

**Virginia Commonwealth University
Urban Studies and Planning**

**URSP/GEOG 313 Urban Research and Field Methods
Dr. Weiping Wu**

Assignment One

Urban sprawl is a problem now faced by many metropolitan areas in the United States. Just like any urban problem, sprawl has many facets to it—e.g. scope, causes, and consequences. After reading this article published in the popular press, you decide to begin a research project to look into the problem of urban sprawl. Before you begin the actual research, you need to plan the project. Your task for this assignment is to outline the first two stages of your project:

Stage one: Choosing the research problem

1. What is the primary research question you are most interested in regarding urban sprawl?
2. Now that you have the research question ready, please try to develop the corresponding proposition or hypothesis.
3. If you have developed a hypothesis, what are the independent and dependent variables?

Stage two: Formulating the research design

4. What would be your unit of analysis and the population?
5. If you have independent and dependent variables, how would you measure them?
6. What kind of data (e.g. population, land area) will you need to gather? From what sources (e.g. primary)?

In completing this assignment, you are expected to type or print your answers and hand it in to me at the beginning of the class on September 7.

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Assignment Two

Survey Research: Sample Selection and Instrumentation

Now that you have learned how to plan a survey, you are ready to design the sample and survey instrument. Here are three potential survey topics. First choose one that most interests you:

- I. Digital divide – to explore how Internet access may vary among Richmond residents of different socio-economic status (e.g. income, employment status, or ethnic background) and educational background, using a sample of 500 residents.
- II. Employment expectation – to see what types of future employment prospective (e.g. types of job, salary, or place of work) VCU students may hold and how such perspectives may be related to their academic performance, using a sample of 300 students.
- III. Social network – to determine what types of social relations (with families, friends, peers, or interest groups) VCU students may have and how such relations may be related to students' demographic characteristics, using a sample of 400 students.

Then you are to work on the following elements of the survey:

Sampling design

1. Clearly state what your sample frame is. Practicality is important here since you are going to conduct the survey soon. So you need to be sure that you can actually obtain the list that you desire. Otherwise, make sure that you devise a sample frame that allows you to sample without a prior listing.
2. Choose a sample selection method and describe the key steps in selecting your respondents.

Designing the survey instrument

3. List the information needs for the survey and prioritize them.
4. Compose five questions that relate directly to your information needs (just questions and no need for response alternatives for now). Keep in mind that you need to look for relationships between variables using cross tabs and regression in future analysis. For cross tabs you need ordinal or nominal scale data. For regression analysis you need interval or ratio scale data.

The assignment is due on September 23. You are encouraged to type your answers since you will be revising the questions later and reproducing the questionnaire for the actual survey.

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Assignment Three

Developing a Questionnaire

This work is to be done in groups of three. You and your partners need to work together to complete the following:

1. Consolidate and revise the questions each of you have composed, and organize them into a questionnaire with at least 15 questions. You need to put the questions in a sequence that is most conducive to good responses. Again remember the questions need to relate directly to your information needs.
2. Design response alternatives and response codes for all of the questions, which should allow for cross tab (nominal or ordinal scale data) and regression analysis (interval or ratio scale data) in the future.
3. Draft a consent form to be used in the actual survey.

The assignment, which should be in the actual questionnaire format, is due on September 30. (Each group only needs to turn in one copy of the assignment. If you wish, you can indicate how three of you have divided up the assignment.)

Grading will be based on the following criteria as applied to the questions and format.

- Clear and unambiguous questions
- Unbiased and non-leading questions
- Language is simple, free of jargon and slang
- Questions respond to research information needs, and will provide data needed to do cross tab and regression analysis
- Recording format is easy to follow.

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Assignment Four

Administering a Survey

This part is to be done in a group of six/seven. You and your partners need to go to an appropriate location and administer the survey together. Each person is to obtain four (4) completed questionnaires. This part should be done before October 16, and you need to bring the completed questionnaires to class on that day.

Entering Data

This part is to be done by yourself. You need to enter data from the four completed questionnaires into a SPSS file in a format ready for analysis, with all variables defined.

For this assignment, you need to turn in three things on October 28:

1. All four questionnaires you have completed,
2. A printout of the SPSS data file (data view), and
3. A printout of the SPSS variable view or file information.

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Assignment Five

Data Description

You need to use the master file **Employment011018.sav** to do the following four tasks for this assignment. Remember to save your own files.

1. Recode variable “x12 (salary)” into a new variable with the following six categories and define the attributes of the new variable:
1=under \$20000
2=\$20000 to \$29999
3=\$30000 to \$39999
4=\$40000 to \$49999
5=\$50000 to \$59999
6=\$60000 and above

For this, you need to turn in the syntax file printout for the recoding and a printout of the variable view for the new variable.

2. Run frequencies for five variables (x1, x2, x6recode, x9, and x15) and turn in the results.
3. Select and calculate the best indicator to measure central tendencies for seven variables (x4, x6, x8, x10, x11, x12, and x13), and turn in the results.
4. Write a one-page (between 600-800 words) summary report for the survey on employment expectations of VCU students. You should at least report on the results obtained from tasks 2 and 3 above, and are welcome to include analysis of other variables.

For this assignment, you need to turn in the above four things on November 4.

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Assignment Six

Data Association

You need to use the master file **Employment011018.sav** to do the following four tasks for this assignment. Remember to save your own files.

1. Choose the best statistical tool (among cross-tab, ANOVA, correlation, and linear regression) and use SPSS to analyze relationships for the follow six pairs of variables. Make sure the results you turn in include the appropriate measures of association (e.g. chi-square for cross-tab, F for ANOVA, r-square for regression) and statistical significance.
 - (1) x6recode and x8
 - (2) x6recode and x11
 - (3) x6recode and x12
 - (4) x1 and x12
 - (5) x13 and x12
 - (6) x12 and x6
2. Select the two pairs of variables with the most significant relationships from the above six pairs, and create two tables (based on your SPSS results) that are easier to understand and can be included in your report written in a word processing program in task 3.
3. Write a summary report (no more than 600 words) for the above analysis of the six pairs of variables, with interpretations of the measures of association and statistical significance. Make sure that your report also includes the two tables you have created in task 2.

For this assignment, you need to turn in the SPSS results and report on November 18.