

## PSYCHOLOGY

### Overall grade boundaries

#### Higher level

<b>Grade:</b>	1	2	3	4	5	6	7
<b>Mark range:</b>	0-8	9-19	20-28	29-41	42-52	53-65	66-100

#### Standard level

<b>Grade:</b>	1	2	3	4	5	6	7
<b>Mark range:</b>	0-10	11-21	22-32	33-45	46-57	58-71	72-100

### Higher level paper 1

#### Component grade boundaries

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

#### General comments

This session examined candidate knowledge and understanding of the first presentation of the new programme, with a changed format for Paper 1 to include a compulsory short answer question section in addition to the more traditional choice of essay question. Well prepared candidates were thus able to more fully demonstrate the breadth as well as depth of their knowledge across all four perspectives. Candidate numbers at higher level continue to increase, by 48% in this examination session from figures for May 2002.

Quality of response varied enormously, with a very marked difference in the achievement of those candidates incorporating empirical research findings and/or theory into their answers and those offering purely anecdotal responses to questions. Frequently, the difference between mid range responses and those attracting higher marks was demonstrated in the making of explicit links between relevant material and the requirements of the question. Fewer candidates answered parted questions as a single response; additionally, the majority of candidates seemed able to write something on all sections of the paper, improvements on performance in previous sessions.

The use of the term ‘proved’ to describe empirical research findings suggested a lack of understanding of the nature of psychological research involving human participants. Additionally, candidates discussing the humanistic perspective who talked about ‘humanist xxx’ rather than ‘the humanistic psychological xxx’ also appeared not to understand the difference between one aspect of the development of humanistic psychology and humanism, lack of clarity of expression in each case suggesting a superficial understanding of key psychological concepts.

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

In Section a), relevant material was often 'listed' but it was left to the reader to make the connection with the requirements of the question. Where candidates only produced 2 sentence answers to a short answer question, it was not usually possible to demonstrate both understanding of the question and of relevant psychological material.

Choice of question in Section b) where the majority of candidates selected the Learning or the Biological perspective suggested a lack of confidence in knowledge and understanding of both the Cognitive and the Humanistic perspectives, an implication supported by generally poorer responses to the compulsory questions for these two perspectives, in Section a).

The major difficulty for many candidates appeared to be in addressing the exact requirements of the question as set. In Section a) both questions 1 and 2 referred to human behaviour, yet many candidate responses omitted this important focus. Many scripts were descriptive, lacking the analysis and evaluation required in most questions. Candidates appeared to have difficulty relating the learning outcomes to the content for detailed study. Thus cultural, gender, methodological and ethical considerations were often addressed as an 'add-on' at the end of an answer, rather than being an integral part of a logically constructed argument in response to a question.

### **The levels of knowledge, understanding and skill demonstrated**

Levels of knowledge and understanding varied between centres and within centres, with some candidates providing focused and knowledgeable answers to questions and others displaying only superficial knowledge and understanding. Although most candidates demonstrated basic knowledge of relevant theories, very often they were unable to analyse and discuss such ideas. Where relevant research studies were described, many candidates appeared unable to interpret such work nor to appreciate its significance. It also appeared that not all candidates had prepared for all four perspectives.

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

#### **Section A, Question 1**

*(a) Describe one theoretical explanation of behavioural change in humans based on the biological perspective. (4 marks)*

Better responses were those addressing a specific behavioural change, e.g. becoming aggressive, or showing symptoms of depression, rather than discussing behavioural change generally. In such cases descriptions were offered of changes in levels of neurotransmitters or related to the effects of drugs. A number of candidates did not address behavioural change, instead considering features such as personality, or a 'predisposition' to act in certain ways (genetic explanations). Accuracy of claims varied.

*(b) Explain the strengths and limitations of the explanation of behaviour described in part (a). (4 marks)*

Few candidates offered both strengths and limitations of the explanation for behavioural change, and too many omitted empirical research in support of claims. Weaker responses produced general evaluation of the biological perspective instead of evaluation of the part a) explanation. Candidates focusing on evolutionary explanations were unable to sustain their contentions in part b) of their response.

#### **Section B, Question 2**

*(a) Describe one assumption on which the cognitive explanation of human behaviour is based. (4 marks)*

Many candidates were unable to identify relevant assumptions from the cognitive perspective. Where an assumption was mentioned, it was rarely related to human behaviour. Some candidates described theories rather than the required assumptions.

*(b) Choose one research study to demonstrate how the assumption described in part (a) underpins a cognitive explanation of human behaviour. (4 marks)*

Research studies were usually relevant but not clearly linked to the assumption in part a), or to human behaviour.

### **Section A, question 3**

*(a) Outline one psychological question which may be explained using the learning perspective. (3 marks)*

Successful responses outlined a question such as the origins of gender, of aggression or of phobias. General questions such as ‘what makes us behave the way we do?’ (a question relevant to all perspectives) tended to be followed by simple description of theory, with no attempt made to establish psychological aspects. Many candidates chose to describe classical or operant conditioning, in this section.

*(b) Evaluate the effectiveness of the learning perspective explanation of the psychological question identified in part (a). (5 marks)*

Evaluation tended to be made of the perspective in general rather than specifically of the effectiveness of the learning perspective explanation offered in part a). Many responses offered only limitations.

### **Section A, Question 4**

*(a) Describe one method used by humanistic psychologists to collect research data. (4 marks)*

Many responses to this question failed to focus on the required collection of research data, instead describing therapeutic techniques, suggesting too many candidates were unfamiliar with research techniques employed by humanistic psychologists, e.g. use of the Q-sort to evaluate therapeutic technique.

*(b) Explain how the method of data collection described in part (a) reflects the interpretation of behaviour from a humanistic perspective. (4 marks)*

Responses to this section of the question tended to offer either basic assumptions or a general critique of the perspective instead of the required relationship between research technique and explanation of human behaviour. Candidates appeared to have difficulty in establishing the relationships between key ideas within the perspective and methods used for data collection.

### **Section B, Question 5**

*Explain and evaluate claims that correlates exist between physiological processes and psychological behaviour. (20 marks)*

Candidate responses to this question tended to offer description of appropriate content but with little or no evaluation. Very few candidates examined the idea of correlation, fewer still cause and effect relationships and mediators. Weaker responses failed to make clear the relationship between physiological processes and psychological behaviours.

### Section B, Question 6

(a) Describe one model of information processing that helps in the understanding of one aspect of human cognition. (10 marks)

Descriptions of models of memory were popular responses to this section of the question; however, the focus on information processing was not usually made explicit, and levels of accuracy varied enormously.

(b) Using psychological theory and/or research, evaluate the model described in part (a) of this question. (10 marks)

The required evaluation in this section of the question using theory and/or research seemed to pose difficulties for most candidates. Some responses were able to address strengths of the model but did not consider limitations, and did not, therefore offer a balanced evaluation of the model.

