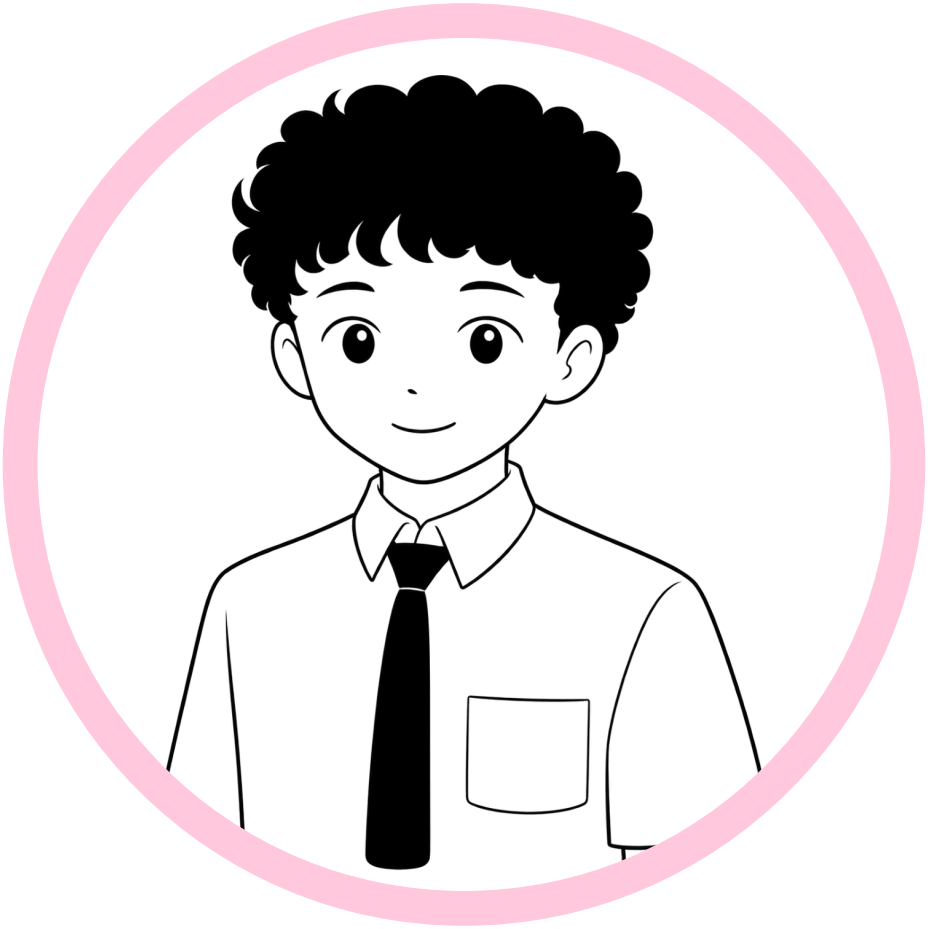
AQA A-LEVEL PSYCHOLOGY · 7182

PSYCHOLOGY



MARK SCHEME

3.3.4 VYGOTSKY

SCORE	PERCENTAGE
/129	%

STEMUP

These questions belong to AQA, not to us.

The examination questions, mark schemes and examiner reports in this pack were written and published by AQA. They are past assessment materials, reproduced here so that students can revise from them.

What we do not own

STEMUP is not affiliated with AQA and does not own, and makes no claim to own, any of the question, mark scheme or examiner report material in this pack. AQA has not endorsed, approved or been involved in the production of it. AQA and the qualification titles used here belong to their respective owners and appear for identification only.

Where to find the originals

AQA publishes its past papers, mark schemes and examiner reports free of charge. Always check the current specification at aqa.org.uk before you revise, because content and wording can change between series.

If you hold the rights to any material in this pack and would like it amended or removed, contact admin@stemup.co.uk and we will act on it.

Q1.

(a) **[AO2 = 4]**

1 mark for **each** of the following:

- identify strata / sub-groups in their population, e.g. the four different schools
- calculate the required proportion from each stratum based on the proportion in the population
- select sample at random from each school / stratum / sub-group
- use a random selection method, e.g. assign each student a number then use a computer, calculator or random number table to select specified number of numbers between 0 and X (or hat method).

Credit answers based on other strata / sub-groups, e.g. male and female etc.
3rd and 4th bullet point can only be credited if preceded by strata and proportionality.

