PSYCHOLOGY TZ2

(IB Africa, Europe & Middle East & IB Asia-Pacific)

Overall grade boundaries

Higher level

Grade:	1	2	3	4	5	6	7
Mark range:	0 - 9	10 - 19	20 - 30	31 - 42	43 - 53	54 - 65	66 - 100

Standard level

Grade:	1	2	3	4	5	6	7
Mark range:	0 - 9	10 - 22	23 - 32	33 - 43	44 - 56	57 - 67	68 -100

Time zone variants of examination papers

To protect the integrity of the examinations, increasing use is being made of time zone variants of examination papers. By using variants of the same examination paper candidates in one part of the world will not always be taking the same examination paper as candidates in other parts of the world. A rigorous process is applied to ensure that the papers are comparable in terms of difficulty and syllabus coverage, and measures are taken to guarantee that the same grading standards are applied to candidates' scripts for the different versions of the examination papers. For the May 2013 examination session the IB has produced time zone variants of psychology paper one. Grade boundaries for the different time zoned papers are set separately, and careful judgments are made that are based on criteria for performance level, to account for differences in the papers.

Higher level internal assessment

Component grade boundaries

Higher level

Grade:	1	2	3	4	5	6	7
Mark range:	0 - 2	3 - 5	6 - 9	10 - 13	14 - 17	18 - 21	22 - 28

The range and suitability of the work submitted

Overall the range and suitability of the work submitted was of a good standard this session and in line with previous sessions. There was a notable reduction in internal assessment (IA) reports that did not meet the criteria for an experimental study. The majority of candidates were aware of ethical issues and the majority of candidates with a full report included a copy of informed consent, briefing and debriefing instructions in the appendices. There was also an overall better attempt to make the background studies and/or theories relevant to the hypotheses.

Most reports were based on cognitive psychology and this seems to provide good results at this level of study. Favourite experiments were, as usual, levels of processing, the Stroop effect, reconstructive memory and experiments related to schema theory and imagery vs rehearsal (Pavio). Other good IAs were based on availability heuristics and social loafing. A few candidates performed experiments with several conditions although a simple experiment with ***only two conditions*** is recommended in the guide.

In general, the weaker reports shared the following characteristics:

- Weak and imprecise explanation of background research in the introduction. The hypotheses were not clearly justified and operationalized, that is, made measurable.
- For the descriptive statistics, the results were not stated in words, the use of descriptive statistics was not explained, and/or there was no relevant graph and/or table. For the inferential statistics, tests were absent or not justified.
- Discussions were superficial with no discussion of the IA results in the light of background research and/or no reference to statistics. This was often due to the limited relevant research and/or theories presented in the introduction. Identification of limitations of own procedure was not linked to suggestions for modification.
- The referencing was poorly done.

It should be noted that it is not required to make an exact replication of an experiment. A partial replication is adequate but the candidate's experiment should be closely linked to an actual experiment.

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Candidate performance against each criterion

Criterion A: introduction

In many IAs, the research presented was not sufficiently explained. There seemed to be a lack of understanding of the studies and/or theories presented, which made it difficult for candidates to sufficiently link them to the hypotheses. Or alternatively, it made it difficult for candidates to formulate a clear hypothesis.

Candidates should also always *explicitly* state how the theories and/or studies presented in the introduction link to the hypotheses.

It is important that the introduction is clear and focused on relevant background research so that it logically leads towards the candidate's own research hypotheses and the background research is explained and analysed in sufficient depth (for example, aim, procedure, findings) to allow for formulation of a clear research hypothesis in the introduction and to stimulate discussion of own results in the light of the background research in the discussion section.

Criterion B: design

Most candidates could state an appropriate experimental design (repeated measures or independent designs) but choice of design was not always properly justified, that is, why that particular design was chosen over another.

A number of candidates had problems with operationalization of the IV and the DV, that is, clearly making them measurable.

Overall, candidates had a good understanding of the ethical guidelines. Some candidates used participants under the age of 16 without parental consent, but this was less frequently done than in previous sessions.

Criterion C: participants

Overall, most candidates included the relevant characteristics of the participants, although at times irrelevant characteristics were included, for example, socio-economic status.

The target population, that is, the population from which the sample was drawn, was not always appropriately identified. Often candidates would confuse the actual sample with the target population.

Most candidates did identify a sampling technique, but often struggled to explain the use of this method.

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Criterion D: procedure

There were at times problems with the description of the procedure in sufficient detail, that is, timings, allocation of conditions, and so on, and therefore it would be difficult to replicate the experiment.

It is necessary that all materials are referenced in the appendices, for example, appendix III for the debriefing. Without proper referencing, it would not be possible to properly replicate the experiment.

Criterion E: results – descriptive

Most candidates included a graph and a table, but often they were not labelled appropriately or not labelled at all.

Often candidates presented the results only in tabular form without describing the results in a narrative form as well.

Only the strongest candidates explained the use of descriptive statistics, that is, why was the mean or standard deviation chosen.

Only one measure of central tendency and one measure of dispersion is required.

