Psychology

2010 ASSESSMENT REPORT

Science Learning Area

Government of South Australia

SACE Board of SA

PSYCHOLOGY

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GENERAL COMMENTS

This is the seventh year in which Psychology has been assessed as a SACE subject. The enrolment numbers increased from about 2700 in 2009, to about 2900 in 2010. The mean score for the 2010 examination was 60.2%. The table below provides information for the last three years.

Year	Enrolment Numbers	Examination Mean (%)
2010	2869	60.2
2009	2687	51.2
2008	2096	58.4

ASSESSMENT COMPONENT 1: COLLABORATIVE INVESTIGATION
ASSESSMENT COMPONENT 2: INDIVIDUAL INVESTIGATION

These two assessment components were centrally moderated according to the SACE Board's requirements, policies, and procedures. Schools submitted the specified samples of both types of student investigations from all grade bands, as per the Science Learning Area Manual. This helped the moderation panel understand the marking standard and how teachers had directed their students to construct their investigation reports. Moderation helps to ensure fairness to students and to provide the wider community with reliable information about student performance.

Moderators are trained teachers and academics. Pairs of moderators viewed the samples. The pairing of moderators was changed on a regular basis so that the standards set during the training period were consistent during the moderation period.

Results for approximately two-thirds of the classes were unchanged. This indicates that, in general, teachers are providing accurate guidance as the students conduct the research program, gather data, write proposals for using data, and write reports.

Approximately one-third of the classes had some marks changed during moderation. Where marks were lowered, it was usually as a result of overgenerous marking within the A and B grade bands. No classes had marks increased.

Both quantitative and qualitative investigation reports were seen, with the latter usually having the data presented after content analysis. In general, Stage 2 levels of scientific literacy were evident. The two criteria for judging performance for which students had most difficulty in providing responses were the interpretation and the evaluation of their investigations.

Teachers should be aware of the following:

- Students should be encouraged to base their investigations on a simple research question/hypothesis, but one that reflects a Stage 2 level of complexity and is relevant to the collected class data. Students who presented multiple hypotheses or overly complex research questions found it difficult to produce an adequate interpretation and evaluation within the word-count.

- Some students presented investigations by combining both quantitative and qualitative data. Teachers must provide feedback early in the process to ensure that proposals cover only a subset of the class data, specifically a subset of the quantitative data or a subset of the qualitative data, but not both.
- Some teachers used their own marking schemes which detracted from students addressing the criteria for judging performance at the global level. That is to say, the marking schemes generally led to overly generous marking and a resultant downward shift at moderation. Likewise, extensive checklists of what to include in the report sometimes led students to write short statements under each heading without exploring the in-depth meaning of what they were commenting on.
- Students need to adhere to the word-limit of 1500 words. Teachers should manage this at the draft stage. Words in excess of 1500 will not be considered as part of the investigation report.
- Guidance should be given at the draft stage if students are using complex terminology which doesn't add meaning to the discussion.
- Students should be discouraged from using dot points in place of continuous prose in their report because this often leads to a lack sufficient depth and detail.

Students should be aware of the following:

- The purpose of the investigation report is to explore scientific research methods and ethical considerations in the context of a Stage 2 assessment. As such, it is not considered important that students do information searches on their chosen topic. References to outside sources should be kept to a minimum (for example, definitions of key terms from psychology texts), and extensive book and Internet research is not desirable.
- Students should comment only on their specific research question/hypothesis. In some cases, students have overestimated the power of their research and gone on to claim quite far-reaching conclusions which are not justified by the evidence at hand.
- It is unusual for qualitative research to be based on a hypothesis. Students only need a research question in this case and one that is probably very closely linked to the focus group or Delphi Technique questions.
- The investigation report should not include a lengthy and detailed description of methods used in the research program. The methods are provided by the SACE Board of SA.
- Data selection and analysis must be relevant and appropriate to the research question/hypothesis. Producing multiple graphs of irrelevant data does not result in higher marks and often causes a reduction. For example, many students produced box-plots, medians, and standard deviations without ever referring to them in their reports.
- Graphing raw quantitative data so that participant ID numbers are on the X-axis and raw scores on the Y-axis is not considered analysis of data.
- Tables of analysed data are not necessary if the means, medians, and so on are present on the graph itself.
- Graphing different measures which have different scales on the same graph may lead students to making inappropriate comparisons and interpretations.
- Students should not graph data from different years and interpret shifts in data over the years. If data from previous years is to be included, so as to increase the sample size, then the data should be treated as one set and analysed once.
- Content analysis tables should only include a few responses which illustrate the theme they represent. It is not desirable to submit all responses in the finished table. Similarly, it is preferable to look for a limited number of themes in the data. To produce a long list of themes with two or three responses per theme shows an inability on the student's part to find commonality between responses. Themes should become a natural response of the research question itself. Themes such as 'positive' and 'negative' may be used if appropriate to divide the data initially, and then more detailed subthemes should be found within these groupings.

