

PSYCHOLOGY

Overall grade boundaries

Higher level

Grade:	1	2	3	4	5	6	7
Mark range:	0-8	9-19	20-27	28-39	40-51	52-63	64-100

Standard level

Grade:	1	2	3	4	5	6	7
Mark range:	0-9	10-21	22-32	33-45	46-57	58-71	72-100

Higher level internal assessment

Component grade boundaries

Grade:	1	2	3	4	5	6	7
Mark range:	0-2	3-5	6-8	9-11	12-15	16-18	19-25

The range and suitability of the work submitted

While there was a wide range of topics that were investigated in the HL Internal Assessments this year, the vast majority of them were generally from within the field of Cognitive Psychology (memory, search, recall, perception, Stroop Effect, primacy and recency effects). Most of these were very suitable for experimental study. Areas of social psychology were also prevalent (attribution, social facilitation, *etc.*)

Once again there were several candidates that did not use an experimental method in their research. The IB psychology requirements indicate that the studies submitted must be true experiments (*psychology guide* page 57) – as indicated by careful manipulation of one independent variable while measuring one dependent variable. Several surveys and observations were reported as well as studies hypothesizing on the influence of a variable that is not manipulated (*e.g.*, gender). Such studies do not meet the requirements of the project and therefore can be awarded no marks (*i.e.*, 0 out of 25).

While it is admissible to investigate more than one manipulated independent variable it is not recommended, as the word limit is quite strict. To fully discuss such multi-faceted studies usually requires a longer report and, in order to stay within the word limit, these types of studies generally lack the detail of studies with just one independent variable. Please remember that the goal is to learn basic experimental research methods rather than develop wide reaching studies.

In addition to investigating the impact of a manipulated variable, some projects also discussed differences in the results of the genders in addition to their independent variable. This is not suitable for the IA as this variable is not manipulated; rather it is naturally occurring and thus quasi-experimental. Inclusion of this type of results does not aid in the awarding of marks; while marks are never deducted for such results, the total marks do tend to be lower as less time is spent discussing more relevant and appropriate information.

It appears as though there were fewer ethically contentious Internal Assessments this session, which is commendable. However it should be every student and teacher's goal to have no unethical studies carried out. For example, studies involving sleep deprivation, ingestion of any sort, violent videos or games, aggression and conformity studies, such as replications of Asch, must not be approved by the teacher as students at the IB level are not suitably trained to handle these types of studies. It is the responsibility of both the candidate and teacher to ensure that all work is sound and follows ethical guidelines published by both the IBO and internationally recognized psychology organizations, such as the APA and BPS. The IBO ethical guidelines can be found on the Online Curriculum Centre, from your IB Coordinator (section 3.5 of the *Vade Mecum*), or on a poster available from the IBO.

Candidate performance against each criterion

Introduction

Most candidates were able to appropriately cite at least one study that is directly relevant to the aim of the study. In many cases, however, some of the additional studies cited did not help to justify the hypothesis or were completely irrelevant to the study. An example would be a candidate investigating the Stroop Effect (*i.e.*, interference in cognitive processing). Some candidates cited studies on the primacy/recency effects and chunking. While these are both examples of studies in cognitive psychology, they have little relevance to the Stroop Effect and therefore did not help in earning marks for this criterion. Reports earning higher marks on this criterion usually included a clear statement of how the cited study relates to the aim and hypothesis of the candidate's study. Additionally, if the background research indicates that a one-tailed hypothesis is appropriate, then the research hypothesis of the IA should indicate this as well. Hypotheses, both research and null, should be operationalized and precise.

Methods: Design

Many candidates earned no marks for this criterion, as they had not followed ethical procedures by mentioning informed consent and including a copy of a blank informed consent form in the appendix. Justifying the design of the study also proved difficult for some candidates. For example, the use of a repeated measures design can be justified by briefly identifying its relative strengths as opposed to an independent samples design. Note that the required justification for this criterion is for the design rather than the method used. Issues such as counterbalancing, randomization and demand characteristics were overlooked by many candidates. Precise identification of the independent and dependent variables was also problematic for many. Full identification of the independent variable would include both the variable itself and the two levels or conditions of it. The dependent variable should be expressed in quantified terms.

Methods: Participants

Relevant and sufficient participant characteristics and justified sampling and allocation procedures proved to be difficult for many candidates. Characteristics of the participants include more than just the number of people involved, for example, gender, age, culture, common characteristics, *etc.* While these do not form the basis for any reporting of results, they do help the reader to understand the sample and the characteristics of the population that the participants represent. There was widespread use of opportunity (convenience) samples although this was not always fully justified. Some candidates stated they had used a random sample but either did not explain how it was randomized or inaccurately described their selection procedure as being random when in fact it was an opportunity sample. Care must be taken when using other psychology students as they may be aware of the study and thus a confounding variable may be introduced. Sample size seemed problematic in many cases with extremely large or very small numbers of participants taking part in the study. A sample of 15 to 20 participants is suitable for the Internal Assessment; with larger samples additional calculations are required for inferential statistics.

Methods: Procedure

Performance on this criterion was relatively good. Many studies were clearly replicable, however some provided a simple list of steps or incomplete information. The instrument being used and how it was implemented was not always made clear. The use of measurement instruments developed by the candidates must be carefully reviewed prior to data gathering.

Results

First and foremost both descriptive and inferential statistics must be calculated as based on the hypothesis. For example, results on the Stroop Effect should clearly indicate calculations for both the congruently and incongruently coloured word list conditions. All raw data should be included in the appendix and only summary data should be described and represented in this section. Some of the reports that earned the highest marks included a narrative description of the results, a table indicating calculations of various descriptive statistical calculations, and a simple two-bar graph of the means for each condition. There are still many papers that included several types of graphs, most of which were inappropriate (*e.g.*, displaying results for each participant or reporting a variable other than the independent variable), unclear (*e.g.*, did not label the graph accurately), or failed to include any graphical representation at all. Additionally, the use of parametric tests for inferential statistics must carefully follow the guidelines published by the IBO. It is highly recommended that candidates limit their choice of inferential statistical tests to those outlined in the psychology guide. The simplest, yet most appropriate, inferential statistical test should be used. For example, the dependent variable for classic Stroop Effect experiments is time. In this case, either a Mann-Whitney U or Wilcoxon matched pairs signed ranks test would be most appropriate depending on the experimental design (unrelated or related).