Criterion F: results – inferential

Most candidates did choose an appropriate test and did justify the use of the test (based on the level of data and the design). At times t-tests were chosen (which is acceptable) but often it was not the most appropriate test based on the particular aspects of the experiment.

A number of candidates did not make a statement of statistical significance and/or the null hypothesis was not accepted or rejected.

It is important that raw data and calculations of the inferential test are included in the appendices. If the calculation is performed online, a screen shot of the calculation could be included in the appendices as documentation.

Criterion G: discussion

Candidates should always refer back to *all* research and/or theories presented in the Introduction and discuss these in reference to their own findings. Candidates who included research and/or theories in the introduction that were not highly relevant often struggled with this aspect of the discussion.

Almost all candidates presented limitations, but often in a superficial manner, without rigorous analysis. Limitations should be presented that are relevant to this particular investigation, not limitations of a general experimental nature.

It is also necessary that a conclusion is included for all IAs.

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Criterion H: citation of sources

Candidates often did not include all the references mentioned in the introduction. Often candidates did not use a standard citation method, such as APA, or referencing was not complete.

Criterion I: report format

Generally the report formats were well done. Appendices were well organized and labelled.

The abstract must include a summary of the study as well as the results of the study.

Recommendations and guidance for the teaching of future candidates

- It is recommended that teachers help candidates find appropriate background research, that is, theoretical framework and appropriate experiments. Finding relatively simple experiments to replicate is recommended. Again, it is recommended that candidates do a partial replication of studies rather than try to "create" their own study. The manipulation of only two conditions is recommended.

- The background research in the introduction should be analysed in sufficient depth so that the aim of the candidate's own research is clearly justified and the experimental hypothesis should be clearly linked to background research.

- For the sample, the number of participants in the experiment does not need to exceed 20 (independent design) or 10 (repeated measures design), and it is recommended to observe this.

- It would be helpful if candidates were given past experiments to read in order to familiarize themselves with the aspects of experimental research.

- It is generally recommended that candidates are familiar with scientific standards, and the reading of proper background research should be encouraged. It is recommended that candidates be trained in critical use of internet resources. Many candidates only used internet sources of a non-specialist nature as background literature.

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Standard level internal assessment

Component grade boundaries

Standard level

Grade:	1	2	3	4	5	6	7
Mark range:	0 - 2	3 - 5	6 - 8	9 - 10	11 - 12	13 - 14	15 - 20

The range and suitability of the work submitted

Overall the range and suitability of the work submitted was of a moderate to good standard this session. Most studies conducted were simple classic experiments suitable for the purpose of the internal assessment (IA). They involved manipulation of a clearly identified independent variable to determine its effect on the dependent variable. The vast majority of reports allowed candidates the opportunity to access all the available marks. The most popular topics came from cognitive psychology such as Stroop effect and Loftus and Palmer replications on reconstructive memory. Some interesting works were presented on short-term memory, the effect of priming on perception of ambiguous figures and some variations on the halo effect. Within centres there were varied choices of studies, showing confident selection/guidance by teachers. Unfortunately, there were also some non-experimental works (for example, comparing performance of female versus male participants in a Stroop effect study) and some studies which were not conducted in accordance with ethical guidelines, such as replications of Asch's conformity research or studies with very young children as participants. The majority of candidates were well aware of ethical issues and most candidates with a full report included a copy of informed consent in the appendices. A few candidates performed experiments with several conditions although a simple experiment with only two conditions is recommended in the psychology guide. The majority of reports had adopted the required format, dividing the report into sections and attempting to fulfil the requirements for each section. Some centres seem to have encouraged candidates to present hypotheses although this is not needed for standard level and in a few centres candidates had applied inferential statistical tests which again is not needed for standard level.

Candidate performance against each criterion

Criterion A: introduction

Most introductions were well-written. The majority of candidates restricted their background information to the one study being replicated. However, some errors kept occurring:

Where centres allowed their candidates to write more extensively, some candidates reported more in-depth introductions which referenced several studies. In many instances this "clouded" the introduction for the candidate and they often failed to explicitly state which study they are replicating.

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A more common issue was that candidates often neglected to explicitly state their own aim. The candidate's aim cannot just be "to replicate X's study". Their aim should be expressed in terms of their intention to investigate the effect of one chosen IV on a operationally defined and measured DV.

Many candidates included a null and research hypothesis, and then attempted to reject or accept them without inferential statistical analysis.

Criterion B: design

Most candidates have an understanding of different research designs though its selection is frequently not fully justified, for example by reference to strengths and limitations of respective designs. A number of candidates had problems with operationalization of the IV and the DV. Many candidates fail to identify levels of the independent variable. Ethical guidelines were usually well discussed and the majority of candidates provided documentation in appendices showing a consent form and a standard debriefing. A small number of centres had allowed participants under the age of 16 to participate without parental consent and this is violating the ethical guidelines of the IB. Some candidates neglected to seek parental consent for young teenagers, instead gaining consent from the class teacher of the participants. There were only a few cases where the informed consent was not included and this was always in weak reports where other things were missing as well.