### Section B, Question 7

*“Theories challenging traditional learning theory make the assumption that learning is more than a series of stimulus-response associations.”*

*With reference to this statement, assess the extent to which cognitive and/or biological factors contribute to explanations of behavioural change within the learning perspective.*

(20 marks)

Many responses to this question demonstrated how candidates failed to answer the question as set, describing challenges from the cognitive and the biological perspectives, rather than from within the learning perspective in terms of the contributions of cognitive and/or biological factors to explanations of behavioural change. In addition, few answers addressed ‘the extent to which...’ directive. This suggests a lack of appreciation of the development of the learning perspective during the 20<sup>th</sup> century.

### Section B, Question 8

*“The humanistic perspective’s universality is limited by its emphasis on the individual.”*  
*Discuss this statement using relevant psychological theory and/or research in your argument.*

(20 marks)

A major problem common to many responses to this question appeared to be a lack of knowledge and understanding of the perspective. This was demonstrated in the numerous answers apparently misunderstanding the nature of the theories of both Carl Rogers and Abraham Maslow: to claim that universality was limited because of the emphasis on self was to misunderstand the nature of each theory. The cultural relevance and relativity of any theory should be addressed as an integral part of any study of the discipline of psychology. Very few responses identified cultural differences in the concept of self as a key evaluation point in discussion of the statement opening this question.

## **The type of assistance and guidance teachers should provide for future candidates**

The above comments indicate a need for thorough preparation in the understanding (‘unpacking’) of questions, and in planning a logically constructed response to questions. Candidates should be familiar with the precise meaning of such terms as ‘assess’, ‘evaluate the effectiveness of’, ‘discuss’, etc., and should have experience of synthesising ideas from different areas. In practical terms, a ‘weaning’ approach to the delivery of essay writing/question answering skills is useful, having candidates initially working together in groups planning an essay and then jointly writing an essay response, then working in pairs on a question, and finally working individually to produce an answer to a question from a previous examination paper. Peer group assessment of such essays, using

markschemes/mark band descriptors also contributes in a meaningful way to the development of candidate appreciation of examination requirements.

Revision exercises applying learning outcomes to course content would contribute to candidate understanding of examination expectations for this paper.

The use of empirical research findings to support or to challenge psychological theory rather than anecdotal evidence is a key to producing an informed answer to a question. Thus an exercise designed to chart relevant studies both for and against major theories can provide another useful activity both consolidating knowledge and developing analytical/evaluative skills.

Paying equal attention to the development of relevant analytical and evaluative skills as well as to relevant content in course delivery should provide candidates with a grounding in this subject which will allow hard-working candidates to be successful in the paper 1 examination.

## Higher level paper 2

### Component grade boundaries

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

### General comments

The May 2003 examination session was the first that assessed the revised syllabus. The focus of this revised paper has been narrowed by the elimination of the research methodology section and now assesses candidates' knowledge of two options.

The Psychology of Dysfunctional Behaviour and Psychodynamic Psychology were the most popular options. Other options that attracted responses included (in order of popularity) Social Psychology, Lifespan Psychology, Health Psychology and Cultural Psychology. Comparative Psychology drew very few responses. Even with a revised range of options available for study it seems that relatively few centres are teaching some of the new choices. It is hoped that as teachers become more comfortable with the syllabus that there will be greater coverage of the options, thus allowing candidates to explore topics that are current and relevant.

Overall there seemed to be a better range in the quality of responses to this year's questions than those seen in previous sessions. Stronger responses used empirical studies to demonstrate or integrate opposing or contradictory findings. Such responses were also successful at going beyond the purely descriptive accounts and coherently evaluated theories/studies by addressing cultural, ethical, methodological, or gender considerations. The weaker responses seemed to suffer the same pitfalls as have been seen in previous sessions. These are addressed below.

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

Evaluation or analysis of theories, studies, and concepts was challenging for many candidates. While there was a noted increase in the skill of evaluation, there were still many candidates that had a difficult time providing a more in-depth response, by discussing problems, issues, considerations or alternatives that were relevant to the question. It was noted that some candidates did attempt to use evaluation techniques, however it was noted that this evaluation was general in nature and not necessarily specifically related to the question as it was written. For example, in question 19 from the

Psychodynamic Psychology option the question directed candidates toward discussion of the psychodynamic view of the development of personality. Rather than specifically evaluating psychodynamic views of personality development, some candidates gave broad evaluative comments on psychodynamic psychology in general. While these evaluative points might be accurate, they were not necessarily always directly related to the question as it was written. This type of focused, relevant evaluation is necessary for higher marks.

Some candidates provide very short answers; this led the examiners to believe that time management skills require more practice. Often an inordinate amount of time was spent on the first essay which was then detrimental to the candidate's performance on the second.

Once again during this examination session, many candidates were challenged in providing focused responses to the questions. In some cases, candidates provided responses that did not directly address the question as it was written. Instead of providing a tailored response to the question, some candidates drifted into the "everything I know" about the topic type of response. These types of responses generally did not meet the requirements as outlined in the markscheme and hence did not earn high marks.

Depth of analysis was limited in some candidate's responses while other may have provided superficial or naïve interpretations of the issues in the question. Some candidates also had difficulty using empirical studies and/or theories to support their lines of argument. Anecdotal support was used at times rather than psychological evidence. Additionally, the use of personal opinion rather than arguments supported with psychological research and/or theory was seen at times.

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

Once again this year there was an improvement in candidates' ability to critically evaluate theories and studies. Many more each session are recognizing possible ethical, cultural and methodological considerations that affect the interpretation of results of particular studies as well as interpretation of human behaviour through various theories.

While there were strong responses across all options, candidates seemed to be best prepared to respond to questions from the Dysfunctional, Psychodynamic, Social and Lifespan options. While there were strong responses across all options, these four seemed to be the strongest.

The quality of the support used by candidates in their argument for each question was generally stronger than in previous sessions. Although there is still some evidence of problems in this area, more candidates are doing much better at this than in the past. It was also refreshing to see a wider range of empirical studies/theories than in previous sessions. It appears that many teachers are bringing a wider variety of psychological theories/studies to the classroom. More contemporary studies were also used by candidates, thus making their study more current and relevant.

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

### **Comments on the most frequently answered questions**

#### **Cultural psychology**

##### **Question 4**

- (a) Identify and explain *one* problem which arises for psychologists conducting cross-cultural research. [4 marks]

- (b) Describe *one* study which illustrates the problem identified in part (a). [6 marks]  
(c) Discuss conclusions from the study described in part (b). [10 marks]

Unfortunately, most of the responses for this question were very broad and not well focused. Most candidates did not seem prepared to discuss the unique aspects of cross-cultural research methodologies and relevant issues.

### **Question 5**

Discuss how *two* dimensions of cultural difference affect interpretations of human behaviour. Use relevant psychological research to illustrate your answer. [20 marks]

A very limited number of candidates attempted this question. However, those that did attempt the question did well by discussing various dimensions such as individualism/collectivism, power distance, and masculinity/femininity.

