

OLLSCOIL NA hÉIREANN, GAILLIMH
NATIONAL UNIVERSITY OF IRELAND, GALWAY

SEMESTER 2 (SUMMER) EXAMINATIONS 1999/2000

SOCIOLOGICAL AND POLITICAL STUDIES

2nd YEAR

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SP203 METHODS 1

Time allowed: TWO hours

Answer 4 questions.

1. (a) What is meant by random assignment in a true experimental research design?
(b) why is random assignment crucial to a true experimental design?
2. A researcher collects data by interview on a sample of households to find out if people who read 'quality' daily newspapers are more knowledgeable about politics than people who read 'tabloid' newspapers daily. The hunch was confirmed. People who read the quality newspapers were twice as likely to respond accurately to a series of questions designed to test their political knowledge. The researcher concludes that the quality dailies induce higher levels of political knowledge than the tabloids. Assess this reasoning.
3. Describe the use or function of any four of the following facilities in SPSS? Under what conditions might an analyst wish to use them?
 - (a) Select cases
 - (b) Recode
 - (c) Variable labels
 - (d) Value labels
 - (e) Missing values
4. (a) Does random error affect the reliability of a measurement procedure? Justify your answer. (40%)
(b) Describe the parallel forms and test-retest approaches to assessing the reliability of a measurement procedure. (60%)
5. (a) Does systematic error affect the reliability of a measurement procedure? Justify your answer. (40%)
(b) Describe the criterion-related validity (predictive and/or

concurrent) and the construct validity approaches to assessing the validity of a measurement procedure. (60%)

6. (a) When operationalizing a concept, why might it be useful to consider the possibility that it comprises a number of dimensions?
(b) Why are multiple item scales (such as satis which consists of satis1, rsatis2, satis3 and rsatis4) popular in research?
7. (a) What is a boxplot and what information does it convey?
(b) What problem would you anticipate if you used the mean and the range as measures of central tendency and dispersion respectively for the variable 'size of firm' in table 7.1 below?

Case number	Size of firm (number of employees)	Number of specialist functions
1	110	3
2	150	2
3	190	5
4	230	8
5	270	5
6	280	6
7	320	7
8	350	5
9	370	8
10	390	6
11	420	9
12	430	7
13	460	3
14	470	9
15	500	12
16	540	9
17	550	13
18	600	14
19	640	11
20	2,700	16

Note:

When case 20 is included Pearson's $r = 0.67$ and the regression equation is

specialisation = $5.55 + 0.00472 \text{ size}$.

When case 20 is excluded Pearson's $r = 0.78$ and the regression equation is

specialization = $0.78 + 0.0175 \text{ size}$.

8. What are the benefits and costs of relying on a sample as opposed to taking a total enumeration of a population?
9. (a) Why might a stratified random sample be superior to a simple random sample?
(b) In what contexts might multistage cluster sampling be particularly useful?
10. (a) If we wanted to see if women were more talkative than men, what would the null hypothesis and the alternate hypothesis be?
(b) What would the non-directional alternate hypothesis be?
11. A researcher wishes to determine whether there is a difference in the use of alcohol and marijuana between college freshmen and seniors. He takes samples of 100 freshmen and 100 seniors, and administers a questionnaire on drug and alcohol use. The results are shown in Table 11.1.

Table 11.1. Use of Alcohol and Marijuana by Year in College

		Year in College		
		Freshman	Senior	Total
Usage	Name	18	16	34
	Marijuana only	29	6	35
	Alcohol only	21	17	38
	Both	32	61	93
Total		100	100	200

SPSS reports that chi-square is equal to 24.70 with degrees of freedom equal to 3.

The chi-square table in a statistics text tells you that for a significance level of .05 and 3 degrees of freedom the critical value of chi-square is 7.815. Can the researcher conclude at the .05 level of significance that there is any difference between the freshmen and the seniors?

P.T.O.

12. According to Babbie, what considerations should we keep in mind when designing the layout of a questionnaire or interview schedule?
13. The regression equation for the relationship between age and autonom given by SPSS (with the latter as the dependent variable) is:

$$\text{autonom} = 6.964 + 0.06230 \text{ age} \quad r = 0.28$$

- (a) Explain what 6.964 means i.e. what information does it convey to the data analyst?
 - (b) Explain what 0.06230 means.
 - (c) What is the likely level of autonom for someone aged 54.
 - (d) As autonom is the individuals self-reported level of job-autonomy, why do we not use the full word autonomy instead for clarity's sake within SPSS?
14. EITHER
Discuss the new opportunities and challenges which the Internet presents to the social science researcher

OR

In relation to the attached web-documents:

1. Classify each document and explain briefly why you would classify the document in this way.
2. Evaluate the documents, assessing authority, accuracy, objectivity, and currency.
3. Give full citation details for the documents.
4. What sites do the documents belong to and what do you think the web addresses for those sites are?