4

(b) **[AO3 = 4]**

For **each** suggestion, award marks as follows:

2 marks for a detailed, coherent, relevant suggestion

1 mark for a brief or muddled, relevant suggestion

0 marks for just naming an ethical issue

Possible content:

- confidentiality: advise students that their data is to be kept confidential so their individual responses will not be identifiable and will not be accessible to anyone other than the researchers / their agents
- withdrawal of data: ensure students are told they have the right to withdraw their data after the event even if they consented to the survey and were aware of the aim at the start
- protection from harm: ensure that no one has been upset or offended by questions on the survey, e.g. if they were felt to be intrusive or offensive, or upset by feelings aroused during the survey. If so, then discuss that these feelings are normal etc
- debrief: explain the full purpose / aim of the survey, check again that they are willing to allow their data to be used.

Answers may be verbatim or as above.

Can gain full credit without naming the issue.

Credit other relevant suggestions consistent with BPS guidelines.

4

(c) **[AO1 = 3 AO2 = 2 AO3 = 3]**

Level	Mark	Description
4	7-8	Knowledge of Vygotsky's theory is accurate with

STEMUP.CO.UK

		some detail. Application is effective. Discussion is thorough and effective. Minor detail and / or expansion of argument is sometimes lacking. The answer is clear, coherent and focused. Specialist terminology is used effectively.
3	5-6	Knowledge of Vygotsky's theory is evident but there are occasional inaccuracies / omissions. Application and/or discussion is mostly effective. The answer is mostly clear and organised but occasionally lacks focus. Specialist terminology is used appropriately.
2	3-4	Limited knowledge of Vygotsky's theory is present. Focus is mainly on description. Any application / discussion is of limited effectiveness. The answer lacks clarity, accuracy and organisation in places. Specialist terminology is used inappropriately on occasions.
1	1-2	Knowledge of Vygotsky's theory is very limited. Discussion / application is limited, poorly focused or absent. The answer as a whole lacks clarity, has many inaccuracies and is poorly organised. Specialist terminology is either absent or inappropriately used.
	0	No relevant content.

Possible content:

- social interaction / culture are key to cognitive development – child internalises understanding of others
- child as an apprentice who develops tools of a culture, e.g. language, use of technology
- language has an important role: external speech leads to inner speech leads to internalised thought
- emphasises scaffolding – more knowledgeable others / experts act as supportive framework, later withdrawn
- zone of proximal development – gap between what can be achieved alone and what can be achieved with help
- knowledge of theory embedded in evidence.

Possible application:

- students might say they learned better with help / scaffolding from teacher / peers
- students might be able to go beyond their current level of attainment with help (move through ZPD)
- students might describe how they can eventually succeed alone – the scaffolding framework can be removed
- according to Vygotsky, students should learn better in activities that involve scaffolding, e.g. peer tutoring, pair work, teacher demonstration, use of writing frames, etc.

Possible discussion points:

- use of evidence to support / refute Vygotsky's theory about cognitive development, e.g. evidence for improved performance with scaffolding or evidence that shows tutoring does not accelerate learning
- cross cultural differences in concept development show that understanding depends on social interaction / cultural experience
- comparison with other theories of cognitive development, e.g. Piaget's view on the role of language / child as scientist
- assumes all children learn better with social interaction – some children prefer to learn alone.

Credit other relevant material.

8

[16]

Q2.

[AO1 = 6 AO3 = 10]

Level	Marks	Description
4	13 – 16	Knowledge of Vygotsky's theory of cognitive development is accurate and generally well detailed. Evaluation is thorough and effective. The answer is clear, coherent and focused. Specialist terminology is used effectively. Minor detail and / or expansion of argument sometimes lacking.
3	9 – 12	Knowledge of Vygotsky's explanation of cognitive development is evident. There are occasional inaccuracies. Evaluation is apparent and mostly effective. The answer is mostly clear and organised. Specialist terminology is mostly used effectively. Lacks focus in places.
2	5 – 8	Some knowledge of Vygotsky's explanation of cognitive development is present. Focus is mainly on description. Any evaluation is only partly effective. The answer lacks clarity, accuracy and organisation in places. Specialist terminology is used inappropriately on occasions.
1	1 – 4	Knowledge of Vygotsky's explanation of cognitive development is limited. Evaluation is limited, poorly focused or absent. The answer as a whole lacks clarity, has many inaccuracies and is poorly organised. Specialist terminology either absent or inappropriately used.
	0	No relevant content.