- Describing data and interpreting data are two different skills. The former may be achieved by presentation of the data in tabular or graphical form, with or without some written comments (for example, 'The mean score for Group A is not significantly different from the mean score for Group B'). Interpretation, on the other hand, requires students to provide some meaning and context for the data, particularly in relation to the research question/hypothesis. For example, if one mean score is not significantly different from another, what conclusions may be drawn in relation to the research question/hypothesis? What effect did the sample have on the nature of the data collected?
- Students should choose their wording carefully when discussing their results. For example, they should not refer to correlations in the data when what they are actually discussing is a comparison of means.
- In order to fulfil the criteria for judging performance, students must relate their discussions to the particular research program they have undertaken. That is, the students must not only identify the sample and the strengths, weaknesses, and ethical issues of the research program, they must also explain clearly how each of these components has affected the outcome of their own particular investigation.

The following advice is also given:

- Students should attach proposals to the investigation report.
- Teachers should refer to the subject outline and support materials on the SACE website for advice regarding the investigations.
- Teachers should join the online community for Psychology on the SACE website in order to make connections with other teachers and receive up-to-date information.
- New teachers should seek clarification and advice early in the year by contacting the Curriculum and Moderation Officer.

ASSESSMENT COMPONENT 4: EXAMINATION

The examination is composed of two sections: short-answer questions worth 80 marks and extended-response questions worth 40 marks. The examination is divided under the six topic headings, and some of the questions also cover ethical issues and the four levels of explanation of behaviour used in psychology.

The mean marks for each topic, ethics and four levels are shown in the following table.

Topic	Mean mark (%)
Introduction to Psychology	66.91
Social Cognition	71.14
Learning	56.27
Psychobiology of Altered States of Awareness	55.35
Healthy Minds	56.56
Personality	54.55
Ethical Issues	45.18
Four Levels of Explanation of Behaviour	56.56

Overall, average marks in each section show that this year's cohort could show evidence of learning in most aspects of the course. Ethical issues, when applied outside of human research, are poorly understood by students. Teachers should explicitly cover aspects of ethical issues in each of the six content areas (topics) so that students may appreciate the ethical issues in the application of psychological principles. In particular, students should demonstrate knowledge of the ethical use of animals in research and the ethical treatment of patients in the clinical setting.

In terms of specific content areas, ‘Personality’ had the lowest mean by a small amount. ‘Personality’ was tested in the extended-response section where answers need to connect and explore ideas in the given scenario.

SECTION A: SHORT-ANSWER QUESTIONS

In general, 2 marks are allocated for one well-expressed idea or piece of information. Questions that require an explanation are worth 4 marks and, therefore, in order to obtain full marks, students must supply two relevant and connected pieces of information. Students need to be mindful not to use the wording of the question as if it was an answer in itself.

Generally, students were able to demonstrate their knowledge using appropriate psychological terminology. The examiners aimed to produce short-answer questions that varied in difficulty from those that required straightforward, easily reproduced knowledge through to those that required skills of critical understanding, problem-solving, and/or application of psychological principles. No changes were made to the curriculum statement in 2010.

Students often lost marks by not understanding the verb used in the question; for example, the difference between ‘state’, ‘describe’ and ‘explain’. Further to this, students sometimes gave generic answers, where the question asked for a response directly related to the information provided in a scenario. Where questions are divided into parts, students sometimes did not see the connectedness of the parts and their relevance to the opening scenario. Students need to avoid writing irrelevant information which may render their answer incorrect.