Discussion

The quality of discussion sections has generally increased. Many candidates are attempting to discuss their results in the light of background research in the introduction section, identifying weaknesses and posing areas for improvement. Most candidates, however, are not discussing some of the differences they may have discovered in their descriptive statistics other than those of central tendency. For example, most candidates report on the standard deviation of each condition, yet they do not discuss why this may have happened. While weaknesses are generally well covered, fewer candidates successfully identify the strengths of their study.

Presentation

Presentation marks were generally good. Some issues of concern, however, revolve around the quality of some references, especially those from Internet sites. Teachers and candidates should be aware of issues just as the quality, credibility, validity and reliability of any source cited. While there is much information on the Internet that is suitable, there is also a plethora of information that may not have high standards in the four areas mentioned above. There were also many difficulties in properly citing Internet and secondary sources.

Recommendations for the teaching of future candidates

- All candidates must be taught the various aspects of experimental research methodology as outlined in the *Psychology Guide*. It was apparent that many candidates are only familiar with the basic ideas of the various sections of the report. Full knowledge of these topics will help candidates to better design, justify and discuss their study.
- All candidates should have a copy of the latest guidelines for internal assessment. These can be found in the *Psychology Guide* and the *Teacher Support Material for Psychology Internal Assessment (TSM)*. It is vital that all teachers and candidates use pages 7 – 11 from the TSM very early in the IA process.

- Establish a procedure for reviewing the ethical issues involved in every study. Students should not be permitted to begin collecting data without the teacher’s approval.
- Ensure that informed consent is obtained from every parent or participant as outlined in the internal assessment guidelines. A blanket consent statement for an entire group of potential participants is not suitable and individual informed consent must be obtained.
- Time should be spent in class teaching candidates about aspects of statistical analysis.
- Depth and detail of the analysis of background studies in the introduction need to be developed.
- Justification of design decisions is important to earn high marks (*e.g.*, justification of design, sampling method, inferential statistics, *etc.*)
- The focus and relevance of background studies in the introduction, which lead to the hypothesis, should be carefully reviewed.

Standard level internal assessment

Component grade boundaries

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

A wide range of replications or partial replications was presented and the vast majority of the experiments were suitable for Internal Assessment. Regrettably there were some reports that were not experiments and in these cases examiners were unable to award marks to work that was irrelevant in terms of the clear syllabus requirements. On a more positive note it was pleasing to note that fewer experiments infringed ethical guidelines; those experiments that did so gained very few, if any marks. There was a tendency among weaker reports to ignore essential parts of experimental procedure. These included the use of inadequate or irrelevant background studies, poor use of sampling procedures or omission of sampling; in some cases there was no identification of the target population from which the sample was drawn, incorrect experimental designs were used, and there were incomplete presentations of results and weak discussion sections. There was also a tendency for some candidates to do their own experiments without reference to any previous work in the field of their study. The recommended approach, to replicate previously published experiments, most frequently resulted in higher quality reports.

Candidate performance against each criterion

Introduction

The aim behind the psychology internal assessment requirements is that standard level candidates should replicate an experiment. In doing so they should become familiar with well-established requisites of the experimental method and be in a position to implement the criteria required when they do their own experiments. Some candidates appeared to ignore this aim or were simply unaware of it. In either case if an experiment was not performed it was not possible to meet the various criteria required. This meant that investigations that dealt solely with surveys, interviews, questionnaires or correlation studies could not be awarded marks.

The great majority of candidates did submit experiments and some of these were of an excellent standard, but there were other reports that fell short of this standard. Once the aim of the experiment

was established, with reference to the replicated work on which it was based, candidates should have considered other studies that showed some relationship to their own study. These should have formed the basis of the introductory or background study; their function was to inform the candidates of the wider context of their work, and also to add depth and breadth to the subsequent discussion. Several reports lacked information in both the introductory and discussion sections.

Method: Design

The design selected for experiments did not usually present problems but there were occasions when a replication had been adapted in a way that also altered the design. Candidates need to understand why a particular design was selected and to justify its choice. The difference between independent or repeated measures was not always acknowledged or recognised.

Method: Participants

In some cases lack of awareness of sampling techniques was also very apparent. If psychology students choose their participants from among their peer psychology students they should know the consequences of doing so, particularly in relation to the validity of their results. Whilst it is realised that options for access to participants may be restricted, the downside of using a limited target population also impacts on claims for generalising from the results. Some candidates claimed that they used a random sample when it was evident that they did not know how this technique was employed. Purposive sampling is a reasonable technique to use as long as its advantages and disadvantages are realised. A short description of the sample such as age, gender or other salient features was sometimes omitted. Without this information it was difficult to know how relevant the results were.

A matter of considerable concern was also raised by some candidates. This related to the participants that came from another class in their school. The psychology candidates, in trying to gain data, complained that the classes were sometimes left unsupervised by the teachers and individual pupils who were 'volunteered' as participants treated the experiment as a joke. The results obtained in these circumstances were suspect since little credence could be given to them and the psychology candidates also indicated that in their opinion the status of IB psychology in that school had been demeaned. This is not a situation that should be allowed to occur in schools and steps should be taken to avoid a reoccurrence of these regrettable events.

Results

Results are a central feature of experiments and they need to be presented with great clarity and accuracy. The results section in the body of a report may often be a summary of other tables. Several graphs may appear in the appendix section of the report but usually only one or two are needed in the results section itself. If graphs, charts or histograms are used they should have clearly labelled axes and titles. Other salient information should be crystal clear. The terminology used should also be precise. Some candidates referred to 'average' when they really meant 'mean' or 'mode'.