Criterion C: participants

A large number of candidates were able to give some characteristics of the sample and were able to identify and explain/justify their sampling method accurately. A minority of candidates gave muddled accounts of the sampling method, switching between some combination of "random", "convenience" and "volunteer" in a way that failed to allow for replication. In some cases, although candidates described several participant characteristics they failed to identify relevant characteristics of participants, for example, for the Loftus study: do participants have driving experience, was the study conducted in their native language or how proficient they are in their second language, how many participants were included in the study?

Criterion D: procedure

Most procedure sections were adequately handled. However, at times the description of the procedure was not written in sufficient detail, and therefore it would be difficult to replicate the experiment. Reference to the materials in the appendices (either in procedure or in materials) was not always done and this would make replication difficult or impossible. It is recommended to include all materials and give details on how materials were used in the procedure.

Some candidates tended to rely on referral to participant instructions sheets in the appendix, rather than giving a step-by-step, bullet-pointed list of things to do. It was clear from some of the descriptions of the procedure that a lot of testing is taking

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place in corridors at break or in the corner of the canteen. It would be helpful if centres allowed candidates better conditions for conducting their IA experiments.

Criterion E: results

In the majority of cases this was the weakest part of the report. Candidates should, if possible, be steered away from experiments that produce only nominal data, or should be given better guidance on how to convert it to percentages and use it effectively. Candidates often applied several different descriptive statistics, even if they were inappropriate for the level of data. Some candidates included, in this section, raw data or graphs showing each individual participant's score. Moreover, the graphs and tables were rarely clearly presented due to inexact or incomplete labelling. Not labelling the y-axis was quite common, and many candidates could make their graphs more precise by carefully labelling the x-axis with specific test condition rather than merely writing "experimental" and "control" condition. Many candidates presented two or three measures of central tendency when they only need to use one. Few candidates gave reasons for their choice of descriptive statistics and in many cases although the results were stated they were not explained by referring back to the aim of the study.

Criterion F: discussion

The quality of discussions varied greatly. All candidates attempted to meet the requirements of this criterion and for the stronger candidates there were some very effective and well thought out discussions. Discussions often contained paragraphs on strengths of the study, in spite of the fact that this is not assessed. Comparisons with the study being replicated usually lacked analytic rigour. Candidates' identification of limitations was often weak, with issues such as low numbers of participants, low population validity, low ecological validity although there were more important limitations that could have been identified and discussed. This seems to suggest that candidates have a limited understanding of research methods. The focus of the evaluation tends to be on the sample rather than on the design and procedure.

Some moderators reported that a common issue in the discussion was that candidates seemed to forget to include a conclusion. Moderators were sometimes surprised that only very few candidates gave ideas for further research.

Criterion G: presentation

In the majority of cases the whole report, including appendices, was well organized and labelled. Only a few reports did not include a content table, an abstract or appendices. The vast majority of candidates gave reports within the word limit. Abstracts were variable in quality from those that were clear and concise summaries to those that included very little specific information related to their replication of an original study – some candidates wrote half the abstract describing the study being replicated, rather than just giving the main details of their own aim, method and results. Presentation of references was often fairly weak, particularly where candidates have accessed studies from the internet or secondary sources. They

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tended to give web addresses without citing which study was found there, and not giving a date of access. Many candidates did not include any calculations in their appendices. In most cases where appendices were included, they were generally labelled appropriately and referenced into the body of the report.

Recommendations for the teaching of future candidates

- Teachers should assist candidates in finding appropriate studies to replicate. Finding good descriptions of relatively simple and straightforward studies to replicate is of utmost importance. This will help candidates undertake their own experiments without too much confusion.

- In the introduction, candidates should be told to just write about the study being replicated and then clearly state their own aim at the end. There should be a close relationship between the aim of the candidate's study and the replicated study so that these can be integrated in the introduction and the discussion of results. The replicated study should be analysed in sufficient depth in the introduction so that the aim of the candidate's own research is clearly justified and the candidate can write a thorough discussion. This way the findings of the candidate's experimental study can easily be discussed with reference to the study being replicated.

- Candidates should be guided to state the design and immediately justify its use. In the same way, in the participants section candidates should be encouraged to name the sampling method and then explain it.

- Candidates need to develop skills of analysing the data that is collected and interpreting results. This not only includes how to calculate descriptive statistics but also how to analyse them. For example, candidates should be able to discuss what it means if the calculated means of the two conditions are different, yet the standard deviation is similar, or if the means are similar but the standard deviation of each condition is different.

- In the results section, candidates should be told to only apply the most appropriate measure of central tendency and measure of dispersion, and to justify/explain their choice of descriptive statistics.

- In the discussion, candidates should avoid writing about the strengths of their study, since this is not required and it adds unnecessarily to the word count, leaving candidates less able to write a well developed discussion of their results.

