

UEP Policy and Planning Competency Grid

Course Name/Number: UEP 254/Quantitative Reasoning Instructor: Mary Davis

Semester: Spring 2009

| a) Knowledge Competencies | Specific sub-competencies or examples as developed in this course |
|---|--|
| 1. History, structure, function of urban and metropolitan settlements | |
| 2. Economic influences on policy and planning (e.g. 'market' and 'polis' relationships) | |
| 3. Environmental, social and cultural influences on policy and planning | |
| 4. Understanding different roles in policy and planning | |
| i) Levels of government | |
| ii) Governance structures | |
| iii) Citizens and residents | |
| iv) NGOs | |
| 5. History, theory and processes of policymaking | |
| 6. History, theory and process of planning | |
| 7. Implementation of policy and planning | |

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| 8. Evaluation of policy and planning | Major focus on the basic quantitative tools used to compare and predict policy outcomes. This includes generating and evaluating statistics such as t-tests, correlations, and simple linear regression. |
| 9. Administrative and legal aspects of policy | |
| 10. Administrative and legal aspects of planning | |
| 11. Politics of policy and planning | |

| b) Skills Competencies | Specific sub-competencies or examples as developed in this course |
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| 1. Critical thinking | Major focus on hypothesis development and moderate focus on study design. |
| i) Defining problem | |
| ii) Documenting the extent of a problem | Moderate focus on data collection methods, including a discussion primary and secondary data sources. |
| iii) Documenting the political and social context | |
| iv) Documenting the environmental and spatial context | |
| v) Identifying possible analysis strategies and their implications | Major focus on the basic quantitative tools used to compare and predict policy outcomes. This includes generating and evaluating statistics such as t-tests, correlations, and simple linear regression. |
| vi) Identifying criteria for proposing solutions | |
| vii) Identifying criteria for selecting solutions | |
| viii) Evaluating the development and results of policies and plans | |

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| 2. Research skills | Moderate focus on issues related to proper study design. |
| i) Understanding research design | |
| ii) Collecting relevant literature | |
| iii) Analyzing relevant literature | |
| iv) Identifying and assessing data sources and limitations | Moderate focus on data collection methods, including a discussion primary and secondary data sources. |
| v) Developing data collection instruments and tools | Moderate focus – students encouraged through extra credit assignments to search for secondary data sources in an area of specific interest to them. |
| 3. Data Analysis skills | Major focus on utilizing STATA statistical software to compile, manipulate, and quantitatively analyze data. |
| i) Interpreting and synthesizing data | |
| ii) Drawing inferences from specific observations to make | Major focus on the basic quantitative tools used to draw inferences, such as p-values, t-tests, hypothesis tests, confidence intervals, etc. |
| iii) More generalizable findings | Moderate focus on the limitations and pitfalls related to generalizing quantitative findings outside the range of available data. |
| iv) Comparative analysis | Major focus on the basic quantitative tools used to compare and predict policy outcomes. This includes generating and evaluating statistics such as t-tests, correlations, and simple linear regression. |
| v) Longitudinal analysis | |
| vi) Recognizing and accounting for limitations to findings | Moderate focus on the limitations and pitfalls related to generalizing quantitative findings outside the range of available data. |
| 4. Qualitative Analysis skills | Moderate focus on issues related to proper study design and collection of primary data. |
| i) Direct observation | |
| ii) Analysis of primary qualitative data | |
| iii) Analysis of secondary qualitative data | |

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| 5. Quantitative Analysis skills | |
| i) Descriptive statistics | Major focus on how to generate and interpret descriptive statistics in STATA statistical software, along with a detailed discussion of how direct interpretation of descriptive statistics can be misleading, i.e., median vs. mean. |
| ii) Inferential statistics | Major focus on underlying probability theory and the normal distribution, as well as how to interpret the results of statistical tests. |
| iii) Basic forecasting | Major focus at the end of the course on simple linear regression and methods of forecasting, not including time series or other more complicated forecasting models. |
| iv) Use of spreadsheets and statistical software | Major focus on learning STATA statistical software throughout the course, including weekly lab periods and assignments. |
| 6. Spatial Analysis skills | |
| i) Understand how to identify spatial problems and frame spatial questions for analysis and research | |
| ii) Use Geographic Information System for basic spatial analysis and mapping | |
| 7. Communication skills | |
| i) Writing skills | |
| ii) Speaking skills | |
| iii) Graphic presentation skills | Major focus on generating graphics, such as histograms, boxplots, linegraphs, etc., in STATA statistical software. |
| iv) Presentation strategies and methods | |

| c) Policy and Planning in Practice Competencies | Specific sub-competencies or examples as developed in this course |
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| 1. Collaboration skills i) Negotiation | |
| ii) Group project management | |
| iii) Group problem solving | |
| iv) Perspective-taking | |
| v) Adaptability, flexibility | |
| vi) Networking | |
| 2. Organizational management skills i) Decision making | |
| ii) Strategic problem solving and adapting to change | |
| iii) Human resource development | |
| iv) Financial management and resource development | |
| 3. Political and economic power mapping skills i) Understanding political and economic power structures and dynamics | |
| ii) Modes of influencing their use | |
| 4. Ethical and professional behavior skills i) Understanding and upholding the role of ethics and accountability in professional policy and planning processes, practices, and behavior | |