Discussion

Discussion sections were possibly the weakest parts of candidates' reports. This is the section that required the greatest cognitive effort since candidates needed not only to compare their own results with those mentioned in the background or introduction, but also to justify why their own particular results occurred in the way they did. If the previous research was inadequate or poorly chosen the discussion became a much more difficult task. Each stage of the research built up towards the final discussion; there was a cumulative effect where each successive stage impacted on the next. Not all candidates realised the central process that occurs in research. If the early stages were weak, no amount of subsequent effort could redeem the earlier limitations. Some candidates failed to plan their research in a logical manner.

Recommendations for the teaching of future candidates

Ensure that candidates:

- Choose a relevant and appropriate experiment to replicate
- State the aim of the experiment
- Research and note relevant background material that informs the context of the present experiment
- Decide on the research design (normally similar to that used in the original experiment)
- Choose the parent population from which participants will be sampled and adopt an appropriate sampling technique.
- Implement appropriate ethical procedures
- Present the findings clearly and accurately
- Construct the discussion based upon the information gained in the previous steps

Teachers should try to ensure that the participants act in a responsible manner when candidates collect data from them, particularly when this involves classes within the school. Where this is not possible then alternative strategies in gaining access to participants should be considered, dependent upon local conditions.

Higher and standard level paper one

Higher level

Component grade boundaries

Grade:	1	2	3	4	5	6	7
Mark range:	0-4	5-9	10-13	14-19	20-24	25-30	31-52

Standard Level

Component grade boundaries

Grade:	1	2	3	4	5	6	7
Mark range:	0-5	6-10	11-13	14-19	20-24	25-30	31-44

General comments

As in previous years, the number of psychology candidates continues to increase, by 17% at SL and by 30% at HL (in comparison with May 04 figures). Additionally, there has been a 19% increase in psychology extended essays. This session saw many candidates well prepared for the demands of both the short answer questions in Section A and the extended response question in Section B. However, this was not the case for candidates from some centres, and the general picture suggested a drop in standards. This was reflected in the large number of candidates failing to appropriately respond to questions rather than in the reduction of content knowledge.

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

Knowledge and understanding of the different types of methodology used in psychological research frequently presented problems for candidates, both in terms of description and evaluation.

- Description of a historical/cultural condition was often inaccurate and misunderstood with regard to its contribution to the rise of a perspective.
- Many candidates did not appear to have developed a clear understanding of the basic assumptions on which each perspective is premised, with consequent implications for their ability to address the requirements of dedicated questions. In addition, key concepts were often confused with major theoretical explanations.
- A large number of candidates appeared to assume that purely genetic explanations represent the Biological perspective's explanation for human behaviour, apparently unaware of the contribution of physiological correlates to behavioural explanation, or of the interactionist debate, and of the need to consider individual differences in any psychological explanation of human behaviour.
- However, a major difficulty for many candidates sitting this paper appeared to be the ability to address the exact requirements of the question as set. Candidates frequently omitted evaluation, ignoring command terms such as 'discuss', 'compare', 'to what extent', and 'examine' which require specific evaluative treatment of relevant material. 'Compare' questions rarely included similarities in addition to differences.
- Gauging an appropriate amount of information/detail in response to a Section A question presented a difficulty for some candidates. One or two sentences cannot offer sufficient information to attract the full 8 marks in a Section A response. Similarly, it is inappropriate and unnecessary to write 2 sides for a short answer question.

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

Candidates in some centres were able to appropriately address question requirements and effectively demonstrate their understanding of the different perspectives. In particular, questions testing knowledge and understanding of the biological and humanistic perspectives produced a number of impressive responses. However, in many cases candidates appeared to have prepared well for one perspective but to have only a limited understanding of others.

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

Section A

Biological perspective

1. *Explain how determinism relates to the biological perspective.*

(8 marks)

Understanding of determinism was often only superficially demonstrated, despite being one of the learning outcomes for the biological perspective. Attempted definition of the term frequently resulted in statements such as 'the biological perspective is deterministic because it claims behaviour is determined' (*i.e.* no definition was offered). Many candidates appeared not to understand this important debate in psychology and how it impacts on the usefulness of psychological explanations of human behaviour. There was a tendency to confuse

determinism with reductionism although it may be argued that the two co vary, *e.g.* if genes are held responsible for a specific behavioural disposition. Weaker answers were often very overstated, failing to acknowledge the correlational nature of much relevant research data, and ignoring the potential influence of environmental or cognitive factors. However, where candidates were fully conversant with the determinism/free will debate as applied to biopsychological explanations of behaviour, excellent responses were produced, including discussion of the role of environmental factors in the manifestation of genetically predisposed behaviours.

Cognitive perspective

2. (a) Outline **one** assumption of the cognitive perspective.

(2 marks)

There was much confusion as to what constitutes an assumption where instead of focusing on a generally held belief related to a perspective held to be true by its proponents, candidates identified a specific concept or theory such as memory, perception, attention or forgetting.

- (b) Identify **one** key concept based on the assumption outlined in part (a) and explain the relationship between the two.

(6 marks)

The concept for part (b) should have been based on the assumption identified in part (a) but often candidates failed to complete (a) and were thus unable to fulfil the requirements for (b). It was no use providing the concept of 'schema' unless it was related to an assumption in (a).

Learning perspective

3. Describe how **one** historical or cultural condition helped to give rise to the learning perspective.

(8 marks)

It was disappointing that relatively few candidates seemed to be aware of historical/cultural factors that facilitated the rise of the learning perspective. A number of responses showed lack of understanding by discussing influences within the perspective. Some answers claimed Pavlov's experiment with dogs gave rise to classical conditioning theory and therefore was an appropriate historical condition. This was not the case. However, Pavlov's research could have been presented as an *example* within the scientific culture occurring from the 1850s onwards, and thus informing specific features of the developing learning perspective. Unless candidates identified an appropriate historical/cultural condition it was unlikely that further writing on the question could obtain credit.

