that help to scaffold learning, these include demonstration, preparation for children, indication of materials, specific verbal instruction and general prompt.
AO2	• Uriah found that children are able to do tasks better with aid from their more experienced peers- this is because they help the child cross the ZPD. • Once they've crossed the ZPD, they are able to develop better reasoning, allowing them to learn better- which is why Uriah has observed excellent learning.
AO3	1. Roazzi and Bryant (1998) found children aged 4-5 performed better on tasks when working with a more expert peer, supporting the validity of the ZPD. 2. There are practical implications of Vygotsky's theory- if children perform better when being aided by their more expert peers, as found by Van Keer and Verhaeghe (2005), then such learning can be implicated in schools to improve performance. The benefits of this are also demonstrated by Uriah's experiences. 3. Not all children respond to learning opportunities in the same way.

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	Some, in a study by Howe, had a better understanding of how objects move down a slope after a discussion. But others, after the same discussion did not, this cannot be explained by Vygotsky's theory, limiting its validity.

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Describe and evaluate Baillargeon's explanation of early infant abilities. (16 MARKS)

AO1	• Baillargeon suggested that children in the sensorimotor stage have a better understanding of the physical world than Piaget proposed, this is because the methods used by Piaget caused him to underestimate children's abilities. So, the violation of expectation (VOE) was used to compare children's reactions to expected events with their reactions to unexpected events. • Infants were shown one of two conditions- a possible condition, in which when a short rabbit and a tall rabbit passed by a window, they were able to see the tall rabbit, and an impossible condition in which they could see neither rabbit. They spent longer looking at the impossible scenario. • An innate PRS was suggested by Baillargeon, which helps us learn more about the physical world. This awareness becomes more sophisticated as we grow older, as we learn from experience.
AO3	1. This provides a better understanding of infant behaviour than Piaget's explanation, as he assumed that children thought that hidden objects no longer existed because they did not look for them. Conversely Baillargeon's method allows exploration of other possibilities- like them losing interest in the object. 2. It was found by Hespos and van Marle that basic physical properties are understood by everyone. If such a property was not innate, cultural differences would be expected. PRS is able to explain why physical understanding is universal, because Baillargeon believed it to be innate. 3. The validity of Baillargeon's findings is limited, because violation of expectations research assumes the behavioural responses indicate understanding. 4. Infants use crude patterns to judge distance but more subtle things require more experience. Distance perception seems to be innate, becoming more sophisticated with age, just like the PRS, supporting its existence as it develops in the same way.

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Discuss the Theory of Mind as an explanation of development of social cognition. (16 MARKS)

AO1	• This is a personal theory or belief about what people know, are feeling or are thinking. • Meltzoff (1988) tested ToM in toddlers by allowing them to observe adults placing beads into a jar, in one condition, the adults struggled. In the other, the adults succeeded. After witnessing both conditions, the children successfully placed the beads into the jar. They did what the adults intended to do- not what they actually did. • Wimmer and Perner (1983) told 3-4 year olds a story in which Maxi either left his chocolate in a blue cupboard, or his mother had used the chocolate to cook and then placed it in a green cupboard. 3 year olds said that Maxi would look for this chocolate in the green cupboard, but 4 year olds said the blue, showing ToM. • In another study, Sally places a marble in her box and leaves. Anne enters and places the marble into her box, unbeknownst to Sally. Children were asked where Sally would look for her marble. Baron-Cohen (1985) tested children with ASD and a control of children with no diagnosis and children with Downs Syndrome. More of those in the control group identified where Sally would look for the marble.
AO3	1. It is difficult to distinguish ToM from perspective-taking. If the two are the same, then ToM lacks usefulness as an identical theory already exists. 2. There is no understanding about how ToM develops. Perner suggests that ToM develops along with other cognitive abilities, which suggests that ToM develops with age and is innate. Astington (1998) suggests that we internalise ToM after interactions. As we do not know how ToM develops and as a result, we cannot develop treatments for children with ASD. 3. False belief tasks may not actually measure ToM, limiting the validity of the theory, as found by Bloom and German who noted that such tasks also involve factors like memory. 4. ToM can help increase understanding of ASD. Baron-Cohen's study indicated that ASD may be a direct result of ToM. If that is the case, potentially new treatments for children who have it can be developed.

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Discuss the role of the mirror neuron system in social cognition. (16 MARKS)

AO1	• Mirror neurons are neurons that respond to the activity of other neurons. They have been found to help us experience the intentions of others, as suggested by Gallese and Goldman (1998). • This is because in order to interact socially, we must understand the intentions of other people. In addition to this, mirror neurons have been implicated in both perspective-taking and ToM. • Ramachandran goes as far as saying that mirror neurons may actually be behind human evolution, this is because they help us understand intention, emotion and perspective. Factors like these are the foundation for all effective social interaction. • Mirror neurons may also be implicated in ASD. This is because due to a 'broken mirror' (Ramachandran and Oberman, 2006), children are not able to imitate others, preventing them from understanding behaviour. In fact, it has been found that such children do in fact typically imitate adult behaviour less than children without ASD.
AO3	1. Haker et al (2012) used fMRI scans to show that an area of the brain rich in mirror neurons is involved in 'contagious' acts like yawning. The fact that this supports the role of mirror neurons, because, if imitation is crucial for development, which it has been shown to be- biological factors like mirror neurons that aid this process are crucial too. 2. The role of mirror neurons in social-cognitive development is believed by Hickok to be to help us use the behaviour of others to plan our own behaviour. The nature of mirror neurons' influence in social-cognitive development needs to be ascertained before they can be used as an explanation. 3. Ideally placing electrodes into the brain (which is not ethical) is required to study mirror neurons. But, brain scanning is used instead, which does not provide specific evidence of the activity of mirror neurons, but rather measures general activity in the brain. 4. The link between mirror neurons and ASD has been questioned. Not all studies support Hadjikhani's supportive findings. This indicates that

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	the reliability of Hadjikhani's study is limited, calling the link between mirror neurons and ASD into question.

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