- Candidates should be encouraged to simply include in their abstracts their own aim, method and results. They should be reminded that when they outline their method, they need a bit more than just design and numbers of participants. Likewise in their outline of the results, they could be slightly more detailed/specific.
- Teachers should provide support for weaker candidates, particularly in the organization and formatting of their reports as well as in teaching them how to construct and label a table and graph.

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- Candidates would also benefit from reading the IA criteria and corresponding level descriptors in the subject guide.

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Higher and standard level paper one

Component grade boundaries

Higher level

Grade:	1	2	3	4	5	6	7
Mark range:	0 - 4	5 - 9	10 - 13	14 - 18	19 - 23	24 - 28	29 - 46

Standard level

Grade:	1	2	3	4	5	6	7
Mark range:	0 - 4	5 - 9	10 - 13	14 - 18	19 - 23	24 - 28	29 - 46

General comments

Candidates showed a wide breadth of knowledge throughout paper one. It was impressive to see many candidates showing that they understand a good mix of both classical studies and more modern research being done in psychology.

Many candidates had difficulty differentiating between the different levels of analysis. For example, candidates used biological studies for the cognitive level of analysis or vise versa. Studies used at each level of analysis should reflect the principles that define it.

The areas of the programme and examination which appeared difficult for the candidates

Weak writing strategies proved to be one of the greatest hindrances to top marks. Candidates often used a highly formulaic approach to writing; for example, they would automatically list all of the principles, address ethics or give a history of the level of analysis. Often this information was irrelevant. This is not what is expected and lowers the overall quality of the essay. In addition, many candidates had long and highly irrelevant introductions in section B responses. When material is presented that is not relevant to the response, this lowers the marks for criterion C (organization).

In criterion B (critical thinking), links were not made and ideas were poorly developed. Often comments were made about "ecological validity" or "demand characteristics," but there was no explanation. Too many candidates were arguing that psychological theories have been proven. This does not demonstrate understanding of the testing of theories.

The areas of the programme and examination in which the candidates appeared well prepared

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Overall, candidates showed a good range of understanding with a wide breadth of research to support claims. There were several examples of outstanding levels of organization and structure.

The strengths and weaknesses of the candidates in the treatment of individual questions

Section A

Biological level of analysis

Although there were some good responses, many candidates did not do well on this question. Some candidates wrote about hormones instead of neurotransmitters.

Many candidates did not focus on the **effects** of neurotransmission. Often several effects were listed, but only the first two were awarded marks. Often a study was described in detail that did not match the effect outlined: for example, many candidates wrote that serotonin was responsible for mood and then used a study on hallucinations; or that dopamine is responsible for addiction and then used a study on schizophrenia.

Often candidates would describe a relevant study but not focus specifically on the actual effects. Evaluation of the methodology of a study was also frequently included which did not merit any marks.

Cognitive level of analysis

There were many strong responses to this question. However, many candidates did not explain the principle, but simply stated it. In addition, several candidates used more than one principle. In those cases, only the first principle was assessed.

It is important that candidates link the research back to the stated principle, as candidates would often state a principle and then describe a study without showing the relationship between the two, that is, how the principle can be demonstrated in research.

Many candidates used brain research rather than studies of cognitive processes. For the principle "cognitive processes can be studied scientifically", studies of brain localization or brain scanning are not appropriate.

Sociocultural level of analysis

The majority of candidates wrote about individualism/collectivism. A surprising number of candidates, however, were not familiar with the concept of "dimensions". Many candidates did not describe the dimension, but rather summarized a relevant study. This attracted low marks.

Often candidates used the term to define itself; for example, individualist cultures

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focus on the individual or "long-term orientation" looks at "the long-term".

At times, candidates also confused dimensions. For example, power distance, collectivism/individualism and time orientation would all be described without clearly understanding the distinction among them.

Section B

Biological level of analysis

This was a very popular question. The most common methods discussed were experiments, case studies and correlational studies. Strong responses focused on *how* and *why* the method is used, giving an example of a relevant study to illustrate the use of the method.

Many candidates, however, did not describe the research method and the research was often not explained in terms of how the method was applied. In addition, often the studies were evaluated, rather than the use of method.

Some candidates wrote about "animal research" or "twin studies" and focused on the sample rather than on a research method. This attracted no marks. In addition, there was often lengthy discussion of ethics. This was of only marginal relevance to the demands of the question.

There was a misperception that case studies are unique and rare. In addition, it was often stated that it is impossible to generalize from a case study. This is incorrect.

Cognitive level of analysis

There were many strong responses to this question which demonstrated a breadth and depth of understanding. Most responses focused on Brown & Kulik's flashbulb memory theory.

Very often there were no strengths of the theory discussed. Strong responses focused on biological support for the theory.

Sociocultural level of analysis

Many candidates had a very detailed understanding of the theory and empirical research to support it. However, evaluation was often focused on the studies rather than on the theory. Often there was a long list of evaluative points in the concluding paragraph that were not explained. Listing evaluative points in the conclusion is not a recommended writing strategy.