Humanistic perspective (HL paper 1 only)

4. (a) Identify **two** contributions of the humanistic perspective to the study of behaviour.

(2 marks)

- (b) Explain and evaluate **one** of the contributions identified in part (a)

(6 marks)

This was a question frequently misread as one focusing on contributions of the perspective rather than on its contributions to the study of behaviour. However, in some centres candidates appeared to have been well prepared and were able to identify *e.g.* the use of qualitative data techniques, or the emphasis on 'human' experience as distinct from non-human animals as specific humanistic contributions to research into human behaviour. Many responses inappropriately focused on description and evaluation of theories of behaviour, thus missing the point of the question.

Section B

HL question 5./SL question 4.

(a) Describe assumptions on which key concepts from the biological perspective are based.
(10 marks)

(b) Evaluate the assumptions described in part (a).
(10 marks)

There was a broad range of assumptions available to candidates to choose from, and several of the descriptions provided were good. They included assumptions that abnormal behaviour is based on mechanisms in the brain that malfunction and that such problems can be resolved by resorting to drugs or brain surgery. This led to evaluation that examined the dangers of both approaches or challenged the reductionist idea that is adopted. Some answers were of a high standard and candidates showed considerable depth of understanding of salient points. However, many candidates did not appear able to distinguish assumptions from theoretical explanations, e.g. lateralization of function. Too often unsubstantiated opinion was offered in part (b) in place of the required informed commentary. Some candidates produced a general critique of the perspective, ignoring the specific requirement to evaluate assumptions described in (a).

HL question 6./SL question 5.

Describe and evaluate methodologies used in the cognitive perspective (e.g. experiments, interviews, verbal protocols).
(20 marks)

Despite the question including examples of methodologies used in the cognitive perspective, some candidates chose to ignore these or similar methodologies and wrote about inappropriate processes. Often candidates described cognitive studies but made no reference to the characteristics of the research methodology being used, missing the point of the question. As in *HL question 7./SL question 6.* many candidates made the implicit and erroneous assumption that all experimental research is laboratory based, and that all observations are naturalistic. This suggestion of a lack of familiarity with psychological research methods was strengthened by inappropriate use of the term 'prove'. Well-prepared candidates were able to select examples from a range of factors addressed in the cognitive perspective, including memory, attention and perception. In addition to description, candidates discussed disadvantages and advantages of the methodologies including their lack of ecological validity, ethical violation, limited sampling, use of scientific measurements, and prediction.

HL question 7./SL question 6.

(a) Use empirical studies to illustrate two research methodologies used within the learning perspective (e.g. experiments, observations, case studies).
(10 marks)

Although popular, responses to this question were disappointing.

Part (a) of this question called for an illustration of two research methodologies used in the learning perspective. Many investigations related to classical or operant conditioning relied upon the experimental method; examples of other types of learning including imprinting or insight learning in non-human animals, involved observation. Case studies have been used by psychologists to investigate learning processes that may be mediated by age and development. Regrettably some candidates confused some experimental investigations with observation where the latter was primarily an integral part of the experiment itself. As in the previous question many candidates failed to explicitly illustrate the methodology employed, instead simply describing an appropriate study in some detail.

(b) Compare the strengths and limitations of two methodologies used in the learning perspective.

(10 marks)

Part (b) of this question did not necessarily depend upon an appropriate answer to part (a), and some candidates scored higher marks in the former. Both strengths and limitations were required here and it was notable that candidates were generally better at negative rather than positive criticism. It was not accepted that a comparison of classical and operant conditioning could be construed as two separate research methods.

HL paper 1 only

8. *Identify and explain the strengths and limitations of humanistic explanations of human behaviour.*

(20 marks)

This was a straightforward question calling for knowledge and understanding of humanistic theories of behaviour. Sadly, too many candidates interpreted it as requiring a general evaluation of the entire perspective. Not addressing the specific requirements of the question meant few marks could be awarded for such answers, irrespective of the amount of perspective information included. Responses frequently merely described humanistic therapies with no reference made to them as applications of relevant theory. As in previous questions, inappropriate use of terminology was evident; ‘humanistic psychology’ and ‘humanism’ refer to two distinct things, types of psychology and philosophy. However, it was a pleasure to read the high calibre responses produced by those candidates with a sound grasp of relevant theory and the ability to focus on the requirements of the question.

Recommendations and guidance for the teaching of future candidates

As identified in previous subject reports, it would appear that the performance of many candidates could be improved with more practice in identifying and addressing the specific requirements of questions as set. ‘Unpacking’ the question requires: (1) identification of the specific topic (not just the general area); (2) consideration of the meaning of the command term; and (3) a strategy to be devised that addresses both (1) and (2). Only then can an appropriate plan be constructed, a feature sadly lacking in many responses. Clearly, familiarity is required with the meanings of the command terms as listed in the *psychology guide*. Candidates must realize that preparation purely in terms of relevant content is insufficient for success in this Paper.

The supporting framework for each perspective should be made explicit and candidates should be able to identify and describe assumptions and key concepts for each perspective, as well as understand the relationship between the two. It is then possible to identify and explain the relevance of the resultant methodologies favoured by psychologists working within a particular perspective, including identifying the characteristics of each type.

Higher level and standard level paper 2

Component grade boundaries

Higher level

Grade:	1	2	3	4	5	6	7
Mark range:	0-4	5-9	10-12	13-18	19-24	25-30	31-40

Standard level

Grade:	1	2	3	4	5	6	7
Mark range:	0-1	2-3	4-6	7-9	10-12	13-15	16-20

General comments

The most popular options, by far, were Dysfunctional and Psychodynamic Psychology. Social psychology and Lifespan psychology questions were answered by a fair number of candidates, while Cultural, Health and Comparative psychology were rarely answered. As in previous sessions, some candidates chose questions that appeared to be easy from within Health psychology and Cultural psychology, although it was apparent they had not studied these options – the answers offered presented anecdotal descriptions and earned very low marks.