Possible content:

- social interactionist theory – focus on role of social interaction and culture in development of cognition – how child internalises the understanding of others
- through social interaction child develops tools of culture, eg language
- importance of language – enables shift from elementary mental functions to higher mental functions; external monologue > inner speech > internalised thought
- scaffolding – more knowledgeable others (parents, older peers, teachers, siblings) provide a supportive framework which is gradually withdrawn

STEMUP.CO.UK

- zone of proximal development – gap between what child can do unaided and what child can do with help – difference between current ability and potential ability – where scaffolding operates to extend child's abilities.

Credit other relevant Vygotskian concepts.

Possible evaluation points:

- evidence in favour of Vygotsky, eg Wood and Middleton (1975)
- evidence against Vygotsky, eg tutoring does not accelerate learning Gelman (1969)
- cross-cultural findings to support role of social factors
- implications for education – peer tutoring, classroom organisation, role of the teacher
- comparisons with Piaget – social interactionism vs constructivism; different views on the role of language (key to thought vs by-product of thought); child as apprentice vs child as scientist.

Credit other relevant evaluation points.

Only credit evaluation of the methodology used in studies when made relevant to evaluation of the explanation.

Q3.

[AO1 = 6 AO2 = 4 AO3 = 6]

Level	Marks	Description
4	13 – 16	Knowledge of Piaget's and Vygotsky's views is accurate and generally well detailed. Discussion is thorough and effective. Application to the stem is appropriate and links between views of the two researchers and stem content are explained. The answer is clear, coherent and focused. Specialist terminology is used effectively. Minor detail and/or expansion of argument sometimes lacking.
3	9 – 12	Knowledge of Piaget's and Vygotsky's views is evident. Discussion is apparent and mostly effective. There are occasional inaccuracies. Application to the stem is appropriate although links to the views of the researchers are not always explained. The answer is mostly clear and organised. Specialist terminology mostly used effectively. Lacks focus in places.
2	5 – 8	Knowledge of Piaget's and Vygotsky's views is present but is vague/inaccurate **or** one view only is present. Focus is mainly on description. Any discussion is only partly effective. Application to the stem is partial. The answer lacks clarity, accuracy and organisation in places. Specialist terminology used inappropriately on occasions.
1	1 – 4	Knowledge of Piaget's and/or Vygotsky's views is limited. Discussion is limited, poorly focused or absent. Application is limited or absent. The answer as a whole lacks clarity, has many inaccuracies and is poorly organised. Specialist

STEMUP.CO.UK

		terminology either absent or inappropriately used.
	0	No relevant content.

Possible content:

- Piaget – cognition develops as a result of active discovery; action on the world; child as scientist; schema development via assimilation and adaptation and striving for equilibrium; development takes place in stages (description of Piaget's stages is neither necessary nor expected); language as a byproduct of cognitive development
- Vygotsky – cognition is socially and culturally determined; child as apprentice learning tools of the culture; scaffolding as a support structure provided by more knowledgeable others and gradually withdrawn as child becomes more capable; peer learning; language as the key to cognitive development

Possible applications:

- Piaget – discovery learning 'students worked alone'
- Piaget – teacher's role is to provide the materials and environment 'they were given tasks and materials … had to sort out the problem by trial and error'
- Vygotsky – child as apprentice and peer tutoring 'worked in pairs of different abilities so they could help each other'
- Vygotsky – scaffolding by more knowledgeable other 'teacher demonstrated ….. until they could manage on their own'
- Vygotsky's views on language and thought 'talk it through'

Possible discussion points:

- Use of evidence for/against Piaget's view
- Use of evidence for/against Vygotsky's view
- Contrast/comparison of the two views
- Implications of the two views eg for education

Credit other relevant information.

Q4.

[AO2 = 4]

Level	Marks	Description
2	3 – 4	Knowledge of the scaffolding in relation to cognitive development is clear and mostly accurate. The material is applied appropriately. The answer is generally coherent with effective use of terminology.
1	1 – 2	Some knowledge of scaffolding in relation to cognitive development is evident. Application is not always effective. The answer lacks accuracy and detail. Use of terminology is either absent or inappropriate.
	0	No relevant content.

