Exemplar for internal assessment resource Mathematics and Statistics for Achievement Standard 91583

Student 5: Low Achieved

Question: Does the order of questions in a questionnaire affect a student's answers to the questions?

Plan:

My questionnaire was about how many Facebook friends a person has. I wanted to test whether mentioning a link between Facebook friends and popularity first will affect the number of Facebook friends that participants put down.

To investigate this I will use two Year 13 classes as my experimental units. There will be 53 students, 30 female students and 23 male students who will be split up randomly into two groups.

Two surveys have been typed up particularly with question order in mind. One asks if popularity is defined by the amount of Facebook friends a person has then is immediately followed by a question that asks the user to state how many Facebook friends they have. The other reverses this order, asking how many friends a person has first, then asking if the number of Facebook friends defines popularity.

The treatment variable for my experiment is whether the popularity question is before or after the question asking how many Facebook friends a person has. Students only complete one survey.

The two surveys will be carefully distributed to students in the class, by members of the experiment team in order to control the number of boys and girls who receive each kind of survey removing any possible variables that might arise from the difference in gender. We will do this by randomly allocating the boys to the two surveys and then randomly allocating the girls to the surveys.

The response variable from my experiment will be the amount of Facebook friends listed by participants.

To ensure that students do not discuss the question order of their surveys or how many friends they think they might have, participants are made to fill out the survey in silence without any communication to those around them.

Analysis

In the experiment the difference between the mean number of friends when popularity was mentioned first and second was 97.9 carried out the rerandomisation test with the means. The test will see if the difference I got between the means (97.9) of the two groups is likely by chance.

The difference of 97.9 only came up 55 times in the 1000 re-randomisations. Based on the evidence (the rerandomisation test results) I would say that the order of questions does affect answers. Having the popularity question first caused answers for the number of Facebook friends that tended to be higher than when the popularity question was second.

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