The quality of scripts varied from those clearly focusing on the set questions, offering detailed, in-depth knowledge and understanding of psychological theory and research, to those that were commonsense, anecdotal responses lacking any reference to psychological knowledge. The majority of answers appeared to have reasonable knowledge of the options but seemed unable to make this material relevant to the specific question set.

The higher-order skills of evaluative commentary, assessment and comparison were not well articulated in many cases. Critical evaluation usually only offered weaknesses of the study, research, assumption, method, *etc.* It seems that many candidates did not mention the positive aspects, thus they did not provide a balanced discussion, as appropriate to each question or part of the question. Comparison also proved difficult and the two most common approaches were to either fully describe each aspect of the question without explicit comparison or to only discuss differences between the two and not address similarities.

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

While the skill of evaluating psychological content has improved over previous sessions, many candidates struggled to provide the most relevant or focused evaluation for the question. Wording of each question generally requires evaluation focused on a specific aspect rather than just broader evaluation of the field. For example, question 16 (b) required evaluation of how psychodynamic research has been applied rather than general evaluation of psychodynamic theory. Some responses to questions from options for which candidates were very well prepared with detailed knowledge were not well focused. Most candidates are able to go into great depth on psychodynamic and dysfunctional options content; however the responses that earned the highest credit always focused their essays with the most relevant of the vast amount of knowledge available. This type of tailoring of knowledge is an area in need of improvement.

All questions presented in paper 2 ask for both description and analysis/evaluation. Many responses lack this analytic/evaluative commentary and therefore these answers can achieve only low to middle marks. Also, although most answers reflect a general understanding of the material required in the option, there is a lack of detailed, accurate presentation of relevant material. Therefore, candidates should practice clear presentation of knowledge, specific evaluation of psychological research and essay structure rather than focusing on preparation of a large content (mastering a large amount of material).

Relatively few questions would require candidates to give fully detailed description of a particular study or theory, yet many candidates did just this. For example, many candidates were able to provide the most detailed descriptions of Asch's conformity studies including the lengths of each line, every detail of each of the Freudian psychosexual stages of development, or a full description of all eight stages of psychosocial development. In most cases this was far more information than was required to answer the question precisely. Taking so much time to fully describe studies/theories in this manner limited the amount of time available for the candidates to respond directly to the question or provide discussion of relevant elements. Rather than giving a full account of each study/theory, higher scoring responses tended to provide only the most relevant details or elements of the study/theory as appropriate to answer the question.

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

Time management was good. There was evidence of planning for some responses. Many candidates were able to cite specific, relevant research for each question. Many more candidates are attempting to focus their responses more by using the terms indicated in the question. This is a very good strategy to follow as it keeps them focused on the demands of the question and usually results in stronger essays.

Some candidates provided detailed knowledge of the option and tried to present a good, organized answer by giving an introduction, descriptive knowledge, some evaluation and an ending conclusion. In some cases candidates would start each of these sections with a rather clear reference to the question. Candidates from some centres demonstrated an in-depth understanding of topics, being able to explicitly analyse and evaluate psychological research and use psychological terminology with precision. More frequently, candidates presented general knowledge and understanding of the option without addressing the requirements of the specific question set.

Questions that were parted tended to help focus the candidate and those who were well prepared did generally very well on these types of questions. Some did have difficulties in time management on parted questions with the second part being slightly shortened. Additionally many candidates seemed aware that the mark allocation for each part of a parted question should indicate the relative detail, discussion or depth required.

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

Comparative Psychology

1. *Consider what is meant by altruism in non-human animals, using studies related to comparative psychology.*

(20 marks)

This question was only answered by a few candidates. There were some very appropriate and detailed responses to this question where it appeared the candidates had been prepared. In other cases brief, anecdotal responses were found, as it appeared that the candidate had chosen to respond to a question from an option that had not been studied. The few strong responses that

were read included detailed and appropriate discussion of studies on altruism. Many of these also debated apparent altruism and how altruism relates to evolutionary theory.

2. (a) *Explain courtship and mating strategies in one or more species of non-human animal.*
(10 marks)
- (b) *To what extent are courtship and mating strategies linked to parenting in non-human animals?*
(10 marks)

Attempted by a few candidates who appeared not to have studied comparative psychology. Most answers were anecdotal and demonstrated very little understanding of this field of psychology. There was also a tendency to discuss courtship and mating in teenagers rather than non-human animals.

3. *Discuss the teaching of language to non-human animals.*
(20 marks)

Overall, very few candidates attempted this question but it was the most popular within this option. There was a basic understanding of trying to teach sign language to primates, but this was very limited in depth and analysis.

Cultural psychology

4. *Describe and evaluate problems faced by psychologists conducting cross-cultural research.*
(20 marks)

Of the questions answered from this option, this question was handled best. However, it seems to have attracted the attention of unprepared candidates who provided a vague, general outline of general problems of research in psychology. Most answers lacked specific knowledge of the option. Some responses to this question addressed issues such as language, cultural differences, researcher bias, and cultural specificity. There were relatively few strong responses to this question as most offered simplistic descriptions of general research methodology that did not specifically address problems in cross-cultural research.

5. *Discuss ways in which ethical considerations affect research in cross-cultural psychology.*
(20 marks)

Although this was a somewhat popular question from this option, the ethical considerations addressed in most responses were general in nature and not specifically linked to cross-cultural psychology. Vague, inaccurate generalizations were provided not supported with any evidence of actual studies conducted in cross-cultural psychology.

6. *Discuss how cultural differences in communication may influence interaction between cultures.*
(20 marks)

This question was only attempted a few times. There was little understanding demonstrated about the unique aspects of cross-cultural communication and its impact on interaction. Simplistic description of differences in languages was offered while other factors, such as non-verbal communication, cultural norms, and time perspective were rarely addressed.

