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**Task 2 Southern River College**

**Psychology ATAR 2021**

**Assessment type:** Investigation

**Conditions**

Time for the task:

* one week to conduct the investigation, collect the data and research the relationship between handedness and hemispheric dominance
* two lessons to write the scientific report in class under supervised conditions

**Task weighting**

10% of the school mark when combined with validation test

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**Relationship between handedness and hemispheric dominance**

The tendency for one hemisphere of the brain to control language production and comprehension and to initiate movement more often than the other is referred to as hemispheric dominance. This dominance occurs because the dominant hemisphere sends inhibitory messages to the other hemisphere via their connection with the corpus callosum (van Iersel *et al*., 2005). This dominance usually refers to hemispheric dominance for language and movement, but it is possible for individuals to have preferences for left- or right-brain styles of thought.

Dominance is also prevalent in handedness, which refers to which hand an individual prefers to use. For example, ninety per cent of all humans are right-handed; ten per cent are left-handed (Hackett, 2007).

The aim of this investigation is to establish and examine the relationship between handedness (left- or right-hand preference and strength) and hemispheric dominance (left- or right-brained).

You will be asked to individually complete a questionnaire. From this questionnaire, a handedness score (which is your hand dominance and the strength of this dominance) will be generated and your hemispheric dominance will be identified using your three best subjects as a guide.

A handedness score and hemispheric dominance will be collected from all participants and collated to form a set of results for the class to use.

Using your class notes and library research, make succinct notes on the theories and evidence related to this topic. You will write a formal report in class under supervised conditions. You are permitted a half-A4 page of notes to write your report.

Come prepared with:

* data (tables and graphs)
* list of references
* appendices (e.g. questionnaire)
* a half-A4 page of notes.

Your formal report will include:

* an abstract – provide an overview of the investigation, including the aim, main features of the method, summary of results and conclusion/s
* an introduction – provide information and research related to the topic for the investigation
* method – describe the participants, materials and procedures so that the investigation can be replicated
* results – represent data in a written summary, tables and graphs
* discussion
  + discuss the results of the investigation and how they relate to relevant psychological theories
  + evaluate the design of the investigation and explain how the investigation could be improved
  + discuss how ethical issues were addressed
  + explain the relevance of the results to the population from which the sample was drawn, and to theory or other research
* state a conclusion that relates the results to the hypothesis or research question
* references – provide an alphabetical list of any references used in the report
* appendix – attach your questionnaire

**Marking key – Relationship between handedness and hemispheric dominance**

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| --- | --- |
| **Description** | **Marks** |
| **Abstract** | |
| * succinctly writes a specific aim | 2 |
| * provides a general aim | 1 |
| * briefly describes the method, including   + the participants   + materials used   + how the task was administered | 1–3 |
| * states the results of the research * draws a relevant conclusion | 1–2 |
| **Subtotal** | **7** |
| **Introduction** | |
| * makes a relevant statement about hemispheric dominance, describing its main features | 2 |
| * makes some comments about hemispheric dominance | 1 |
| * supports above information with reference to relevant research | 2 |
| * refers to some research without making links to the topic | 1 |
| * includes a rationale | 1 |
| * includes an aim | 1 |
| * writes research question/prediction as an operational hypothesis that follows on logically from the aim and includes:   + population   + operationalised independent variable   + operationalised dependent variable | 3 |
| * poses a research question/prediction but it is not an operational hypothesis | 1 |
| **Subtotal** | **9** |
| **Method** | |
| * describes participants in sufficient detail to be replicated, e.g. number, age, gender * describes the selection process | 1–2 |
| * describes materials * provides sufficient detail to be replicated | 1–2 |
| * describes the procedure, including:   + addresses anonymity   + describes task in sufficient detail to be replicated   + describes the collection, collation and presentation of results | 1–3 |
| **Subtotal** | **7** |
| **Results** | |
| * organises all relevant data logically in correctly labelled tables   + correctly organises table   + correctly labels table, including units, where appropriate   + includes relevant data | 1–3 |
| * presents data in a graph   + correctly graphs data   + uses appropriate labelling   + uses appropriate titles | 1–3 |
| * states results of the investigation | 1 |
| **Subtotal** | **7** |

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| --- | --- |
| **Discussion and evaluation** | |
| * discusses the results of the investigation and relates the results to the hypothesis | 4 |
| * discusses the results of the research supports and comments on the hypothesis and describes relevant psychological theories | 3 |
| * describes what happened in the investigation and cites relevant psychological theories | 2 |
| * describes what happened in the investigation | 1 |
| * explains how the results relate to relevant psychological theories | 2 |
| * describes relevant psychological theories | 1 |
| * evaluates the investigation design:   + discusses any methodological flaws   + explains steps taken to ensure reliability and how it could be improved | 3 |
| * explains how variables were controlled and suggests ways to improve reliability | 2 |
| * states that variables need to be controlled and suggests how to improve reliability | 1 |
| * discusses ethical issues and describes how these were addressed | 2 |
| * refers to ethical issues that were considered in the investigation | 1 |
| * discusses relevance of results to the population from which the sample was drawn as well as to theory or other research referred to in the introduction | 2 |
| * suggests how the investigation might be of relevance to science or society | 1 |
| * makes accurate conclusions that relate to the hypothesis or research question | 2 |
| * forms an accurate conclusion but does not relate it to the hypothesis or research question | 1 |
| **Subtotal** | **15** |
| **References** | |
| * reference list:   + relevant references   + range of references   + listed alphabetically | 1–3 |
| * in-text citations:   + consistently used correctly   + incorrectly formatted or not consistently used | 1–2 |
| **Subtotal** | **5** |
| **Appendix** | |
| * appends questionnaire | 1 |
| **Subtotal** | **1** |
| **Total** | **51** |