Possible applications:

- Scaffolding acts as a support structure or framework for Katie's learning about medical procedure

STEMUP.CO.UK

- Mother playing with Katie maintains interest and participation
- Mother shows Katie how to use a bandage – demonstration
- Talking when Katie is struggling controls the child's frustration
- By talking, Katie is encouraged to do more and more of the process alone – verbal support/prompt/encouragement
- Eventually Katie will be able to do this alone without any support from her mother - independence

Credit other relevant information.

Q5.

Marks for this question: AO1 = 6, AO3 = 10

Level	Marks	Description
4	13 – 16	Knowledge is accurate and generally well detailed. Discussion / evaluation / application is thorough and effective. The answer is clear, coherent and focused. Specialist terminology is used effectively. Minor detail and / or expansion of argument sometimes lacking.
3	9 – 12	Knowledge is evident. There are occasional inaccuracies. Discussion / evaluation / application is apparent and mostly effective. The answer is mostly clear and organised. Specialist terminology is mostly used effectively. Lacks focus in places.
2	5 – 8	Some knowledge is present. Focus is mainly on description. Any discussion / evaluation / application is only partly effective. The answer lacks clarity, accuracy and organisation in places. Specialist terminology is used inappropriately on occasions.
1	1 – 4	Knowledge is limited. Discussion / evaluation / application is limited, poorly focused or absent. The answer as a whole lacks clarity, has many inaccuracies and is poorly organised. Specialist terminology either absent or inappropriately used.
	0	No relevant content.

Please note that although the content for this mark scheme remains the same, on most mark schemes for the new AQA Specification (Sept 2015 onwards) content appears as a bulleted list.

AO1

Vygotsky's theory emphasises the sociocultural context of cognitive development and the key role of language. Other important ideas include the zone of proximal development (ZPD) and the importance of the instructor, scaffolding and culture. Also relevant are stages of concept formation (vague syncretic etc.) and proposed

STEMUP.CO.UK

different functions for speech at different stages of development: pre-intellectual or social speech (0 – 3 years old), egocentric speech (3 – 7 years old), inner speech (7+ years old).
Stages of concept formation: vague-syncretic (trial and error); complex (appropriate strategies, but main attributes not identified); potential concept stage (identify one attribute or feature at a time); mature concept stage (identify several attributes / features at a time).

AO3

Credit use of evidence in relation to various aspects of Vygotsky's model. In particular the zone of proximal development and the role of the instructor have been investigated (e.g. McNaughton & Leyland, 1990). Also credit applications to education, for instance the teacher's role in the ZPD and scaffolding, peer tutoring, the importance of language and inner speech in early learning.
Credit also cultural relativity of Vygotsky's work, his overemphasis on sociocultural factors at the expense of biological influences and the use of alternative theories such as Piaget as part of sustained and effective evaluation of Vygotsky's ideas.
Other relevant factors may include the nature / nurture debate and the relative roles of innate mechanisms versus the influence of society / culture.

Q6.

Marks for this question: AO1 = 6, AO3 = 10

Level	Marks	Description
4	13 – 16	Knowledge is accurate and generally well detailed. Evidence clear. Discussion / evaluation / application is thorough and effective. The answer is clear, coherent and focused. Specialist terminology is used effectively. Minor detail and / or expansion of argument sometimes lacking.
3	9 – 12	Knowledge is evident. There are occasional inaccuracies. Evidence present. Discussion / evaluation / application is apparent and mostly effective. The answer is mostly clear and organised. Specialist terminology is mostly used effectively. Lacks focus in places.
2	5 – 8	Some knowledge is present. Focus is mainly on description. Any discussion / evaluation / application is only partly effective. The answer lacks clarity, accuracy and organisation in places. Specialist terminology is used inappropriately on occasions.
1	1 – 4	Knowledge is limited. Discussion / evaluation / application is limited, poorly focused or absent. The answer as a whole lacks clarity, has many inaccuracies and is poorly organised. Specialist terminology either absent or inappropriately used.
	0	No relevant content.

Please note that although the content for this mark scheme remains the same, on most mark schemes for the new AQA Specification (Sept 2015 onwards) content appears as a bulleted list.

