

Decision Analysis I
15:230:522 - Section 01
3 Credits
Spring 2015

Instructor: Dr. Thomas Tramaglini	Day & Time: Thursday's 4:50 PM – 7:30 PM
Phone Number: (732) 713-4899	Location: Scott Hall Room 207
Email: ttram@rci.rutgers.edu Google Hangout: twtramaglini@gmail.com Twitter: @TomTramaglini	Office Hrs: As per request of student/Online or In-Person
Mode of Instruction: <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <input checked="" type="checkbox"/> Lecture <input type="checkbox"/> Seminar </div> <div style="text-align: center;"> <input type="checkbox"/> Hybrid <input type="checkbox"/> Online </div> </div>	

Learning goals

Students in this course will:

- Identify multiple modes of quantitative data and synthesize data using multiple tools for analysis (Indicators, Ratios, Descriptive Statistics, Finding and Interpreting Relationships, Evaluating Change over Time, etc.)
- Understand applications associated with the analysis of data
- Evaluate current issues in educational organizations using learned data analysis tools
- Analyze, evaluate and find relationships between multiple data that yield evidence to the contrary of what is considered normal or practical
- Find and interpret statistical understanding of data in authentic contexts
- Use data to inform decision-making
- Synthesize the principles of research-based data-analysis to guide focused decision making
- Exhibit leadership and organizational skills while working in a cooperative group situation
- Effectively work with colleagues to solve simple and complex problems

Course catalogue description

Introduction to decision making in organizations; focuses on organizational missions, goals, and practical techniques for developing decision-making strategies; emphasizes use of microcomputers for quantitative decision-making.

Class materials/ Textbooks:

Baker, B.D., & Richards, C.E. (2004). *The ecology of educational systems: Data models and tools for improvisational leading and learning*. Upper Saddle River, NJ: Pearson Merrill Prentice-Hall.

Hoy, W. K. & Tarter, C. J. (2008, 2004). Administrators solving the problems of practice: Decision-making cases, concepts, and consequence, 3rd edition. Boston: Allyn & Bacon.

****Please purchase used for cheapest cost possible*

Other readings as assigned throughout the semester as per student need and course topics that arise

This class will use eCollege as the course web space

Course Information:

Decision Analysis I is a course that focuses on quantitative decision making in organizations, specifically educational organizations. The class concentrates on practical applications of different analytical data tools and techniques, which are grounded in theory and sound methodological research to examine authentic organizational contexts and drive decision-making. Decision Analysis I emphasizes the use of microcomputers for quantitative decision-making.

State or Professional Organization Standards:

This course meets the following requirements of the State of New Jersey and Rutgers, The State University of New Jersey

1. **General Leadership:**
 - **New Jersey Administrative Code Requirement 6A: 9-12.5 (a) 2:**
 - i. Leading a common vision of learning in the school community (elements of developing and implementing shared vision);
 - v. Leading with integrity and fairness;
2. **Instructional Leadership:**
 - **New Jersey Administrative Code Requirement 6A: 9-12.5 (a) 2:**
 - i. Leading a common vision of learning in the school community (instructional elements);
 - ii. Leading a climate and culture conducive to student learning and staff professional growth;
3. **Management:**
 - **New Jersey Administrative Code Requirement 6A: 9-12.5 (a) 2:**
 - iii. Leading a safe and effective environment for learning;
4. **Context/Community:**
 - **New Jersey Administrative Code Requirement 6A: 9-12.5 (a) 2:**
 - iv. Leading the mobilization of resources, response to diverse needs, and collaboration with families and communities;
 - vi. Leading with a perspective of the larger political, social, economic and legal context;

ISLLC Standards Addressed in this Course:

Standard 1: An education leader promotes the success of every student by facilitating the development, articulation, implementation and stewardship of a vision of learning that is shared and supported by all stakeholders.

- A. Collaboratively develop and implement a shared vision and mission
- B. Collect and use data to identify goals, assess organizational effectiveness, and promote organizational learning
- C. Create and implement plans to achieve goals
- D. Promote continuous and sustainable improvement
- E. Monitor and evaluate progress and revise plans

Standard 2: An education leader promotes the success of every student by advocating, nurturing, and sustaining a school culture and instructional program conducive to student learning and staff professional growth.