## **The psychology of dysfunctional behaviour**

### **Question 7**

Discuss basic assumptions of *one* model of dysfunctional behaviour in relation to *one* example of dysfunctional behaviour. [20 marks]

This question was quite popular. Stronger responses were based partially upon the choice of both the model and the dysfunctional behaviour. Many candidates did very well by basing the argument of their response on the basic assumptions of the chosen model. Biological and learning models were the most popular choices. Some candidates focused more specifically on a particular therapy rather than the model which it represents. This made it quite challenging to discuss the basic assumptions of the entire model. The strongest essays paid most attention to the overall model and then used specific treatments/therapies to illustrate the points they had made.

### **Question 8**

Consider the role of cultural considerations in the interpretation of dysfunctional behaviour. [20 marks]

This question was attempted less frequently than the other two in this option. There were some excellent responses that focused on issues such as cultural norms, cultural variation and culture-bound disorders and how these related to the interpretation of dysfunctional behaviour. There was a tendency for some candidates to centre their discussion on the concept of normality versus abnormality in a general sense rather than focusing on cultural considerations. Other candidates gave basic descriptions of cultural differences without relating these to the specific demands of the question.

### **Question 9**

- (a) Describe *one* approach to the treatment of *one* dysfunctional behaviour. [10 marks]  
(b) Evaluate the ethical problems involved in the approach to treatment of dysfunctional behaviour described in part (a). [10 marks]

There were a range of approaches and disorders chosen for this question. The strongest responses were ones which carefully selected both the approach to treatment and the dysfunctional behaviour which were well suited for each other. Some examples included the

biological approach to schizophrenia, the behaviourist approach to phobias, and cognitive approaches to depression. Ethical problems were also quite well covered, especially with respect to biological treatments. Problems such as control, side effects of medication, and possible stress induced during the therapeutic process.

### Health psychology

#### Question 10

Discuss how

- (a) substance use can lead to addictive behaviour
- (b) substance misuse can lead to addictive behaviour

This question was the most popular from this option. Unfortunately, the responses were frequently quite broad and unfocused. Relatively few candidates accurately made the distinction between ‘use’ and ‘misuse’. There were many responses of a general nature that had very little psychological support in terms of theories and/or studies.

### Lifespan psychology

#### Question 13

- (a) Describe *two* theories of attachment in human beings.
- (b) Compare the *two* theories chosen in part (a).

The difficulties in this question came from appropriate choice of background studies used as examples throughout the essays. Many candidates focused on studies of attachment using non-human animals and did not adequately make the link to attachment in humans. Additionally, some candidates tended to focus specifically on studies rather than theories of attachment.

#### Question 15

Compare *two* research methods used in lifespan studies in psychology. Provide specific examples.  
[20 marks]

Candidates did relatively well in identifying appropriate research methodologies used in studies within lifespan psychology such as case studies, observations, longitudinal or cross-sectional studies. Difficulties arose when addressing the comparison requirement of this particular question. In order to earn highest marks, candidates had to discuss both the similarities and differences between the two methodologies chosen.

### Psychodynamic psychology

#### Question 16

Consider *two* research methodologies (experimental *and/or* non-experimental) that are used characteristically in psychodynamic psychology. [20 marks]

Candidates were challenged by this question and several candidates found it difficult to accurately identify research methodologies used by theorists in psychodynamic psychology. The strongest responses were focused on specific methodologies such as the case study



method or observational studies. The most common response addressed therapeutic methods such as dream analysis or free association. While these techniques have been used during the research process to gather data used to formulate theories, very few candidates addressed this point. It was more common to find candidates discussing the historical and therapeutic aspects of free association and dream analysis.

### Question 17

- (a) Outline *two* neo-Freudian theories. [10 marks]

While not as popular as the other two questions from this option, when it was answered the responses were generally quite strong. Most candidates accurately identified and outlined theories from neo-Freudian theorists such as Erikson, Adler, Horney and Jung.

- (a) Evaluate the contribution of *one* of the theories described in (a) to the understanding of human behaviour. [10 marks]

Candidates did quite well in focusing on the contribution that one of the theories made to understanding human behaviour. This question lent itself quite well to a structured and focused response. There were some responses which were structured more as general evaluation of a particular theorist rather than the contribution of one of their theories.

### Question 18

Discuss the extent to which psychodynamic psychology offers a satisfactory explanation of the development of personality. [20 marks]

This was the most popular question in this option. The question proved to be very challenging for candidates to answer in a precise and focused manner. While some candidates appropriately focused on development of personality as the question asks, many more responses were a basic description and evaluation of basic psychodynamic concepts and theories. Many candidates failed to put the emphasis on explanations of the development of personality. While there were still candidates who based their discussion around the work of Freud, it was promising to see that many more included the work of others such as Horney, Jung, Klein, and Bowlby.

## Social psychology

### Question 19

- (a) Describe *two* research studies investigating obedience. [10 marks]

This was a very popular question and attracted a range of responses. The two most popular studies to be cited were those of Milgram and Zimbardo. Milgram's study was covered quite well. The Zimbardo study, to be awarded credit, must have pointed out the obedience the 'prisoners' felt as a result of the assumed authority that the 'guards' had. Another popular choice was Hoffling. Some candidates attempted to include Asch's study of conformity as a study of obedience, but this was inappropriate to the question.

- (b) Discuss ethical and methodological considerations that may occur in the research described in part (a). [10 marks]

Candidates tended to do very well discussing relevant ethical considerations with each of the studies mentioned in part (a). Issues of possible psychological harm and deception were well covered. Some candidates did an excellent job in framing the ethical considerations within the

era in which each study was conducted by highlighting that the generally accepted ethical guidelines of the time may have been different than those that guide research today. Methodological considerations tended to be generally less well covered. Quite often the coverage of these two distinct types of considerations was unbalanced.

### **Question 20**

Outline and evaluate *two* theories of collective behaviour. [20 marks]

Performance in answering this question depended on the ability of the candidate to accurately identify what constitutes collective behaviour. Many candidates misinterpreted the term to mean behaviour of the individual rather than that of the group.

### **Question 21**

(a) Describe *two* explanations of the origins of prejudice and discrimination. [10 marks]

(b) Consider the effectiveness of attempts to reduce prejudice and discrimination. [10 marks]

While this was a fairly popular question, many candidates struggled to clearly differentiate between their two chosen explanations of prejudice and discrimination. This may be a result of confusion as to the distinction between the two concepts as few candidates provided an accurate definition of each. Similarly there were varying levels of performance in part (b). It was noted that candidates often simply repeated content from (a) or may have provided simplistic and unsupported accounts of effectiveness.

## **Recommendations and guidance for the teaching of future candidates**

One of the keys to success in IB Psychology is each candidate's ability to effectively communicate the knowledge and skills that have been acquired throughout the course. Frequently examiners can recognize that candidates have solid psychological knowledge, yet the inability to effectively communicate this knowledge does not allow for awarding of higher marks. There were many candidates that spent time on introductory paragraphs. These do not necessarily help develop their argument. Some candidates provided long introductory paragraphs that simply repeated the question and did not give indication to the lines of argument to be addressed in the essay. Candidates should also practice developing balanced, organized, structured responses that are precisely focused on the question as it has been written. This includes development of coherent and logical arguments. The use of anecdotal and/or personal examples not supported by research does not help the candidate to demonstrate specific psychological knowledge. Additionally, the paragraphing techniques used by some candidates made it difficult to follow their lines of argument and had detrimental effects on the structure and focus of their responses.