STEMUP.CO.UK

AO1

Marks for knowledge of Vygotsky's theory of cognitive development and for knowledge of relevant research. Likely content includes: the importance of social and cultural factors in cognitive development; development of the tools of a culture including language; scaffolding and the role of instruction / guidance; the zone of proximal development – difference between actual and potential; child as an apprentice to a more knowledgeable other; internalisation of the world view of others via means of social interaction; guided participation as a specific kind of scaffolding relating to cultural traditions.

AO3

Marks for discussion / evaluation / analysis of Vygotsky's theory. Likely issues include: Vygotsky's theory and possible acceleration of cognitive development and the contrast with Piaget's notion of readiness; stance on the role of language versus Piaget's view that language is a by-product; comparison with nativism; over-instruction possibly stifling inquisitiveness and desire to learn; other possible negative influences of instruction and guidance; comparison with information processing theories which place less emphasis on role of others and more on processing strategies; scaffolding as more appropriate for the acquisition of some cognitive abilities than others; use of evidence in relation to the role of others, eg Wood and Middleton's study of scaffolding (1975), Rogoff's (1995) study of guided participation; application of Vygotsky's theory to education eg group activities, peer tutoring, community of inquiry Elbers and Streefland (2000).
Credit evaluation of studies where used to discuss theory. Credit use of relevant evidence.

Q7.

Marks for this question: AO1 = 6, AO3 = 10

Level	Marks	Description
4	13 – 16	Knowledge is accurate and generally well detailed. Discussion / evaluation / application is thorough and effective. The answer is clear, coherent and focused. Specialist terminology is used effectively. Minor detail and / or expansion of argument sometimes lacking.
3	9 – 12	Knowledge is evident. There are occasional inaccuracies. Discussion / evaluation / application is apparent and mostly effective. The answer is mostly clear and organised. Specialist terminology is mostly used effectively. Lacks focus in places.
2	5 – 8	Some knowledge is present. Focus is mainly on description. Any discussion / evaluation / application is only partly effective. The answer lacks clarity, accuracy and organisation in places. Specialist terminology is used inappropriately on occasions.
1	1 – 4	Knowledge is limited. Discussion / evaluation / application is limited, poorly focused or absent. The answer as a whole lacks clarity, has many inaccuracies and is poorly organised. Specialist terminology either

		absent or inappropriately used.
	0	No relevant content.

Please note that although the content for this mark scheme remains the same, on most mark schemes for the new AQA Specification (Sept 2015 onwards) content appears as a bulleted list.

AO1

Relevant theories of cognitive development in the Specification are Piaget and Vygotsky. There is no requirement for students to cover both. Credit can be awarded for outlines of applications of theories to education. For Piaget this might be stage-specific learning, 'readiness', discovery learning or the concepts of assimilation and accommodation. For Vygotsky, key ideas include the zone of proximal development, scaffolding, the role of language, and collaborative learning. Examiners should be sensitive to depth-breadth trade-offs in answers covering both.

Although not on the specification, other theories of cognitive development, such as Bruner's, would also be relevant to this question.

AO3

Research studies have investigated the effectiveness of, eg scaffolding or stage specific learning ('readiness'). Note that methodological evaluation of such studies can only earn credit if explicitly linked to discussion of application of theories. General points include the role of the teacher and the significance of individual differences between children. Observations on the overall significance of Piaget and / or Vygotsky to education may also earn marks.

Further relevant commentary might include some direct comparison of Piaget and / or Vygotsky's theories in relation to education, although this is not essential. Alternative theories, such as Bruner, may earn credit if used either as part of effective commentary on Piaget and / or Vygotsky, or discussed in their own right.

Note that students are not required to evaluate their chosen theory(ies) beyond their applications to education. Classic studies (naughty teddy, three mountains, etc) will not earn credit unless the implications of findings are directly linked to the discussion of applications to education.

Relevant points include cultural and historical issues, with Vygotsky's views in particular shaped by the socio-political environment he was working in.

Q8.

Please note that the AOs for the new AQA Specification (Sept 2015 onwards) have changed. Under the new Specification the following system of AOs applies:

- AO1 knowledge and understanding
- AO2 application (of psychological knowledge)
- AO3 evaluation, analysis, interpretation.

[AO3 = 3]

1 mark – credit description of how any design (repeated, independent or matched) could be used.

STEMUP.CO.UK

1 mark – both IV & DV: whether or not child receives scaffolding and jigsaw success
3rd mark – for appropriate expansion / elaboration of how the experiment would be conducted eg more detail of variables (eg adult encouragement in form of 'well done' for placing a piece correctly; time taken to complete a 15-piece jigsaw or the number of pieces correctly positioned in ten minutes) or of the design.

