The Polytechnic of North London
Faculty of Environmental and Social Studies

Post Qualifying Scheme

Level: Postgraduate (15 points at CNAA Master level)

Module Number: SR501

Module Title: Survey Analysis Workshop

Location: Policy Studies and Social Research

Module Convenor: John Hall (Director, Survey Research Unit)

Study Requirement:

6-9 hours per week of which 3 hours will involve timetabled classes (normally 1 hour instruction followed by 2 hour workshop/discussion). 3-6 hours should be used for private study and/or keyboard experience and follow-up exercises.

Module Objectives:

By the end of the module you will:

a) acquire practical and intellectual skills in data management and statistical analysis of single variables (univariate), two variables (bivariate) and many variables (multivariate)

b) be familiar with the language and logic of data analysis (with an emphasis on explanation as well as description) and the interface between theory and data

c) be able critically to assess published reports which include analysis of survey and similar data

d)   become sufficiently confident and proficient to tackle your own research projects in college, on placement and in employment, or as a basis for more advanced methods

e) understand how to code data from questionnaire surveys to a standard data layout and how to enter them into a file

f) understand how to define data and associated dictionary information for entry into SPSS-X and save this in a system file for future use

g) understand how to prepare and use supporting documentation

h) acquire a working knowledge of the Vax control language, VMS, and the screen editor, EDT

j) enjoy a distinct advantage in the employment market

k)   discover that survey analysis is fun and you **can** do it!

Module Assessment:

The course will be assessed by three components:

    Component 1: Data Capture and Documentation (20%)

    Component 2: Analysis and Report (60%)

    Component 3: Descriptive and Inferential Statistics (20%)

The first assignment will be to select from a British Social Attitudes Survey a topic of interest to yourself, to select questions relevant to your topic, and to use SPSS to read the relevant survey data and construct a "system file" with missing value specifications, labelling, and a frequency count, together with appropriate user-documentation. (20%)

The second will be to conduct an analysis of your chosen topic and to write a short report on your findings. (60%)

The third will consist of a set of exercises involving data management and descriptive and inferential statistics, to be designed, conducted and interpreted within a limited time. (20%)

All work for assessment must be submitted (preferably typed) double-spaced and single-sided on A4 size paper including SPSS output which must be burst before stapling and clearly marked with your correct assessment number.

For components one and two, you should prepare an outline proposal identifying your research topic and listing the variables (and related questions/items) you propose to use and your initial ideas for the line of enquiry you intend to pursue. This should be submitted on the official proposal form not later than 4pm on Friday 13th March 1992.

Assessment date(s):

Component one must be submitted not later than 4pm on Friday 27th March 1992

Components two and three must be submitted not later than 4pm on Friday 19 June 1992

All three components must have been submitted before any marks can be considered by the Examination Board.

There is no provision for extensions. Work submitted late must be accompanied by a statement of the reason(s) for lateness and, if appropriate, copies of supporting evidence.

Study Programme:

This course is heavily skill-based, but with an emphasis throughout on logic and professional standards. Statistics as such are not taught, although the procedures for producing them will be used and their rationale and results explained (in non-mathematical language!)

Teaching programme

Block I From questionnaire to SPSS-X system file   (Norusis 1990 Ch 1-6)

1   Data matrix. CASES, VARIABLES, VALUES. Coding of questionnaire data. Levels of measurement. The use of computers in survey research. Intro to Vax computer. Use of computer terminals and printer. Simple VMS commands. Special keys. Files on the Vax. Demonstration of SPSS-X. Creating and editing files with the screen editor EDT.   Entering questionnaire responses into a data file.

2   Intro to SPSS-X.   Basic structure of SPSS-X language; commands, sub-commands and specifications. Using SPSS-X to read an external data file. Records, fields, formats. Naming variables. Dictionary, active file. Displaying contents of dictionary and active files.

3   Extending a dictionary. Labelling variables and values. Missing values. Saving an external system file.

Block II One Variable   (Norusis 1990 Ch 7-8,10)

4   Describing data. Univariate distributions. Graphical representations. Retrieving an external system file. Selecting variables for analysis. Frequencies for nominal and ordinal variables. General and integer mode; treatment of missing values; absolute, relative, adjusted frequencies. Barcharts. Utilities for printing

5   Frequencies for interval variables. Cumulative percentages. Univariate statistics. Measures of central tendency and dispersion. Histograms, percentiles. Condensed format for variables with many values.

6   Data transformations. Changing the coding scheme. Derived variables. Selecting cases for analysis. Conditional frequency distributions.

Block III Two variables (and sometimes three)   (Norusis 1990 Ch 9,11,13)

7   Joint frequency distributions for two variables. Contingency tables. Dependent and independent variables. Rules for percentaging. Specifying cell contents. Percentage differences (epsilon).

8   Introducing a third variable. Conditional contingency tables. Controlling for test variables. Elaboration.

9   Handling multiple response questions. Frequencies and contingency tables using multiple response.

 10 More transformations. Creating simple scales. Comparing averages across different groups of cases.

Block IV Testing hypotheses   (Norusis: 1990 Ch 14-16,18-23)

11 Testing the differences between means from samples. The t-test. One way analysis of variance.

12   Testing for statistical independence of variables in contingency tables; the chi-square test. Observed and expected frequencies; residuals; significance levels.

13 Plotting data on scattergrams. Correlation and regression.

Presentation of findings.

14 The final session is given over to brief presentations by individuals or groups of their experiences and findings, and to course evaluation.

Essential Reading:

Norusis M J   **The SPSS Guide to Data Analysis for Release 4**
                       (ISBN 0-923967-08-7: SPSS Inc., 1990)

Further Reading:

Norusis M J**,**   **SPSS Introductory Statistics Student Guide**
                       (ISBN 0-923967-02-8: SPSS Inc., 1990)

Norusis, M J   **SPSS Base System User's Guide**
                       (ISBN 0-918469-63-5: SPSS Inc, 1990)

   Technical Report on British Social Attitudes Survey
   (Social and Community Planning Research, annually).

   British Social Attitudes (Gower, annually)

   Survey Analysis Workshop: statistical notes
   (Survey Research Unit, PNL, 1988)

Learning Materials:

Facsimile questionnaires and other material from the British Social Attitudes survey 1989.

There is some PNL Computer Services documentation on SPSS-X and the Vax and its operating system, but most of the course relies heavily on extensive documentation by John Hall.

As well as your own exercises on the 1989 British Social Attitudes data, Marija Norusis' book includes some on the 1984 General Social Survey (National Opinion Research Center, Chicago). This data set has been installed on the Vax as a SPSS system file **ASS:GSS84.SYS** and access is open to any Vax user.