In order to help candidates focus their responses, it might be advisable to define the necessary terms from the question. Examples of terms that could be defined from this examination session might include prejudice, discrimination, and research methodology. There are terms in psychology that require precise definition in order to be applied appropriately.

Teachers are advised to provide a more global and contemporary view of psychology. All of the options have been undergoing extensive research as of late. Developing this contemporary interest in the option helps candidates to better understand the topics and helps to create more personal interest. It provides a link between classic theories/studies to a frame of reference that may be more appropriate for the contemporary understanding of psychology.

As recommended in previous sessions, candidates should use empirical/theoretical evidence rather than anecdotal evidence in support of their arguments. In addition to this, candidates should develop skills of evaluating strengths, weaknesses, alternative points of view and/or cultural, ethical, gender or methodological considerations appropriate to the question. This depth of evaluation and analysis is a requirement for awarding marks in the highest markbands. As noted above, this evaluation should be directly linked to the requirements of the question rather than broad evaluative comments on the general topic.

The teaching of skills necessary for IB Psychology also include the ability to read questions thoroughly, ‘unpack’ the question, and develop a coherent argument. Each word in the question is important and should lead the candidate towards a focused response. It is recommended that candidates practice ‘unpacking’ sample questions and developing a plan on how to address the demands of the question. This could be done as group work which would allow candidates the opportunity to discuss various approaches to each question.

Candidates should be familiar with the subject guide. The understanding of terminology, command terms, and assessment criteria used in IB Psychology will help candidates to construct their responses.

Candidates should be familiar with the options that have been taught during the course. There were instances of candidates at many centres being more attracted to questions from an option for which they had not been sufficiently prepared.

Importance of knowledge and application of research methodologies is seen as vital to the understanding of the academic field of psychology. This understanding also includes the ability to evaluate the findings of various studies by analyzing the methods used to collect data and make conclusions. The link between research studies and how the interpretation of results from such studies either support or refute theories or other studies is a skill demonstrated by candidates scoring in the highest markbands.

## Higher level paper 3

### Component grade boundaries

<b>Grade:</b>	1	2	3	4	5	6	7
<b>Mark range:</b>	0-2	3-5	6-8	9-11	12-13	14-16	17-30

### General comments

It was evident that many teachers and candidates had prepared thoroughly for this new examination paper. Some candidates had obtained real knowledge and understanding of the concepts related to qualitative research and in some instances they had used this knowledge to make evaluative points in their paper one responses. In other cases however there was a tendency to confuse the terminology used in experimental psychology with the approach associated with qualitative methodology. These two major means of research used in psychology derive from differing philosophical standpoints – positivism and interpretivism. The latter, qualitative approach deals with meaning and how people interpret the different phenomena they encounter.

Candidates should be aware that in choosing any one specific research method that there will always be a pay-off or a disadvantage to their choice, e.g. the use of a survey will enable several hundreds of people to be sampled, but it will not result in the rich data that can be obtained from a handful of people who are interviewed.

## **Areas of the programme and examination that appeared to be difficult for candidates**

There was a widespread tendency to appreciate the value of employing triangulation techniques where the interpretation of findings from different research methods tended to reinforce each other, but to ignore occasions where the research methods employed gave rise to contradictory findings. Validity was sometimes confused with reliability. Terms such as validity and reliability cannot be transferred directly from their statistical use to qualitative research since different methods and data collection methods are employed. Indeed some researchers challenge the use of terms such as reliability and validity in qualitative research. Candidates need to realise, as with other aspects of psychology, that qualitative research tends to be dynamic in the way that it develops.

When writing about interviewing, some candidates mistakenly used the term experimenter when they meant interviewer. Although the concepts of intrinsic and extrinsic were not known by some candidates they were still able to answer the second part of Question 3 provided that they understood what case studies entail. Many candidates thought that case studies referred solely to the study of a single individual. In reality case studies are more frequently applied to a group of individuals within a single entity e.g. a school class, a clinic or a sports team.

## **Areas of the programme and examination in which candidates appeared well prepared**

Most candidates performed well on Question 2 in their responses to a question on the advantages and disadvantages of interviewing small groups and one to one interviews. The question was usually addressed effectively and was presented within a structured framework. In many cases a balanced approach was used and candidates were sensitive to the pressures felt by both interviewees and interviewers.

## **The strength and weaknesses of the candidates in the treatment of individual questions**

### **Question 1**

Although the question asked for examples that used different methods and sources, not all candidates provided examples. Some candidates merely listed various methods or sources and hence failed to mention the critical point that triangulation techniques should be applied to the same group of participants or the same data set. Many candidates correctly gave the use of experiments and interviews as an example of triangulation, but relatively few appeared to realise that the use of different qualitative methods is also employed for this purpose. Few candidates appeared to realise that there is an ongoing debate concerning the nature of validity as it is applied to qualitative methods. It was accepted that triangulation using different methods, different investigators or different times are attempts to increase the validity, or that sources could include the use of different perspectives or different journals. Candidates could also have referred to the position taken by several research theorists who suggest that the task for the researcher is to make the research process, findings and interpretation as transparent and rigorous as possible, and it is subsequently the task of the end users of such research to establish for themselves the validity of the research. If this approach is adapted, a discussion in response to the second part of the Question 1 could have indicated that where triangulation techniques do not result in similar findings then the end user should not rely on the outcome.

### **Question 2**

Answers to this question tended to gain the highest marks in paper three and there were some excellent responses. Many candidates were aware of the advantages and disadvantages of small group and one to one interviews. It was slightly disconcerting to find in the discussions of several candidates the notion that group interviews could often lead to fights because people disagreed over a certain issue, or that one-to-one interviews would lead to greater honesty because of the proximity of the interviewer. Many candidates did not present a balanced discussion of advantages and disadvantages, but instead focused on one of these aspects and vaguely addressed the other, rather dismissively, at the end of a sentence. A small percentage of candidates used their knowledge of humanistic psychology and presented answers in relation to client centred therapy instead of considering the strengths and weaknesses of interviewing.

### **Question 3**

Some candidates realised that an intrinsic case study is conducted for its own sake; that is, the case is valuable in itself and there is no great need to consider its generalisation to other cases. For example, a clinic specialising in problems that people have with eating disorders may commission its own case study on itself as an organisation, in order to learn about its own efficiency and effectiveness. It need not try to generalise these findings to other clinics.

Where candidates understood this point they were usually able to indicate that extrinsic case studies usually related to several case studies that were performed on a carefully chosen sample of several similar entities, for example – schools. If common factors, related to each school, emerged from such research then generalisation might be made to other schools that come from the same parent population as the sample.