The psychology of dysfunctional behaviour

7. *Compare the basic assumptions of two models or theories of dysfunctional behaviour.*

(20 marks)

This question was a rather popular choice. In many cases, although there was evidence of knowledge of the option, the answers provided did not focus on the question. As a comparison question, responses were to address both similarities and differences between two different models or theories. While most responses included discussion of basic assumptions of two models, some of the comparison was not explicit in nature. Phrases that indicated explicit comparison were seen in some responses, such as "...another similarity between these two models is..." or "The two differ on their view of..." Such use of precise terminology and direct comparison usually resulted in higher marks. Some responses took the approach of comparing the view of two different models on a specific type of dysfunctional behaviour, most commonly schizophrenia. While a few of these responses were very well done, others were overly descriptive of the dysfunctional behaviour and drifted away from the focus of the question – basic assumptions. Too often candidates compared the overall models rather than the required assumptions. Some answers focused on only one assumption – in these cases the answers did not attract many marks since the question was only partially addressed. Differences between the selected models or theories were generally more prevalent than similarities.

8. *Discuss methodological **and** ethical implications of using classificatory systems in the diagnosis of dysfunctional behaviours.*

(20 marks)

Very often candidates refocused their answer to providing a detailed account of DSM or ICD but lacking evaluation on how methodological issues and ethical challenges question the use of classificatory systems in the diagnosis of dysfunctional behaviour.

Most responses were more able to adequately address ethical implications than methodological implications. Some candidates presented relevant empirical studies but failed to explicitly link these studies to specific methodological or ethical implications. The most common ethical implications included issues of labelling, self-fulfilling prophecies, and the rights of the individual. The work of Szasz was most commonly cited in this line of argument. Methodological issues were slightly less well addressed. The issues of diagnostician bias and reliability or validity of the classificatory system were addressed by candidates and Rosenhan was referenced quite often. The most common challenge to addressing methodological implications was in defining the term with reference to the use of classificatory systems. Some responses interpreted this to mean research methodology, rather than the process of applying the classificatory system.

The most popular systems addressed were the DSM and ICD, while relatively few discussed classificatory systems from other cultures, such as the Chinese Classification of Mental Disorders (CCMD). While a basic description of a relevant classificatory system sometimes helped frame the response, many responses were overly descriptive of the system itself, which limited the amount of discussion of ethical and methodological implications. Many candidates also made overly simplistic statements such as "the DSM is/is not reliable/valid" with no evidence to support these claims.

A few candidates seem to have confused the term "classificatory systems" with "perspectives or models of dysfunctional behaviour". Since in almost all of these cases the candidates only partially attempted to answer the question they gained a modest amount of marks.

9. (a) Describe **one** possible etiology for a dysfunctional behaviour of your choice. (6 marks)

This was one of the most popular questions on the exam with biological etiology of schizophrenia being the focus of most responses. Some of the strongest responses framed the description with the assumptions of the etiological model. For example, the biological view of the role of neurotransmitters on behaviour is exemplified by the role of dopamine and serotonin in discussing possible causal factors influencing schizophrenia. This type of framework facilitated the response to part (b).

- (b) To what extent does the etiology of the dysfunctional behaviour you have described in (a) affect the treatment of that dysfunctional behaviour? (14 marks)

The choice of a dysfunctional behaviour and the possible etiology in part (a) proved important to the success of part (b). Some responses that discussed the diathesis-stress model, genetics, or the role of pre-natal development and infection with respect to schizophrenia had a difficult time assessing the extent to which these influenced treatment. It should be noted that the issue of extent of influence on treatment could be answered with a range of responses from a very limited extent to a great extent. Some of the responses that focused on etiologies that had a limited amount of influence on treatment had a difficult time expressing this – however, some others did this extremely well. In many cases a relevant therapy was described but the link between etiology and therapy was mainly implicit.

Health Psychology

10. Describe and evaluate research methodologies used in health psychology. (20 marks)

Only a relatively few answers were offered. General description and evaluation was provided for the experimental method. In general the impression was that candidates selected and attempted to answer this question by using knowledge of the different methods used in perspectives (paper 1 knowledge). A lack of relevant knowledge of the option was evident throughout the answers.

11. Examine ways in which psychological and physiological aspects of stress may be interrelated. (20 marks)

This question was attempted by a very limited number of candidates. Those who answered it did so at a very cursory level and were unable to examine stress-related issues with accuracy or depth. Very few examined the interrelationship between psychological and physiological aspects of stress and, instead, described different types, theories or causes of stress.

12. Discuss addictive behaviour related to substance use and misuse. (20 marks)

This question was the most popular from the health psychology option. Some responses made an appropriate distinction and adequately discussed both substance use and substance misuse as related to addictive behaviour. Others, however, gave a very simplistic discussion of addiction using anecdotal support and limited understanding of health psychology.

In some cases answers provided some descriptive knowledge but failed to provide the relevant evaluative commentary. Overall, essay answers to this question were of generally low quality. A majority of candidates produced answers, which presented their personal experience and every-day examples with minimal signs of knowledge of the option. Stronger candidates produced answers which were largely descriptive, and very often the essays were not direct

answers to the whole question but rather presented knowledge solely about problems of substance misuse.

Lifespan psychology

13. *Describe and evaluate **one** research methodology used in lifespan psychology.*

(20 marks)

This was the most popular question from this option and was generally better handled than some of the other options that did not attract many candidates. The most popular responses focused on the use of longitudinal or cross-sectional studies. There were many instances of quality support provided using research examples from lifespan psychology. Experimental research into attachment and separation was also rather frequent. Some weaker responses tended to evaluate a specific research study rather than the methodology used in the study.

14. *Discuss changes in identity during the lifespan.*

(20 marks)

Responses to this question most frequently discussed Erikson's stages of development. Some did this very well while others were overly descriptive and not focused on changes in identity. Other responses discussed theories of cognitive or moral development and were not explicitly linked to identity and thus attracted very low marks.