Students who performed best provided clear and concise answers, directly related to the scenario. The number of lines provided for the answer gives an approximate guide to the average length of response required. Students cannot lose marks for the volume of their response (provided that the materials is relevant, correct, and understandable), but it may be useful for them to practise giving answers within the lines given on past exam papers.

Teachers are advised to address these issues during their teaching program so that students have a greater variety of examination-answering techniques at their disposal.

The mean mark for each question in Section A is shown in the table on the following page.

Question	Mean Mark	Maximum Mark	Mean (%)
1	1.47	2	73.36
2	2.63	4	65.66
3	3.42	4	85.47
4	1.00	2	49.96
5	1.63	2	81.71
6	1.81	4	45.30
7	1.74	2	86.96
8	2.39	4	59.67
9	2.84	4	70.98
10	2.06	4	51.54
11	1.79	2	89.30
12	4.10	6	68.36
13	3.10	4	77.52
14	1.21	2	60.48
15	2.59	4	64.69
16	0.83	2	41.45
17	0.97	2	48.25
18	2.56	4	63.97
19	0.75	2	37.54
20	1.26	2	62.77
21	2.39	4	59.63
22	1.83	4	45.67
23	0.59	2	29.64
24	2.74	4	68.38
25	1.69	2	84.41
26	0.74	2	36.93
Section A Totals		**80**	**61.91**

Introduction to Psychology

Question 1
This question related to limitations of a sample. The most common answer discussed was sample size, but some students failed to provide reasons for why this was a limitation, stating only ‘The sample was too small.’ This identifies the limitation without describing it.

Question 2
Some students confused experimental with quantitative observational investigation design, with answers such as ‘quantitative experimental’. Many students demonstrated knowledge of features of experiments without connecting this to the information in the scenario.

Question 3
Most students can competently calculate mean and median. One common error occurred when students appeared to be unable to decide on the median because there were two different numbers near the middle, specifically 10 and 12.

Question 4
Standard deviation and its relationship to the mean were tested in this question. Students continue to relate this measure to the range of scores rather than its anchoring on the mean.

Question 5
Most students were able to identify the investigation design as a Delphi Technique.

Question 6
In part (a), students usually described pre-existing groups, natural settings, or random allocation. Part (b) proved more difficult, with students unable to connect advantages to the scenario given.

Social Cognition

Question 7
Most students answered this correctly. However, it is important for students to complete their ideas rather than to use phrases like ‘vice versa’ which can be ambiguous.

Question 8
Students were mostly able to identify a function of the attitude. Some of the best explanations used the adaptive/utilitarian function of attitudes. Descriptions of other functions were poor, showing a lack of understanding. There were also a number of students who could give a description of the chosen function but showed an inability to relate it to Yasmine in the scenario.

Question 9
Most students handled this question well, but some seemed to have missed the stipulation that the comparison had to come from Ricardo comparing himself against Louis. A few described the comparison but never stipulated the knowledge that would have been gained.

Question 10
Some answers strayed from the source of the message to the message itself or the audience. It was also common for students to miss part of the question; for example, by describing the attribute without an example.

Question 11
With the highest mean in the exam, it is clear that most students understand the concept of impression management.

Question 12
Although the mean for this question suggests most students could handle it competently, it was still evident that many students find it difficult to relate the theoretical advantages and disadvantages of rating scales to scenarios. Furthermore, in part (b), students were able to identify ethical issues, but not necessarily how they would relate to primary school students.

Learning

Question 13
Positive reinforcement is a well-understood principle. Students should include the idea that the reinforced behaviour will be strengthened or increase in frequency. Some students wrote a good definition but could not round out their answer with an accurate example, often crossing over into negative reinforcement.

Question 14
Negative reinforcement was the correct answer. Some students appeared to guess different elements from the scenario, such as the beeping sound.

Question 15
Many students unnecessarily repeated the information provided in the question before beginning their answers. Marks were often lost because students tended to make very general comments about systematic desensitisation, rather than giving examples of hierarchical fears relating to height. Some students used examples, such as spiders, which were unrelated to the question.

Question 16
For this question on contiguity, many students were unable to make the connection between time and the two stimuli. It appears to be a difficult concept for many students.

Question 17
Students often attempted to explain the scenario without considering the similarity of the two stimuli. Many added to the scenario by incorrectly assuming stimulus generalisation to all loud bangs.