Example answer: independent design: one group of children solves jigsaw puzzles with an adult giving encouragement the other group has an adult present but there is no encouragement (the IV). The psychologist would measure the time taken to complete the jigsaw (the DV).

Q9.

[AO2 = 2]

Up to two marks for a valid explanation. 1 mark for outline of relevant concept. Second mark for application to classroom situation. Does not have to be science, but must be classroom. Possible answer: peer tutoring – use of mixed ability pairs so more able can aid less able; collaborative learning – working in small groups of mixed ability; teacher helping child set up apparatus / pour liquid / measure liquid etc, then withdraws support as child becomes more able to do it alone; how ZPD / scaffolding could be applied; setting up a community of inquiry.

Q10.

Marks for this question: AO1 = 6, AO3 = 10

Level	Marks	Description
4	13 – 16	Knowledge is accurate and generally well detailed. Discussion / evaluation / application is thorough and effective. The answer is clear, coherent and focused. Specialist terminology is used effectively. Minor detail and / or expansion of argument sometimes lacking.
3	9 – 12	Knowledge is evident. There are occasional inaccuracies. Discussion / evaluation / application is apparent and mostly effective. The answer is mostly clear and organised. Specialist terminology is mostly used effectively. Lacks focus in places.
2	5 – 8	Some knowledge is present. Focus is mainly on description. Any discussion / evaluation / application is only partly effective. The answer lacks clarity, accuracy and organisation in places. Specialist terminology is used inappropriately on occasions.
1	1 – 4	Knowledge is limited. Discussion / evaluation / application is limited, poorly focused or absent. The answer as a whole lacks clarity, has many inaccuracies and is poorly organised. Specialist terminology either absent or inappropriately used.
	0	No relevant content.

Please note that although the content for this mark scheme remains the same, on most

mark schemes for the new AQA Specification (Sept 2015 onwards) content appears as a bulleted list.

AO1

Marks for knowledge of what can affect cognitive development (relevant psychological research and theory). Likely content: Vygotsky's work on the role of others – socio-cultural theory; internalisation; references to scaffolding; research eg Wood and Middleton (1975); guided participation Rogoff (1995); ZPD.
Candidates should also be credited for knowledge of counter-perspectives eg nativism, Piaget's views on biological maturation (the lone scientist). Broader social learning theory concepts could also be relevant.

AO3

Marks for discussion of the role of others in cognitive development. Likely content: discussion of contradictory views; supporting evidence; general evaluation of theories; cognitive development as due to an interaction between various factors. Credit use of relevant evidence and evaluation of evidence where relevant to the question.

Q11.

Marks for this question: AO1 = 8

Level	Marks	Description
4	7 – 8	Knowledge is accurate and generally well detailed. The answer is clear, coherent and focused. Specialist terminology is used effectively. Minor detail and / or expansion of argument sometimes lacking.
3	5 – 6	Knowledge is evident. There are occasional inaccuracies. The answer is mostly clear and organised. Specialist terminology is mostly used effectively. Lacks focus in places.
2	3 – 4	Some knowledge is present but the answer lacks clarity, accuracy and organisation in places. Specialist terminology is used inappropriately on occasions.
1	1 – 2	Knowledge is limited but there is some relevant material on one theory of cognitive development.
	0	No relevant content.

Please note that although the content for this mark scheme remains the same, on most mark schemes for the new AQA Specification (Sept 2015 onwards) content appears as a bulleted list.

A01

Candidates are able to choose from Piaget, Vygotsky, and Baillargeon. Descriptions must be accurate, for instance, Piaget's stages, Vygotsky and the role of the ZPD, or Baillargeon's explanation of early infant abilities. Answers may present studies as a way of illustrating aspects of the theory.

STEMUP.CO.UK

Q1.

In part (a) marks were awarded independently so many answers gained a mark for identification of strata. Whilst the stem was meant to cue the students in to ‘the 4 schools’ as strata, some students invented possible strata of their own, for example male / female or A Level subjects studied. Thereafter, marks were less easily gained because further credit was dependent on whether or not students could explain the need for proportionality in the sample. References to proportionality were not always explicit; other terms could receive credit, for example, many students used the word ‘ratio’ which was accepted. It was also acceptable and quite commonly the case that the idea was explained through the use of a concrete example, or via a mathematical formula. Having achieved marks for strata and proportionality, it was then possible to be credited for the random selection from each stratum. Relatively few answers did attain full marks.