Several candidates appeared to think that case studies were always focused on one individual within a clinical setting as exemplified by Freud's work. The term case study is in reality more frequently applied to groups of people within single entity such as a clinic, classroom, sports team or recreation centre. A case study is not in itself a research method but may employ more than one method in an investigation that often takes weeks, months or years to complete. But even where the term may still be applied to one individual, as some candidates indicated, it is still possible to argue that the particular is always in the general, e.g. the causes or characteristics of specific types of abnormal behaviour may begin with the discoveries made through a single case study.

## **Recommendations and guidance for the teaching of future candidates**

More time is needed to understand and implement this part of the programme, to enable candidates to:

- show an understanding of qualitative research methods and relevant technology
- evaluate such methods
- apply their knowledge and understanding of these methods
- gain experience in answering questions directly and succinctly

Understanding of qualitative methods may be obtained through several means:

- attendance at workshops where qualitative methods are part of the programme
- contacting experienced teachers

- reading relevant literature on qualitative methods – a list of suggested books is available on the OCC

## Standard level paper 1

### Component grade boundaries

<b>Grade:</b>	1	2	3	4	5	6	7
<b>Mark range:</b>	0-4	5-9	10-13	14-19	20-24	25-30	31-44

### Areas of the program that proved difficult for candidates

Some candidates failed to analyse the specific requirements of the questions before they proceeded to write. In consequence they either did not focus on the question or they failed to organise a constructive answer, or both. Many candidates showed limited knowledge and demonstrated only superficial understanding of the perspectives, especially the cognitive perspective. As a result they lacked the ability to analyse and evaluate the perspectives except in the most simplistic form. Candidates often presented answers that were merely descriptive and tended to make generalisations about particular perspectives.

Several candidates failed to make a clear difference between the compulsory short answer questions of part A and the extended response required of section B essays. Some candidates appeared to have spent as much time in answering a single compulsory question in Section A for 8 marks, as they did in answering one question in Section B for 20 marks. In section B they often did not show in-depth knowledge of their chosen perspective and neither did they demonstrate higher order skills of analysis and evaluation. There was a tendency for some candidates to learn just one topic for each perspective, for example stress for the biological or memory for the cognitive. They then seemed to perceive the whole perspective through the eyes of that one topic, and as a consequence misrepresented the perspective's assumptions and research methods. This limitation also meant that candidates lacked the insights that they might otherwise have used to demonstrate greater depth and breadth in their answers.

### The levels of knowledge, understanding and skill demonstrated

Despite the points made above there was evidence to suggest that the changed format of the paper has been successful in producing a wider understanding of the key components of the three perspectives. It was evident too that many teachers had prepared students to evaluate studies and theories that they used in answering questions. Where relevant evaluation was used it gained marks. Many candidates did well in explaining traditional classical and operant conditioning techniques, and they also showed good understanding of cognitive maps (Tolman) and insight (Kohler) although not all were able to distinguish theory from the studies in this perspective. There were several good essays that discussed the effect of brain damage by using the Phineas Gage incident and Broca's area as examples, but some candidates were less successful in applying findings from studies of emotion conducted by Schachter and Singer or James and Lange.

### Strengths and weaknesses of candidates in the treatment of individual questions

#### Section A

### **Question 1**

Answers attracted high marks if the explanations provided were based on the biological perspective and were appropriately and accurately described. Although examples of drugs or hormones were certainly appropriate some answers showed a limited and over simplistic account of relevant material. There was also a tendency for some candidates to offer a discussion of a topic, such as genetics, but fail to relate it to behavioural change in humans. If candidates failed to provide an explanation in part (a) it was difficult for them to explain the strengths and limitations required in part (b). Although the majority of answers addressed the question, many of the evaluations were superficial and weak. e.g. “.....this is a good explanation because it works”. Candidates made more effort to provide strengths than they did to provide weaknesses.

### **Question 2**

Although many candidates gave an appropriate assumption it was not always fully described. Others provided a vague response that was related to the cognitive perspective or referred to a specific theory rather than an assumption. In some cases there was confusion between behaviourism and the cognitive approach. Most of the successful answers were related to cognitive processes and computerised information processing, or focused on insight learning. Regrettably the insight learning answers were not always related to human behaviour as required by the question.

There were several examples in the responses of candidates where there was a description of theory but a failure to relate this material back to the assumption. Part (b) of this question was linked to part (a) and again referred to human behaviour, but some candidates did not address these factors. A few candidates failed to include assumptions from the cognitive perspective, but chose instead to use cases that focused on an alternative perspective. Unless such explanations were explicitly linked to the cognitive perspective they tended to be irrelevant to the question. Relatively few answers used central aspects of the cognitive approach such as memory, language or perception but those that did tended to gain higher marks.

### **Question 3**

Although only three marks were allocated for part (a) of the question, some candidates wrote at length on the learning perspective itself rather than on a question that could be explained by using the learning perspective. Two favourite questions that were used by candidates related to the nature – nurture debate and to conditioning classical/operant conditioning. Either of these approaches was appropriate and in several cases maximum marks were obtained.

The quality of answers for part (b) was partially dependent upon the question chosen for part (a). For example a question that asked how we learn, led to comparatively weak answers, as did a more specific question on how best to get dogs to salivate to a bell. Despite these difficulties many candidates tried hard to offer both strengths and weaknesses in their answers although this was not always well done. In some cases candidates only began their details of Pavlov, Watson, Skinner or Bandura in part (b) and failed to include the required evaluation.

## **Section B**

### **Question 4**

Many candidates chose to use appropriate studies such as those conducted by Schachter and Singer, James and Lange or Dutton and Aron and where such studies were well understood and evaluated they gained very high marks. Some answers provided descriptions of the studies but did not mention evaluative points and were awarded fewer marks as a consequence. In other answers only one of the two main elements, either physiological or

psychological factors, of the question was considered. If candidates did not know any empirical studies that were relevant to this study they were unable to answer the question in any depth. The question is one that is well addressed in the majority of standard introductory psychology texts and probably was the best answered in section (B).

### **Question 5**

Most responses that attracted high marks for this question described and evaluated the multi-store model of memory presented by cognitive psychologists such as Atkinson and Shiffrin, and they also related their material explicitly to information processing. Where candidates omitted this link their marks were lower. There was a tendency among some candidates to think that information processing was exclusively related to computing and had nothing to do with human cognition. This was a great pity since this approach limited their answers to the question. It also meant for these same candidates that where they knew about just one model they were in a difficult position to offer evaluation by employing other models as a comparison.

### **Question 6**

Candidates tackling this question did seem to have greater insight into the learning perspective than the cognitive perspective. Weaker answers related solely to descriptions of classical or operant conditioning techniques, but in contrast there were essays that really did get to grips with the question and revealed a commendable standard of understanding. In these good quality essays candidates used their understanding of cognitive and/or biological factors to show how they have contributed to explanations of behavioural change within the learning perspective. These answers often used elements from Tolman's work on cognitive maps and Kohler's approach to insight learning.