Question 18
Most students were able to describe two factors that influence observational learning, attention and retention being the most commonly used. Some students missed the intention of the question and talked about operant conditioning or persuasion.

Question 19
This question concerned ethical issues with using dogs in research. Students should recognise that terms such as 'informed consent' and the 'right to withdraw' relate to research with humans and it is irrelevant to suggest the same issues with animals. Most correct answers related to the theme of doing no harm to the animals.

Psychobiology of Altered States of Awareness

Question 20
Most students gave adequate answers regarding Stage 2 sleep. Most commonly, answers were rendered incorrect by adding information outside of Stage 2.

Question 21
Some students became distracted by the middle-aged businessmen in the scenario and discussed the stress and lifestyle issues that they imagined the men suffered from. This took them away from the sleep disorder in the question. The most common disorders described were insomnia and sleep apnoea.

Question 22
Stimulus control therapy was most commonly described in these answers, with sleep restriction therapy being the next most common therapy described. CBT (cognitive behavioural therapy) descriptions often didn't relate to sleep. Some students combined self-help with actual therapies which led to less precise answers.

Question 23
This question suffered the lowest mean in the exam. Students struggle to move away from the well-rehearsed ethical principles of human research and apply more overarching principles to areas of psychology that do not involve research.

Question 24
It was common for students to describe what sleep deprivation was rather than its effects. Better answers linked the described effect with how the performance was impaired; for example, poor decision-making leading to a longer time to arrive at a destination; and increased reaction time leading to being unable to respond effectively to sudden events on the road.

Question 25
This question was well answered with a variety of strategies mentioned.

Question 26
Many students failed to earn marks because they reworded the question, and provided no new information. Some students attempted to answer in terms of the Yerkes–Dodson law, for which they were given credit.

SECTION B: EXTENDED-RESPONSE QUESTIONS

The two extended-response questions (27 and 28) were each marked out of 20, with 16 marks allocated for content (each well-expressed idea or piece of information being worth 2 marks) and 4 marks for communication. Both questions had four content parts, each of which was marked out of 4.

The following factors were taken into account when a communication mark was awarded:

- Was the answer clear and well expressed?
- Was the answer well organised?
- Was the answer relevant to the question?

In most cases, students produced well-structured responses of an appropriate length. As a general observation, it is the use of everyday language rather than psychological terms from the subject outline which leads to inaccurate answers.

Answers to Question 27 (and to a lesser extent Question 28) were answered well by students who could use their ability to group together cohesive ideas. It is advisable for students to use clear paragraphs and headings in the extended-response section. As well as displaying their knowledge and understanding, these students provided evidence of clear and relevant application of psychological principles. Extended responses do not require the use of introductory or conclusion paragraphs.

Healthy Minds

Question 27
Responses to this question about symptoms of depression and the four levels of explanation used in psychology varied in quality, with a mean of 11.31 marks, or 56.56%.

Some students found this question to be difficult to answer as many symptoms are interrelated and can be explained from many different levels. This is common with mental disorders as they do relate to many interconnected factors in a person. For example: drinking alcohol can be a biological cause (or symptom) of depression, or a learned behaviour, or a culturally accepted coping strategy.

Some students got distracted by offering explanations for Tony's behaviour or suggestions for treatments, rather than concentrating on the symptoms.

Many students could state the biological symptoms of depression but then did not offer a thorough discussion. Students generally found discussing the symptoms using the basic processes and person levels to be the most difficult.

Other students wrote excellent answers, particularly those that related the person level to some personality theory.

Students used the sociocultural level well, many relating this to concepts like impression formation, or social comparison, which displayed very high-level understanding of the curriculum and connections within it.

Personality

Question 28
This question required students to describe and discuss different aspects of the topic 'Personality', in particular, psychodynamic conceptions. It had a mean of 10.91 marks, or 54.55%.

Most students used Freudian theory for this question and related two of the phrases to psychosexual stages of development. Answers based on Jung were also popular and well answered. Weaknesses of psychodynamic theory are well understood; however, strengths proved more difficult for students. In the third dot point, students displayed their knowledge of personality assessment, many of them connecting this to the psychodynamic nature of the question. Validity tended to be confused with reliability and some students failed to relate this to personality assessment.

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