Part (b) tended to yield high marks, with confidentiality, withdrawal of data, enquiries about possible harm and explanation of the aim as the basis of most answers. Verbatim responses tended to gain the higher marks, usually because they included fairly elaborate explanation as would typically occur when dealing with real participants. Some answers strayed into reasons why certain points would be important, which was not really answering the question. Despite taking a fairly eclectic approach to what might be construed as ‘ethical’, examiners occasionally came across points of general small talk that were not deemed creditworthy, such as ‘Have you travelled far?’

Part (c) was often well answered, but, as in the case of the parallel questions, marks were largely dependent on the ability to organise material and address the three skills in limited time. What might have been very worthy accounts of Vygotsky’s theory were sometimes marred by students’ lack of ability to use specialist terminology effectively. Discussion tended to focus on implications for education and comparisons with Piaget. Despite there being ample scope for application, this was often very limited, with the barest mention that ‘students who say they are helped in the classroom would learn better’.

Q5.

This was a very straightforward question that produced a range of answers. In particular, knowledge of Vygotsky’s theory was extremely variable. Some answers referred only to, for example, the role of language and the zone of proximal development (ZPD). At the top end there were outlines of the stages of concept formation and stages of speech, plus more general issues such as the ZPD and the sociocultural context.

Evaluation tended to be less impressive. There are studies that directly test some of Vygotsky’s ideas, especially the ZPD and the role of the instructor, while for some students applications of his ideas to education provided IDA credit. Comparison with Piaget was also popular, but some answers became diverted into describing and evaluating Piaget rather than Vygotsky. Additional IDA included the emphasis on sociocultural factors rather than on biological maturation, but although the point was occasionally raised students did not usually demonstrate a clear understanding of the issue.

Q6.

This question was one for which students seemed quite well prepared, although in many cases the terms scaffolding and ZPD were not adequately outlined. For example, it was quite rare to see a complete definition of scaffolding which included reference to the support structure being gradually withdrawn as the child’s competence increases. Many

STEMUP.CO.UK

weaker answers consisted of bullet-type lists of descriptive points followed by similarly economical lists of evaluative points. Discussion points frequently involved contrast with Piaget, although these contrasts were often no more than unexplained statements, such as, 'Vygotsky said children were apprentices, but Piaget said they were scientists.'

Q7.

This question was done reasonably well, especially the AO1 outline of applications. Although a few students could not resist describing the actual models of cognitive development and evaluating them (which was not relevant to the question), most answers showed good breadth in relation to applications. Most popular were 'readiness' and critical periods, discovery learning, the zone of proximal development, scaffolding, and collaborative learning. At the top end some students introduced the concepts of assimilation and accommodation and showed how they might be used in the classroom. There was also an encouraging trend towards the use of research studies as evaluation of the success or failure of applications (e.g. studies on 'readiness', scaffolding, and collaborative learning).

Further AO2 / 3 credit was earned through comparison of the ideas of Piaget and Vygotsky on education, their influence on educational practice and Government policy, and their relation to the nature-nurture debate.

Q8.

Knowledge of experimental design was not always in evidence in this question, although the independent and dependent variables were properly identified in most cases.

Q9.

Most students gained at least one mark for this question, although lots of responses were extremely vague with no clear indication of exactly what would happen in a science lesson. In better responses, a relevant concept such as scaffolding or peer tutoring was briefly explained and then applied in a fairly concrete way.

Q10.

This question yielded some varied and interesting responses.
The majority of students recognised this as the Vygotskian position to cognitive development, but various approaches and theories were used to construct some quite valid and innovative responses. Certainly this more open-ended question style discriminated well between those who had practised pre-learned answers and the better students who could select and organise relevant material in examination conditions. Some of these answers were a real joy to read.

Q11.

This was done very well, with an impressive proportion of candidates achieving full marks. Piaget's theory was most popular, and at the top end answers covered the basic assumptions and processes of accommodation and assimilation, and then provided outline accounts of the developmental stages. Some candidates introduced evaluations of the theory, which were not creditable in this question part. A few answers presented reasonable accounts of Vygotsky's theory.

STEMUP.CO.UK