## **The type of assistance and guidance that teachers should provide for future candidates**

- Candidates should practise evaluating theory and empirical research, including discussion in class of the advantages and disadvantages of such studies.
- Candidates should practise writing essays in which answers are well constructed and have information that is explicitly related to the set question.
- A plan should be submitted at the beginning of these practice essays to ensure better organisation and coherence.
- Candidates need to learn the importance of cogent answers by working initially on short focused questions of the type featured on Section A of the paper. They should then gradually be introduced to the wider type questions featured in Section B. They should note the implications for time and effort that relate to parted questions. The effort and time spent on their response should be in proportion to the maximum marks allocated for each part.
- Regular work on key words that are used in questions would help candidates understand what is required. They need to differentiate between key terms – describe, evaluate, explain, to what extent..... and they should know that *compare* invites both similarities and differences.



## Standard level paper 2

### Component grade boundaries

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

### General comments

The options in this year's Paper 2 have been chosen to provide continuity with previous syllabuses and to reflect developing fields in psychology. This section requires in-depth understanding of particular sections in the field of psychology. A broad range of knowledge and understanding was demonstrated in this part of the examination. There were some excellent, well-constructed essays. Most candidates were able to describe concepts or theories with some understanding. However, in many cases candidates asserted their opinions and presented personal experiences with minimal signs of knowledge of psychology as a science. In some cases, candidates gave minimal consideration to cultural, ethical, gender or methodological issues. Higher-order skills of analysis and evaluation proved to be difficult for many candidates. The majority of candidates followed the instructions and answered one question. The most popular topic areas were psychodynamic psychology, the psychology of dysfunctional behaviour and social psychology.

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

Many candidates misinterpreted phrases or concepts, which are part of the "language" of IB psychology. The injunctions "to what extent" and "consider", did not always elicit the type of analysis required. Sometimes, when asked to discuss **one** example, some students discussed more than one in minimal depth. In general, adequate levels of knowledge were demonstrated. One notable exception in several centres was the inability to go beyond Freud in discussing the psychodynamic perspective even when the question specifically requested Neo-Freudian theories. The health psychology section often attracted common sense responses instead of psychological theory. Overall, the level of analysis included remains an area of concern. Candidates not trained in question analysis demonstrated a tendency to describe, leaving out significant components of analysis and evaluation.

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

On the whole, candidates displayed a good level of theoretical knowledge although empirical evidence was not as strong. Several candidates, using precise psychological terminology reflected knowledge, understanding and skill, with references to theory and research. Well-prepared candidates demonstrated planning skills providing an outline of the answers. The majority of the candidates demonstrated at least descriptive and surface-level knowledge of the optional areas.

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

#### Comments on the most frequently answered questions

##### Comparative psychology

### **Questions 1 and 3**

The very few responses to these two do not allow for generalizations

**Question 2** asked about the extent to which research into evolutionary behaviour of non-human animals helped psychologists to explain human behaviour. This question was poorly answered by most candidates, who largely ignored the word ‘evolutionary’ and only referred to the relevance of animal research in the understanding of human behaviour.

### **Cultural psychology**

#### **Questions 4, 5 and 6**

The very few responses to this section do not allow for generalizations.

### **The psychology of dysfunctional behaviour**

**Question 7** was very popular. Most candidates were able to give good descriptive accounts of one model of dysfunctional behaviour. The medical model in relationship to schizophrenia was a popular choice. Better responses were able to discuss strengths and weaknesses, However, this discussion was not always explicitly linked to a model.

**Question 8** asked for a consideration of the role of cultural considerations in the interpretation of dysfunctional behaviour.

A large number of candidates gave vague descriptive accounts of cultural differences in explaining and understanding dysfunctional behaviour. The examples provided were general and not always related to psychological behaviours. Little empirical evidence was offered. The role of cultural differences is clearly presented as relevant throughout the teacher’s guide; it is therefore surprising that, with some exceptions, candidates addressed this issue with superficial knowledge.

**Question 9** requested a description of one approach to the treatment of one dysfunctional behaviour.

This was a popular question and it attracted a number of well-prepared candidates who wrote at length about the medical approach to treatment. Many candidates presented good, detailed knowledge. At the lower end, answers lacked specificity in definition of the disorder. Section (b) presented a challenge as many candidates provided general descriptions of some ethical concerns without a close fit to the chosen approach to treatment. In most cases evaluation was not particularly well developed.

### **Health psychology**

#### **Questions 10**

Marks in this section were restricted to the lower end of the range, with some confusion between the demands of parts (a) and (b) of question10 (substance use and misuse). The same argument was used for both sections with better understanding of the meaning of substance use.

### **Life span psychology**

**Question 14** asked for explanations on gender identity. The explanations centred on the biological and psychodynamic explanations. Some empirical evidence was cited. Candidates who focused their explanations on two rather than four theories obtained better results.

### **Psychodynamic psychology**

**Question 16** This question was very popular. The question asked for consideration of two research methodologies specifically used in psychodynamic psychology. Overwhelmingly candidates provided therapeutic techniques rather than research methodologies. It was felt that many candidates interpreted the term ‘specifically’ as meaning “limited to”. In many textbooks dream analysis and free association are presented as both therapeutic methods and research tools (because Freud presented them as methods for gaining insight about the unconscious). As long as candidates presented them in this way they were given credit for their answers.

**Question 17** This was a very popular question. Unfortunately some candidates did not seem to be acquainted with neo-Freudian theories and simply described Freud’s theories. Most candidates gave fairly good descriptions of Erikson, Adler or Jung’s theories. Part (b) asked for an evaluation of the contribution of one of the theories described to the understanding of human behaviour. In this section many of the issues contained in part (a) were repeated. Critical evaluation was absent.

**Question 18** This question required candidates to consider how psychodynamic psychology explains the development of personality and also to evaluate this. Most candidates identified some relevant issues; however, responses were often a recitation of the perspective’s terminology. Lack of reference to cultural, methodological and/or gender issues led to many mid-range scores.

### **Social Psychology**

**Question 19** the theme of obedience was very popular and attracted many responses of varying quality. Milgram and Zimbardo were brought into the discussion. Milgram’s work was often described in great detail, whereas Zimbardo’s work was presented in sketchy or inaccurate manner. Some candidates incorrectly presented Asch’s experiments on conformity, receiving no marks for this choice. Part (b) tended to elicit ethical concerns of psychological harm with little attention to methodological concerns.

**Question 20** Only a few candidates responded to this question, about collective behaviour with some good answers including varied topics such as conformity, groupthink and deindividuation. Answers in the lower range provided common sense answers lacking empirical evidence.

**Question 21** This question requested a description of two explanations of the origin of prejudice and discrimination. Part (b) asked candidates to consider the effectiveness of attempts to reduce prejudice and discrimination. Part (a) was generally handled better, but unfortunately the level of empirical evidence provided was very limited. Knowledge and understanding of this very important topic seemed limited.

## **Recommendations and guidance for the teaching of future candidates**

Answers need to be tailored to the question. Candidates would benefit from practising exam technique with attention to the precise cognitive demands of the question. Candidates should be familiar with the meaning of injunctions as interpreted by group 3 subjects within the IB. Most questions begin with a key word or phrase that candidates have to be able to understand clearly in order to respond in the way that is expected of them. Candidates are expected to be acquainted with research studies and develop theoretical linkages. Teachers could help candidates understand the meaning of analysis and

evaluation and which questions elicit which type. Class assignments in which students are asked to refute or support certain psychological claims with empirical studies should enhance critical awareness.