Recommendations and guidance for the teaching of future candidates

- Writing skills should be reviewed. Too many candidates wrote very long paragraphs that drifted from idea to idea, losing focus. Long introductions of a general nature that

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do not add to the specific nature of questions should be avoided. Introductions were often poorly constructed, leading to lower marks with regard to the focus of the response. Many candidates' writing was very informal (for example, written in first person) and/or anecdotal in nature.

- Candidates should also define terms and be sure that theories and studies are clearly explained, not assuming too much knowledge on the behalf of the reader.

- Evaluation of studies alone is not enough for “critical thinking”. Presenting conflicting theories/studies, discussions of ethical or cultural considerations, or questioning the assumption upon which a theory is based make for more sophisticated critical thinking. It is important that the evaluation not be formulaic and that there be a clear explanation of any evaluations made. Simply writing “the study is not ecologically valid” is not a good example of critical thinking.

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Higher and standard level paper two

Component grade boundaries

Higher level

Grade:	1	2	3	4	5	6	7
Mark range:	0 - 6	7 - 12	13 - 15	16 - 21	22 - 26	27 - 32	33 - 44

Standard level

Grade:	1	2	3	4	5	6	7
Mark range:	0 - 2	3 - 5	6 - 7	8 - 10	11 - 14	15 - 17	18 - 22

The areas of the programme and examination which appeared difficult for the candidates

Not many candidates wrote very poor answers. Some options and questions were far more popular than others.

Adequate and accurate psychological terminology often was not used or was incorrectly used. Basic knowledge was better than critical thinking. Many responses were based on good memorization skills, but lacked in-depth analysis and critical reflection.

Candidates tended to have difficulties with two of the command terms:

- Evaluate – in weaker responses candidates tended to simply evaluate research studies in a general manner, but failed to evaluate what was required by the question (for example, eclectic approaches to treatment, treatments for substance abuse, one model or theory, techniques for skill development)

- To what extent – some candidates tend not to present both sides of the argument.

In general, responses often reflected that candidates were apt to write with a lot of descriptive detail but could not always tailor the response to the demands of the question set. Many candidates did not include research studies to support their answers and that lowered their marks; other candidates used research studies to a limited effect.

So few responses were made to the sport psychology questions that it is difficult to make general statements about performance on these questions. It seems this option is selected by some candidates who may not have taken it in class because they know something about sport, and that may be the reason answers tend to be anecdotal and not informed by research.

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The areas of the programme and examination in which candidates appeared well prepared

Candidates were often well prepared to answer questions on the abnormal psychology questions, especially question 2 on cultural and ethical issues. In general, candidates had knowledge about the most significant research, but did not always know how to use this knowledge to support their arguments or succinctly analyse the topic.

Regarding developmental psychology, for question 4 candidates seemed to know a lot of detail about Piaget's stages of development but showed limited knowledge on other important concepts of the theory. Regarding question 5 on attachment, they showed quite good knowledge on attachment during childhood, but some did not address well how these early attachment patterns are related to relationships during adulthood. Health psychology was another area where candidates appeared to be well prepared.

In health psychology, the question that was answered the most was the one on the strategies for coping with stress. This question was usually answered with detailed knowledge of theories and research studies.

In the human relationships option, the question that was answered most frequently was the one on altruism, and responses were quite well focused.

The strengths and weaknesses of candidates in the treatment of individual questions

Abnormal psychology

Question 1

This question was a popular choice. The best answers clearly defined “eclectic approaches” in the introduction and provided an example. Most good answers focused on eclectic approaches to treating depression, with some good responses also addressing eating disorders. Many good responses addressed the use of drugs and verbal therapy to treat depression, and covered the strengths of this approach. Middle band answers evaluated separate approaches that could be used in an eclectic approach, but not the eclectic approach itself. The poorest responses showed the meaning of the word “eclectic” was not understood. A few candidates seemed to have interpreted “eclectic” to mean “controversial” and proceeded to discuss treatments such as ECT.

Question 2

This was the most popular question within the option and probably was the most popular question on this examination.

This question was well answered by many candidates. Good responses reflected a clear understanding of both the ethical and cultural difficulties involved in the diagnostic process. Many candidates were able to discuss these considerations in a

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sophisticated manner, making reference to definitions of abnormality and the existing classificatory systems. There was a clear understanding of the most important aspects of cultural considerations such as culture-bound syndrome, culture-blindness, over-pathologization, culture biases, differences in diagnosis within different culture, and so on. The most frequently addressed ethical considerations tended to be problems of labelling, stigmatization, self-fulfilling prophecy, lack of consent, problems of reliability and validity of diagnostic systems, and depersonalization of patients.

The main weaknesses in responses to this question were to be found in strictly descriptive, non-analytical responses and the lack of ability to identify and appropriately use empirical evidence. Some candidates discussed methodological problems in diagnosis regarding reliability and validity without clearly linking them to ethical issues.