15. *Describe and evaluate psychological research on attachment across the lifespan.*

(20 marks)

While this was a rather popular question, many responses tended to focus on attachment in the early years of development rather than addressing attachment across the lifespan. Some weaker responses attempted to draw the explanation across the lifespan by simply stating "...and this has an impact later in life as well"; however they did not go into any further discussion of the impact on adult behaviour. Those responses that did not address attachment across the lifespan were limited to 5 marks.

Psychodynamic psychology

16. (a) *Describe how psychological research from psychodynamic psychology has been applied.*

(10 marks)

Only a few candidates attempted this question, suggesting a lack of confidence in candidate's ability to link psychological research to explanations of human behaviour in an every day/applied context. While most responses demonstrated an adequate knowledge of psychodynamic research, some had a difficult time describing how this research has been applied. There were many instances of overly descriptive accounts of the research, rather than description of how the research has been applied. The application to therapy was the most popular approach to the question while application to literature and the arts was also attempted in a few instances. Additionally, some description of therapeutic applications only focused on Freud's work, rather than the continued use of psychoanalysis in more modern therapeutic settings.

- (b) *Evaluate the applications of psychological research described in part (a).*

(10 marks)

The evaluation of applying psychodynamic research to therapy was generally well done by discussing its relative effectiveness as well as strengths and weaknesses in comparison to other types of therapy. Weaker responses tended to evaluate general psychodynamic research (theories and studies) rather than evaluating the application of this research.

17. *Describe and evaluate the structure and functioning of the personality in Freudian psychoanalytic theory.*

(20 marks)

This question was the most popular on the exam. Most responses were able to thoroughly describe Freud's views on the structure of the mind as well as stages of development. With an abundance of information and knowledge available for such description, many responses ended up being overly descriptive with less well-focused evaluation. In some cases, candidates provided descriptions and evaluation of relevant psychological research – many of these answers seemed to have enough content but the overall presentation of the essay failed to show clear understanding and in-depth knowledge of the option. Weaker responses tended to include the term 'prove'. This term cannot be used when discussing research of human behaviour and the overall presentation of some relevant material tended to indicate a lack of understanding of the complexity of the discipline.

18. *Assess the role of the unconscious and conscious mind on human behaviour in relation to two psychodynamic theories.*

(20 marks)

This question was also rather popular. However answers provided tended to be weaker and less focused than the responses to other questions in this option. To earn high marks on this question, responses needed to address both the unconscious and conscious in two psychodynamic theories. In some cases only one psychodynamic theory was considered and in most of these cases the assessment of the role of the conscious and unconscious mind was implicit in the answer since there was no definition or description of relevant concepts (*i.e.*, Freud's topographical model of human functioning). Freud was discussed in nearly all responses while Jung, Adler, Erikson or Horney was addressed as an alternative view. Some of the discussion of Freudian theory was overly focused on the unconscious while neglecting to discuss his views of the conscious mind.

Social Psychology

19. *Assess the extent to which research from social psychology allows predictions to be made about individual and group behaviour.*

(20 marks)

This was the least popular question within the social psychology option. The studies of Asch and Milgram were frequently discussed in answering this question. While most responses demonstrated detailed knowledge of relevant research from social psychology, some struggled with the discussion of predictions about individual and group behaviour. Stronger responses assessed the extent to which predictions can be made by discussing some of the strengths and weaknesses of the research. For example, discussion of variables affecting the findings from Asch's conformity studies, such as culture and group size, laid a sound basis for the assessment of the extent of predictive validity. Weak responses were overly descriptive of the research with little support for an argument on the extent. It should be noted that to earn the highest marks discussion of both individual and group behaviour was required by the wording of the question. This usually required that more than one research study or theory be presented.

20. (a) *Define prejudice in a way that distinguishes it from discrimination.*

(4 marks)

The attitudinal versus behavioural aspect distinction between prejudice and discrimination was generally well addressed in most responses.

- (b) *Compare and contrast two ways in which prejudice can be reduced.*

(16 marks)

This part of the question was much more difficult for most candidates. Usually, limited descriptions were provided. Often candidates presented one way of reducing prejudice in detail while the other way was only outlined. Evaluation was usually not well balanced – the main focus was on differences. The discussion of similarities and differences between two methods of reducing prejudice was rather limited. The tendency was to adequately describe two such methods, however explicit comparison was not very well addressed.

21. (a) Outline **one** research study investigating collective (e.g. crowd) behaviour.

(6 marks)

This was one of the most challenging questions as the majority of responses focused on a research study that investigated individual behaviour rather than collective behaviour. Conformity, compliance, and obedience studies generally focus on individual behaviour and were not made relevant to this question. Strong responses addressed the aim, method, findings and conclusion of a relevant study. Weak responses tended to be overly descriptive of procedural aspects of the study.

- (b) Describe how findings from the study outlined in part (a) have been applied.

(6 marks)

This part of the question posed two challenges. First was an understanding of the term 'findings' and the second was the application of the findings. The best responses were able to describe how the study discussed in part (a) has influenced other areas.

- (c) Evaluate the applications described in part (b).

(8 marks)

Weak responses to this part of the question focused on evaluating the study itself rather than evaluating the application of the findings. Stronger responses pointed out strengths and weaknesses in the application and/or proposed the application of alternative research findings to the same application.

Recommendations and guidance for the teaching of future candidates

- Stress the relevance of studying more than one psychologist for the psychodynamic option.
- Clearly differentiate different types of influences in social psychology.
- Answers just describing relevant content can only attract about half the total available marks for a question.
- When evaluating within a response, candidates are advised to consider the cultural, ethical, gender and methodological considerations arising from research, as appropriate. Additionally or alternatively, discussion of relative strengths and limitations or alternative views may also be used for evaluative commentary, which is required in all questions or a part of a question.
- Evaluation should also be precisely and explicitly related to the question. There are still many responses that include general evaluation rather than evaluation that is relevant to the question.
- Strongly discourage candidates from selecting questions from an option that was not specifically studied in class.
- The approach to answering comparison questions should be practiced with clear and explicit identification of both similarities and differences.
- Distinguish between group behaviour and individual behaviour as relevant in social psychology.