Teachers could help students develop and practice skills in reading questions carefully. Essay planning benefits all candidates and may prevent them from answering part (a) then finding that their knowledge of part (b) is limited. Group work could engage students in recognizing what is being asked and listing the key concepts, which should be discussed in order to answer the question. Methodological, ethical and cross-cultural evaluation of the empirical evidence has generally improved but these areas need further review before the examination.

## Higher level internal assessment

### Component grade boundaries

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

### Range and suitability of the work submitted

This session was the first under the revised guidelines for Internal Assessment. The major differences with the revised guidelines to the past programme are that only one study is required for assessment and that the study must be experimental. Accordingly, quasi-experimental studies investigating variables such as gender, age, or culture are not acceptable. One of the most notable improvements in this exam session is that most of the studies submitted for moderation were clearly experimental with a precise independent variable identified and manipulated.

There were a range of topics that were investigated by candidates; however the most popular topics tended to be from cognitive psychology. This seems appropriate since many of the concepts and theories from cognitive psychology can be easily studied experimentally. There were also some candidates who chose to conduct field experiments in which the independent variable was appropriately manipulated. Candidates should also carefully consider the background research before attempting to replicate it. The effect of music on cognitive ability is one such popular topic that was quite often investigated yet often the results did not prove to be significant. These results might be expected as much of the background research indicates that several trials or very strict controls are needed to induce the effect. While a candidate's work that turns out not to be significant can certainly earn very high marks, it is sometimes difficult for candidates to construct a strong discussion section as their study may not have been as tightly controlled as the original.

Although it seems that more candidates are considering ethical issues before conducting their study, there were still several cases of studies that should not have been conducted. In such studies there may have been psychological or physical harm to the participants, or the study may have caused participants to be embarrassed or brought shame upon them. It is the teacher's responsibility to ensure that all studies conducted by candidates strictly adhere to ethical guidelines. Additionally, it is once again noted that the use of non-human animals as participants is not appropriate for IB Psychology.

### Candidate performance against the criteria

#### Criterion A: Introduction

In the strongest papers submitted, the candidates were successful in clearly and accurately building arguments that led them to precisely formulate hypotheses. The background research

provided helped to lay the foundation that justified the predictions being investigated. Weaker papers tended to either provide a limited range of background research or to simply describe a few studies that were not clearly linked to the prediction. Candidates should attempt to make sure that the research they provide is logically linked to the hypothesis.

In many papers, candidates did not adequately analyse relevant background studies. In these cases, candidates failed to discuss some of the most relevant findings and/or implications from the background research. Due to the close link between the introduction and discussion sections, such papers did not earn high marks on the discussion section criterion either.

While more candidates in this session provided an accurately formulated, operationalised hypothesis, some candidates still struggled with this.

It was noted that there was often failure to demonstrate a clear understanding of the topic. Few candidates defined concepts involved in their study before describing existing research.

### **Criterion B: Design**

The inability to accurately identify IV and DV will force the examiner to award no marks for this criterion. One of the most important components that is assessed on this criterion is that of ethical considerations. There were many candidates failing to show evidence that ethical considerations were taken into account. Additionally, many candidates did not demonstrate knowledge of the difference between consent and informed consent. All participants must be made aware of as much information about the study as is possible without confounding the results. Asking the participants questions such as, “Do you want to participate in my study?” is not sufficient to meet the ethical requirement of informed consent. Candidates must document informed consent by providing an unsigned copy of the informed consent statement in the appendix.

Studies that have children participating also must be sure to carefully follow the guidelines as published both in the course guide and the Teacher Support Material. Ethical considerations should go beyond the standard ethical procedures, such as informed consent, and should also include consideration of the possible psychological impact, embarrassment, shame, and/ or physical damage that might affect the participants.

Justification of the chosen experimental design was generally weak. Candidates should justify their use of the chosen design by considering the appropriateness, strengths and/ or limitations that make a particular design appropriate for the study they are conducting.

### **Criterion C: Participants**

Most candidates identified at least some characteristics of the population from which the sample was drawn. Some failed to give any relevant characteristics. Most identified the sampling technique but often failed to identify how the sample was allocated to groups and only rarely justified their sampling method.

### **Criterion D: Procedure**

Most reached an acceptable level. Some candidates provided a very basic description of the procedure that would not allow for easy replication. A simple listing of the steps involved may not allow the candidate to earn marks towards the upper end of this criterion.

### **Criterion E: Results**

Quite frequently it was found that candidates discussed either inaccurate or irrelevant results. Some of this included inaccuracy in the calculation of descriptive and/ or inferential statistical tests. Description of results did not necessarily match the IV and DV described earlier in the paper. Raw scores were sometimes given within this section with no summary data of the two groups or conditions involved in the study. Graphs were all too often irrelevant to the aim or hypothesis. Inferential statistics were not used or an inappropriate or unjustified test of significance was used.

Labels on graphs were not always complete or accurate. Some candidates who used computer software to generate the graphs did not select a graph that accurately displayed the results in terms of the hypothesis. In many cases, a simple two bar graph of the mean scores for each of the two conditions or groups would be sufficient. Many candidates graphed raw results rather than summary results.

In some papers, candidates introduced another variable that was not stated earlier as being part of the investigation. For example, variables such as gender, age, or ethnicity were analysed although there were no predictions made about these variables nor any background research to justify the analysis.

Descriptive statistics only stated and not analysed. The most common descriptive statistics provided were mean, median, mode and/ or standard deviation. While it is recommended to include both measures of central tendency and measures of dispersion, very few candidates elaborated on the data. Some very interesting discussion of differences in dispersion was occasionally attempted.

### **Criterion F: Discussion**

Performance on this criterion was directly affected by the candidate's ability to structure a coherent and appropriate introduction section with relevant theories and studies. It was frequently seen that candidates simply repeated information from the introduction rather than elaborating on the previously stated information in order to explain the results of their own study. Many candidates were aware of some of the limitations of their research, but this was not always developed. In some cases candidates did not address some of the most appropriate limitations that were evident in the study. Candidates generally had a more difficult time in identifying the strengths of their study. Limited sample size was used as both a limitation of the study and an idea for further investigation. Although this might be an appropriate comment, often candidates did not address more relevant issues.

### **Criterion G: Presentation**

Some candidates did not provide an accurate references section. Candidates using secondary sources did not always accurately cite them. Most candidates did well in following the recommended format of sections and parts of the paper that were properly labelled. There were also many inconsistencies in the citation format and not all of the references from the body of the paper were accurately cited in the references section.

## **Recommendations and guidance for the teaching of future candidates**

One of the most important issues for teachers to consider is that of following ethical guidelines. Teachers are responsible for ensuring that the work that their candidates undertake carefully follows established ethical guidelines. Work that may cause psychological and/or physical harm must not be approved. Additionally socially sensitive topics or issues that might reinforce stereotypes should be

avoided. Candidates should document the ethical considerations that have been taken into account. Teachers can post their questions as to the appropriateness of proposed topics on the Online Curriculum Centre.