Question 3

This question was answered well by stronger candidates but also tended to encourage weaker candidates to resort to anecdotal descriptions about the effects of the mass media on the prevalence of eating disorders or the effects of modern life on the prevalence of depression without including references to psychological research. Some candidates knew quite well the prevalence rates, but did not seem to have a good knowledge on the reasons for the differences. Some candidates had information about gender variations but lacked reference to prevalence data. Higher quality responses usually referred to the role of hormones in gender differences, the relevance of life stressors and gender biases in diagnosis. Some very good answers focused on how sociocultural factors produced different prevalence rates.

Developmental psychology

Question 4

Better candidates described and analysed a theory of cognitive development in a thorough and thoughtful manner. Piaget's theory was by far the most popular and was often well described. Only a few responses discussed Vygotsky's sociocultural theory or biological explanations of cognitive development.

Weaker candidates got caught up in writing pages of description without ever evaluating the theory in any effective manner. While the stages were adequately identified, several important aspects of the theory (such as assimilation, accommodations, egocentrism, and so on) were not always addressed. Also, responses were supported with relevant studies (for example, the three mountains study) but the relevance of the study was not always made clear.

Question 5

In the responses of most candidates there was clear knowledge of attachment theory in evidence but they did not appear to understand its potential impact on later

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relationships. Most candidates had difficulties explaining to what extent childhood attachment influences the formation of adult relationships but rather focused on the description and analysis of childhood attachment. Bowlby's and Ainsworth's research was often not linked to subsequent formation of relationships. Several candidates referred to the Genie study in a vague manner and with no association to future social relationships. Most responses to this question did not focus on research showing links between early and later attachment styles.

Better answers referred to the research of Hazan & Shaver which directly addressed the long term effects of the quality of attachment achieved in childhood.

Question 6

This question was a temptation for many candidates to become anecdotal rather than psychological in their answers. Many candidates failed to include any psychological research in their answers.

Better candidates answered it very effectively with reference to Bandura's social learning theory, gender schema theory and Mead's study on gender role differences in three New Guinean tribes. The best answers provided an in-depth discussion of a smaller number of sociocultural factors providing clear evidence of knowledge and understanding of factors influencing the formation and development of gender roles. Some candidates used Money and Ehrhardt's study of David Reimer to good effect in evaluating the role of sociocultural factors versus biological factors in the development of gender roles.

Health psychology

Question 7

This was the most popular question within the health psychology option. In general, most responses provided good understanding of the concepts of problem-focused coping, emotion-focused coping, social support as coping strategy, mindfulness-based stress reduction, and so on. The Shapiro et al. study and Taylor's tend and befriend theory were usually used to support the discussion of MBSR and social support. Most candidates discussed two methods in great detail.

Several candidates described at length the GAS or types of stressors but did not make this part of the response relevant to the question, leading to a very poor answer. Description of techniques such as meditation and yoga were often quite anecdotal. While these techniques are valid, some candidates did not use any psychological research to discuss them which resulted in an answer without much academic merit.

Question 8

This question was not a popular choice. Most candidates failed to provide an in-depth evaluation of two treatments for substance abuse or addictive behaviour. Most

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responses referred to nicotine replacement, use of Antabuse or group treatments such as AA to treat alcohol addiction. Superficial accounts of strengths and limitations were usually provided and occasionally more than two treatments were included as part of the response.

Question 9

Not many candidates chose this question. Responses to this question on health promotion were, in general, unsatisfying since there was a lack of understanding of specific health promotion models or theories. Most candidates chose the health belief model or stages of change model but seemed not to have enough knowledge for a full, well developed essay. A few candidates addressed health promotion *strategies* such as use of media campaigns to change smoking or eating behaviours which prevented the response from receiving marks.

Psychology of human relationships

Question 10

This question was usually answered well although it wasn't a popular choice. Candidates were well versed in the role of communication in the maintaining of relationships and included reference to evidence from several relevant research studies. The following aspects of communication were frequently addressed: content and amount of communication, self-disclosure, different types of couples (interdependent, independent separate) and cultural differences in communication between couples. Strong answers often addressed Altman and Taylor's research on the importance of self-disclosure and Tannen's research on gender differences in communication.

Some candidates discussed attribution at length, but neglected to explain how attribution affects communication. Several candidates who answered the question on communication seemed to focus on common sense and personal experience, not on psychological knowledge.

Question 11

This was the most popular question in the option. Candidates were very capable of describing and evaluating theories which explain altruism in humans. Research evidence was cited frequently and with a good level of detail.

In response to the question most candidates adequately identified, described and partially analysed two theories explaining altruism in humans. The most popular choices were kin-selection theory and the empathy-altruism model by Batson. Discussing these two theories gave candidates the opportunity to contrast explanations of altruism based on biological factors versus sociocultural/cognitive factors which produced many good responses. If animal research was used as evidence, a clear association to human altruistic behaviour was not always

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achieved. Cialdini's negative state relief model and Trivers' reciprocal altruism theory were also occasionally chosen but tended to be presented in less detail.