- Use past exam questions and markschemes during the course to develop the skill of answering the question directly and in response to its phrasing and focus, including the command term.
- Some terms commonly used in the teacher’s guide are still misinterpreted: In social psychology – individual, group behaviour/collective behaviour. In dysfunctional – basic assumptions, etiology. In health psychology – substance use and misuse. In psychodynamic psychology – application of research.

Higher level paper three

Component grade boundaries

Grade:	1	2	3	4	5	6	7
Mark range:	0-2	3-4	5-6	7-9	10-11	12-14	15-30

General comments

Examiners frequently remarked on the disparity in quality of answers between those candidates who had been thoroughly prepared for the examination and those who had not. It was surprising that several candidates wrote, as part of their answer, that they had not met certain terms or concepts in the examination questions when these same terms were drawn from the *psychology guide* itself. Overall the examination results showed that the questions were within the grasp of candidates and that many performed at a high level. Those candidates who misinterpreted terms, or simply did not know their meanings, were at a distinct disadvantage.

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

Several terms used in the syllabus were not clearly understood or known by some candidates, *e.g.*, sampling technique, triangulation, content analysis.

In their discussion and explanations candidates did not always use terms such as ‘reliability’ or ‘validity’ in ways that were appropriate for qualitative work.

Despite an explanation of ‘triangulation’ appearing in the syllabus there were several candidates who claimed not to have met the word.

Content analysis was frequently understood in principle, but not always successfully applied in the context of email interviews.

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

Many candidates were familiar the concept of triangulation as used in qualitative research and presented excellent descriptions of three different types and appropriate applications. Some answers offered considerable insights as to how triangulation does add to the credibility of research: they also showed awareness that claims that triangulation always added to reliability or validity, were questionable and could not necessarily be substantiated.

Many candidates were also very familiar with the basic elements of content analysis although application to emails was less well known, despite the increasing use of this method of

communication. Well-prepared candidates also scored highly on their examination of sampling techniques although there is still an erroneous impression that small samples offer nothing of value in the research process.

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

1. (a) Identify **three** types of triangulation and briefly describe how each of these may be applied in qualitative research.

(6 marks)

(b) Discuss how the use of **one** type of triangulation may affect credibility in qualitative research.

(4 marks)

Triangulation is a fundamental concept in qualitative research since it frequently adds integrity to the process of research itself. In the case of this question, choosing the types of triangulation to identify was relatively straightforward, but candidates were also required to describe how each may be applied. Some failed to consider the implications of their choices. For example it would not be appropriate to select triangulation over a time span if the investigation only occurred at one time and could not be repeated. Nor could several methodologies be used if only one was appropriate for the particular research. For example, the observation of animals in their natural environment may well preclude the use of an experimental method.

Many candidates did not offer a coherent discussion that related to the particular type of triangulation that was chosen for part (b). Whilst triangulation frequently offers increased credibility or trustworthiness to the research process, it is not a universal panacea for all of the ills that beset research. The type of triangulation selected must have a relevant rationale to justify its choice. For example, it would add credibility to an observational investigation of say bullying behaviour of children in a playground if two or three trained observers were employed to interpret the same behaviour as it occurred.

2. Explain the process of applying content analysis to printed material from an email interview.

(10 marks)

It was feasible for candidates to gain high marks for this question by using either a qualitative or quantitative approach, or a combination of the two. The focus of the question was on applying content analysis, but it remains evident that a considerable proportion of candidates did not know the meaning of the term or of the process that it involved. Whichever approach was used, the explanation provided should have suggested that the reason behind the analysis of the content was to give a meaning to the email in greater depth than could be obtained by a cursory reading. There is no point in applying content analysis unless it provides more information. Several candidates, especially those familiar with a qualitative approach, realised this point and gave useful examples of how content analysis can provide a valuable aid to interpret and clarify meanings in the text of an email. Some candidates reproduced their rote learning of content analysis by referring to body language and the tone of the spoken word, pauses, loud or softly spoken words. These aspects of communication are not often available in communication by email.

3. Examine **one** sampling technique used in qualitative data collection.

(10 marks)

What appeared to be a straightforward question for many caused considerable muddle in the minds of others. Sampling is to do with how the participants in an investigation are selected.

There are many research methodologies employed by psychologists and each may require a number of participants that can vary from one single individual to many thousands. Although it was commendable for candidates to identify the research methodology involved the focus of the question should have been on the sampling method itself. Random sampling was the most frequently mentioned but often there was regrettably little known about it. The population from which the sample was drawn was ignored. Some candidates mistakenly suggested that surveys or experiments were examples of the sampling method itself. Although it was rarely used, those candidates who did identify a sampling technique for one individual tended to be far more informative in their examination of the process than those that chose other methods. Purposive sampling, or opportunity sampling were also selected by candidates although their knowledge of these was quite variable.

Recommendations and guidance for the teaching of future candidates

There is not the slightest doubt that the most successful candidates on this paper were those who had some practice in conducting qualitative research themselves. The evidence in their responses to questions is palpable. Such application is not hugely demanding in terms of time. Each of the answers to the questions above could have benefited enormously by a straightforward exercise, mainly completed in the candidate's own time. It would involve selecting a sample of one individual to interview, preferably someone unknown to the candidate. A suitable research question would be identified and relevant questions designed for a semi-structured interview of 20-30 minutes. The interview would be conducted by the candidate under appropriate conditions and audio taped with the permission of the interviewee. The words spoken on the tape would be transcribed on to a hard copy and this would then be subjected to content analysis, using a postmodern approach.

This whole investigation is well within the grasp of HL students in psychology. When completed successfully the exercise may well be a revelation to the individual candidate and form a valuable discussion point for the various processes of qualitative research.