Candidates should each have a copy of the guidelines for internal assessment as outlined in the subject guide. This documentation includes general information on the project as well as the assessment criteria.

In order to familiarize themselves with the assessment criteria it is recommended that candidates practice marking a sample piece of work and then discussing the application of the assessment criteria.

Candidates should be given opportunities to practice analyzing background studies. It is recommended that candidates develop the skill of critiquing published studies and discussing the outcomes or implications of the studies. This will help them to be able to use the studies appropriately in their introduction section and also to link background studies to their own research in the discussion section. Structuring of an introduction section includes the ability to formulate a logical and coherent flow to the section.

It is highly recommended that candidates develop skills of interpreting results and analysing the data that is collected. Not only does this include how to calculate the various statistical tests (both descriptive and inferential) but also how to create a graph that accurately reflects the aim or prediction of the hypothesis. The ability to analyse various descriptive statistics is a skill that does not seem to be evident in the work of many candidates. For example, candidates should be able to discuss what it means if the calculated means of the two conditions are different, yet the modes are similar, or if the means are similar but the standard deviation of each condition is different.

Research methodology has its own set of terms, concepts and processes. It is vital that candidates fully understand each of these and be able to both define and apply them appropriately. If a candidate were to imprecisely apply or define a concept then confusion might arise and lead the candidate to inaccurate interpretation.

Citations should be formatted using an appropriate technique and be consistent. This is especially true for secondary sources and those from internet sources.

While completing the requirements of the Internal Assessment candidates may only apply a few of the research methods terms and processes outlined in the subject guide, it is vital that they have a full understanding of research methodology. It seemed apparent on some work that candidates were not fully prepared across the entire range of research methods. This became evident in the inability of some candidates to justify their design choice apply statistics appropriately and discuss strengths and weaknesses of their study.

It is important for teachers to remember that Internal Assessment is an integral part of the education of their candidates. For most candidates, this is their first exposure to research methodology and they will most likely have numerous questions and require support from the teacher. A reasonable amount of guidance is both necessary and desirable. This may include assistance in beginning the search for relevant background research constructing an argument from the background research and formulating a hypothesis. While specific data analysis should be done by the candidates, it is the teacher's responsibility to ensure that the candidates have the appropriate skills and resources to analyse their data.

## Standard level internal assessment

### Component grade boundaries

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

### Range and suitability of the work selected

A wide range of experimental replications or partial replications was presented. These replications related particularly to social psychology in areas such as conformity, stereotyping or rumour, and also to areas of cognition such as memory, perception or imagery. The Stroop Effect was far ahead in the popularity stakes. Whilst many of these experiments were well performed, a substantial number were also problematic or poorly executed. These problems included a lack of concern for the ethical issues involved, no consideration of relevant background studies or appropriate designs and an inappropriate selection of samples. Where too few studies were employed or where candidates failed to grasp the significance of what these studies implied for their own research, it was difficult for examiners to understand where their work could be located within existing theory. This tended to be even more pronounced when candidates produced innovative work of their own. Simple replications of experiments tended to produce the best quality work.

### Candidate performance against each criterion

In general candidates understood the basis of experimental design, but there were occasions when no experiment was conducted at all. The identification of independent and dependent variables posed challenges for some candidates, whilst others attempted to manipulate several variables when the manipulation of one variable was sufficient. Many candidates mentioned that they used random sampling when it was clear that this method was not used. For most candidates opportunity sampling was used; this is acceptable, given the circumstances in which many candidates have to conduct their research and it should be mentioned in the method section. In general centres need to pay more attention to how candidates come to understand the fundamentals in the selection of participants for their experiment. It is relatively rare for actual random sampling to occur since the circumstances in which this can be exercised will not often become available. Candidates should also be explicit in how they identify the target population and in the description of its characteristics, but regrettably clarity in these matters was often missing. There needs to be greater understanding concerning the actual design selected by candidates and they should justify why an independent or repeated measures design was chosen.

Candidates gave examples of consent forms but they did not always show that these were used with participants. These forms were often constructed with sensitivity and maturity, but there were other cases where they were less than adequate. In other situations debriefing was a passive exercise (“if you are interested in the results of my experiment please send me an email”). Ethical considerations were not always taken into account in either this or related areas. Some candidates were unaware of the minimum age at which children may be excused from having parental consent before engaging in psychological experiments, or that there should be another responsible adult in attendance when children are participating in experiments. Where ethical guidelines were flaunted in the conduct of the research, there was a commensurate reduction in the marks awarded and in some cases this made a substantial difference in the final grade awarded.

Almost all candidates did a good job in presenting their results in graphical form such as charts, histograms or graphs, and they also acknowledged the importance of measures of central tendency



and dispersion. A few candidates relegated their graphics to the appendix and simply described the results, while in some reports there was a complete absence of any graphical representation or data. Some candidates just listed the results without documenting patterns in the data collected and did not provide information on the group mean, median or mode. It would be useful if candidates were to practise ways of portraying their findings before they embark on research in order to improve the quality of their results section.

In the discussion section many candidates made only the most cursory reference in relating their results to the prior study that was taken as the model for their own research. More importance needs to be placed on background studies that illuminate the work undertaken by candidates, and they should use findings of these studies as a comparison for their own. If the prior research was weak, as it often was, it followed that the discussion section was also limited in scope and quality. Weaknesses were mentioned about procedural issues – conducting experiments en-masse, extraneous noise, or that since participants were often the peers of candidates, they did not take the research seriously. The discussion should be the most cognitively demanding aspect of the report where consideration of all of the salient features of the research are made and compared to previous relevant studies. A careful conclusion should then be drawn from the considerations that have been made.

The presentation of work was usually one of the better aspects of the reports but some concerns have been expressed by examiners. A word count should be included and candidates should adhere to the recommended number of words. If no word count is provided examiners may well have reduced the mark that they would have otherwise given. Internet sources are often dubious in nature and were improperly cited in the text and in the reference page. Although some references were of excellent quality and potential they were never discussed in the context of the report. References should not be used as window dressing in order to impress assessors, rather the candidate should regard references as the keystone on which the quality of the report depends.

### **Recommendations for the teaching of future candidates**

- Encourage candidates to choose an experimental design and to justify their choice.
- Ensure that candidates are informed precisely about target populations, sampling techniques and use the actual technique that they state they have used. This will rarely include the use of a random sample.
- Ensure that candidates choose experiments that produce data that can be analysed by using descriptive statistics and plan how the data can be analysed before the experiment is conducted.
- Refuse permission for any candidates who ask to conduct unethical research or wish to submit unethical work as part of the IA, and explain that good research never demeans participants.
- Teach candidates to select relevant background material that informs their own research and to integrate the research in their discussions.
- Ensure that candidates use references in an approved way both in the body of their report and in the reference section by implementing appropriate guidelines produced by the American Psychological Association or the British Psychological Society.