Question 12

This question was the least popular question in the option. Most candidates discussed social learning theory and the subculture of violence theory in order to provide sociocultural explanations of the origins of violence. Many of the discussions of social learning theory were weak descriptions of Bandura's "Bobo doll" study. In general this question was less well answered with candidates often finding themselves tempted to resort to anecdotal explanations of the origins of violence which were not based on psychological theory or evidence.

Sport psychology

Question 13

This was not chosen by many candidates and those who did answer it did not show evidence that they were well prepared on this topic. Answers were not supported by psychological research.

Question 14

Answers tended to be anecdotal with minimal reference to research relevant to sport psychology.

Question 15

Discussions of the effects of drug use in sport tended to be anecdotal rather than providing clear knowledge and understanding of psychological research. Most responses included the following issues in their responses: feminization of male athletes, masculinization of female athletes, mood swings, and health issues. Some candidates provided a long introduction in which they gave reasons why athletes start taking drugs rather than focusing on the effects of drug use.

Recommendations for the teaching of future candidates

- Teachers should emphasize the different requirements of the command terms so that candidates have a clear idea how they should focus their writing of responses.

- Teachers also should emphasize the importance of supporting answers with relevant research studies; several answers showed knowledge and some critical thinking, but did not include research studies or their use was limited. Candidates should be encouraged to learn the names of the investigators who produced the research studies, for example, writing "Cooper et al" is better than writing "a study".

- Essay development and writing skills should be further developed. Many candidates do not seem prepared to structure a scientific essay response. A simple enumeration

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of facts is the consequence. A stronger emphasis needs to be placed on scientific essay writing within the examination preparation stage.

- The candidates seemed to struggle most with criterion B (critical thinking). Teachers should coach their candidates in how to provide evidence of critical thinking that will meet the requirements of the question and command term.

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Higher level paper three

Component grade boundaries

Grade:	1	2	3	4	5	6	7
Mark range:	0 - 1	2 - 3	4 - 7	8 - 10	11 - 13	14 - 16	17 - 30

General comments

This year candidates seemed to have a good understanding of the stimulus material but as usual some candidates had problems integrating the stimulus material with knowledge and understanding of qualitative research methodology. There was a tendency in some papers to base analysis on speculation rather than knowledge of qualitative research methods applied to the stimulus material.

The purpose of paper three is to demonstrate knowledge of qualitative research methods as well as how to apply it to the stimulus material as outlined in the subject guide. Quite a few candidates showed very limited knowledge and understanding of qualitative research methods. It was sometimes seen that reasoning was based on candidates' general knowledge, for example their own knowledge of online gaming or knowledge of addictive behaviour.

As in previous years, most candidates used the term “experiment” interchangeably with “research study”, which is not recommended as paper three is exclusively based on qualitative research methodology. On a positive note, only a few candidates used knowledge from quantitative research methods as part of their response and this is an improvement compared to previous years.

Another issue noticed this year was the tendency to focus too much on addiction and less on how to perform a qualitative research study on the topic of potential addiction. Weaker responses overall focused on the topic of addiction or made evaluative comments on the study, for example saying that it was discriminating to investigate gamers since they had the right to play without adults interfering, or that the researchers were probably old and did not understand playing online games. These weak responses had various strategies for answering the questions – but common for them all was that they demonstrated very limited knowledge of qualitative research methods – and the responses tended to say the same for all three questions.

A third issue was that some candidates refer to research studies from the psychology programme in their responses although they are only supposed to use the stimulus material as reference in paper three. Unfortunately candidates do not receive any credit for knowledge of various research studies so candidates should learn to avoid using such a strategy.

There was some spread in the marks awarded and candidates scored all along the mark range with some in the low range, most in the middle and few in the higher range. This is an indication that many candidates are not well prepared to answer paper three questions.

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The areas of the programme and examination which appeared difficult for candidates

Overall, it seemed that some candidates had problems using the information in the stimulus material properly. This was particularly the case for some candidates who seemed familiar to online gaming or computer games. Candidates frequently made limited or no reference to the stimulus material or at the opposite end, just quoted extensively from it. It also seemed problematic for many candidates to effectively meet the demands of the command terms in the three questions.

The most difficult question for candidates appeared to be question one on explaining two ethical considerations relevant to the study. This was a surprise and it was obvious that it was not always because candidates did not have the appropriate knowledge of ethical procedures. It was rather that they assumed that if a specific ethical procedure was not mentioned in the stimulus material, it had not been observed in the study. This resulted in numerous assumptions that could not be supported. The command term “explain” was not adhered to in the weakest responses.

Question three also presented problems to weaker candidates who demonstrated no or very limited knowledge of the procedure of inductive content analysis. In some cases the only thing mentioned was the reference to themes in the stimulus material but even that was not always present in the weaker responses.

The areas of the programme and examination in which candidates appeared well prepared

Many candidates demonstrated sound knowledge and understanding of ethical procedures in the study and most candidates had some knowledge of the semi-structured interview.

The strengths and weaknesses of candidates in the treatment of individual questions

Question 1

The question seemed particularly difficult to a number of candidates who scored low marks in this question.

