Psychology Stage 2

**Exercise and Cognitive Ability**

This is a formative exercise designed to demonstrate the differences between objective and subjective data and the three investigation designs.

Questionnaire (Quantitative Design)

The purpose of this questionnaire is to determine whether exercise can assist students with their reaction time and hence improve cognitive ability.

1. How often do you exercise? Tick the box that suits you.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Minimal Exercise Group** | | | **Moderate to High Exercise Group** | | |
| **Never** | **Once a fortnight** | **Once a week** | **2-3 times a week** | **4-5 times a week** | **Every day** |
|  |  |  |  |  |  |

1. Now complete the following

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Statements** | **Strongly Agree** | **Agree** | **Neutral** | **Disagree** | **Strongly Disagree** |
| **I am losing concentration by midday** |  |  |  |  |  |
| **I am not involved in class discussions** |  |  |  |  |  |
| **I yawn more than my friends throughout the day** |  |  |  |  |  |
| **I feel sleepy around 3pm** |  |  |  |  |  |

1. Visit the link below to test your reaction time (Experimental)

<http://www.bbc.co.uk/staticarchive/32c228ebf5c5b7a78f33fd256c84325081c06646.swf> (BBC Sheep Dash)

1. Walk around B Block 5 times. Test your reaction time again.

Report

1. Write an hypothesis for this set of investigations.
2. Use a histogram to graph your responses from both the Experiment and Quantitative Observational Design.
3. What extraneous variables might be present in this investigation and how the experimenter may have worked to avoid these?
4. What are the advantages and disadvantages of the experimental design?
5. What are the advantages and disadvantages of the quantitative design?
6. Describe two ways of controlling experimenter effects in experimental designs.
7. Write a paragraph (150 words approx) that discusses your findings from your data.
   * + does the data support the hypothesis?
     + compare the data from the two designs. Try to explain reasons for the similarities or differences?
     + what types of data were collected for each design? (subject vs objective)
     + discuss whether the ethics of this investigation are sound

**DUE DATE: Friday Week 3**