The stronger responses were able to explain two relevant ethical procedures (for example, informed consent and anonymity/confidentiality) with examples from the stimulus material. Many candidates had noticed that there was no mentioning of parental consent in the stimulus material and used that effectively in their explanation.

For quite a few candidates there were problems in identifying two distinct ethical considerations and/or the relevance of the two ethical considerations in relation to the study in the stimulus material were not explained in any depth. Sometimes a number of ethical considerations were listed in quite a generic form but only the first two of these could gain marks.

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Some candidates misunderstood the task and gave a critical evaluation of ethical procedures in the study (for example, referring to what was not done because it was not mentioned in the stimulus material). It is perfectly fine to suggest ethical measures that could be relevant to a study even if they are not mentioned in the stimulus material but it is required to explain their relevance within the actual study.

A number of candidates suggested that the study was unethical because it had induced stress in the participants – a consideration that could in principle be relevant if it was followed by a clear explanation of how to avoid this – or even considering whether it is relevant to bring this up. Some even said the research should not have been conducted because it caused trauma to participants or because they were stigmatized. This is a typical example of not understanding the task in question 1.

Generally the weaker responses did not address relevant ethical considerations in qualitative research methodology but rather talked about addiction and labelling participants. For example, some candidates said that participants were harmed, or that the study should not have been conducted – or that such a sensitive issue as addiction is not suitable to conduct with young participants. This reveals limited understanding of the demands of paper three and qualitative research methodology.

Question 2

Candidates generally demonstrated a basic knowledge of the semi-structured interview but most had problems with the command term “discuss”. Most responses actually evaluated the method giving strengths and limitations and stronger responses also integrated this in a discussion of whether the semi-structured interview was relevant for this particular study. Stronger responses also referred to alternative methods as part of the discussion and provided good examples from the stimulus material in support.

The weaker responses demonstrated very limited knowledge of the semi-structured interview and there was a tendency to give personal opinions on the researchers' choice of method instead of using relevant knowledge to discuss relevance of the method.

Question 3

There were some really good responses that scored in the highest markband – but also many poor ones. Description of the process of inductive content analysis was more or less detailed with reference to the themes mentioned in the stimulus material. Most candidates were able to identify the common themes from the stimulus material and could use that but sometimes this was the only relevant point made in the response.

The weakest responses demonstrated no or very limited knowledge of inductive content analysis. Generally, the descriptions of the procedure of inductive content analysis did often not go into any depth and many responses went off track and actually evaluated the use of inductive content analysis instead. Some of the weaker

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candidates misunderstood the task and gave an analysis of the motivations outlined in the stimulus material, commenting on these or on the lack of possibility for generalization because of the small sample. Many candidates gave detailed descriptions of various ways to transcribe interviews but these responses were not awarded many marks as the question asked for a description of the various steps of inductive content analysis with reference to relevant points in the stimulus material.

Stronger responses gave a detailed description of the various steps in the process of inductive content analysis (for example, transcription of the interview, read and re-read the transcripts to identify categories, coding, identification of lower-order/higher-order themes and so on) with relevant examples from the stimulus material. Such responses often included description of various strategies for controlling interpretation of the data.

Recommendations for the teaching of future candidates

- The main challenge in paper three is for candidates to learn to use the stimulus material as documentation for analysis. Paper three requires that candidates integrate knowledge of qualitative research methods with a specific stimulus material. It is not enough to describe what is in the stimulus material or use it for various speculations without reference to qualitative research methodology. The stimulus material is intended to serve as a starting point for analysis of how qualitative research methods could be applied to a specific study.

- It is recommended to base teaching of this part of the programme on practice of "what it is like to be a qualitative researcher", for example, having candidates perform activities that enable them to reflect on various aspects of qualitative research methods. Teaching paper three should include exposure to a number of qualitative studies to give candidates the opportunity to understand the philosophy of qualitative research. The optimal strategy is that candidates conduct small research projects on each of the methods in order to get an insight into the reasoning of a qualitative researcher. It is equally important that candidates have trained with previous examination papers so that they become familiar with the requirements of this paper.

- Each examination question is based on a brief description of a qualitative research study (the stimulus material) combined with three questions. All questions must be answered. Using previous examination questions should give candidates an opportunity to understand how to apply relevant knowledge and understanding of qualitative research methods in the context of the stimulus material. Every fifth line in the stimulus material is numbered so that candidates may refer to the lines without having to use extensive quotations. This could be used more effectively in the responses and teaching this paper should involve showing candidates how to find relevant parts of the stimulus material that could support explanation or discussion of qualitative research methodology.

- Overall, candidates should be prepared in such a way that they have both (1) a general knowledge of qualitative research methods as outlined in the guide and (2)

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competence in applying this knowledge in relation to the stimulus material. It is also recommended to train candidates to make balanced evaluations and discussions instead of claims and speculations with limited relevance to the questions asked.

- Finally, it is advised that teachers instruct candidates in what it means to address the command term in relation to paper three, for example what "explain" or "discuss" means. Too many candidates still have problems here and understanding what a specific command term requires should be part of effective teaching.

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