- A. Nurture and sustain a culture of collaboration, trust, learning and high expectations
- B. Create a comprehensive, rigorous, and coherent curricular program
- C. Create a personalized and motivating learning environment for students
- D. Supervise instruction
- E. Develop assessment and accountability systems to monitor student progress
- F. Develop the instructional leadership capacity of staff
- G. Maximize time spent on quality instruction
- H. Promote the use of the most effective and appropriate technologies to support teaching and learning
- I. Monitor and evaluate the impact of the instructional program

Standard 4: An education leader promotes the success of every student by collaborating with faculty and community members, responding to diverse community interests and needs, and mobilizing community resources

- A. Collect and analyze data and information pertinent to the educational environment
- B. Promote understanding, appreciation, and use of the community's diverse cultural, social, and intellectual resources

New Jersey Professional Standards for School Leaders Addressed in this Course

Standard One: School administrators shall be educational leaders who promote the success of all students by facilitating the development, articulation, implementation and stewardship of a vision of learning that is shared and supported by the school community.

i. Administrators have knowledge and understanding of:

- (1) Learning goals in a pluralistic society;
- (2) The principles of developing and implementing strategic plans;
- (3) Systems theory;

- (4) Information sources, data collection and data analysis strategies;
- (5) Effective communication; and
- (6) Effective consensus-building and negotiation skills.

ii. Administrators believe in, value and are committed to:

- (10) Assessment data related to student learning are used to develop the school vision and goals;
- (11) Relevant demographic data pertaining to students and their families are used in developing the school mission and goals;
- (12) Barriers to achieving the vision are identified, clarified and addressed;
- (15) The vision, mission and implementation plans are regularly monitored, evaluated, and revised.

Standard Two: School administrators shall be educational leaders who promote the success of all students by advocating, nurturing, and sustaining a school culture and instructional program conducive to student learning and staff professional growth.

i. Administrators have knowledge and understanding of:

- (1) Student growth and development;
- (4) Curriculum design, implementation, evaluation and refinement;
- (5) Principles of effective instruction;
- (6) Measurement, evaluation and assessment strategies;
- (7) Diversity and its meaning for educational programs;
- (8) Adult learning and professional development models;
- (10) The role of technology in promoting student learning and

Administrators believe in, value and are committed to:

- (1) Student learning as the fundamental purpose of schooling;
- (2) The proposition that all students can learn;
- (3) The variety of ways in which students can learn;

iii. Administrators facilitate processes and engage in activities ensuring that:

- (16) A variety of sources of information is used to make decisions;
- (17) Student learning is assessed using a variety of techniques;
- (18) Multiple sources of information regarding performance are used by staff and students;

Standard Four: School administrators shall be educational leaders who promote the success of all students by collaborating with families and community members, responding to diverse community interests and needs, and mobilizing community resources.

i. Administrators have knowledge and understanding of:

- (1) Emerging issues and trends that potentially impact the school community;
- (2) The conditions and dynamics of the diverse school community;

- (3) Community resources;
- (4) Community relations and marketing strategies and processes; and
- (5) Successful models of school, family, business, community, government and higher education partnerships.

ii. Administrators believe in, value and are committed to:

- (1) Schools operating as an integral part of the larger community;
- (2) Collaboration and communication with families;
- (3) Involvement of families and other stakeholders in school decision- making processes;
- (4) The proposition that diversity enriches the school;
- (5) Families as partners in the education of their children;
- (6) The proposition that families have the best interests of their children in mind;

Grading and Activities:

Grading:

Leadership Interview	5 points possible
Assignment #1	15 points possible
Assignment #2	20 Points Possible
Assignment #3 (Demonstration Task)	
-Demonstration Task Product	20 Points Possible
-Presentation (Group)	10 Points Possible
Class/Take-Home Assignments	15 Points Possible
Course Participation/Attendance/ Cases/Willingness*	15 points possible

*To embrace new positions when presented with new knowledge/Synthesis of readings/Depth of answers. (poor attendance will negatively affect final grade) (minimum of 2pts off final grade for each class missed) (late papers penalized ½ grade: A to B+, etc.)

Academic Integrity Policy:

The Office of Student Conduct supervises issues related to violations of academic integrity

(see <http://academicintegrity.rutgers.edu>). Please familiarize yourself with the university policy on academic integrity at

http://academicintegrity.rutgers.edu/files/documents/AI_Policy_2013.pdf

Office of Disability Services:

Rutgers University welcomes students with disabilities into all of the University's educational programs. In order to receive consideration for reasonable accommodations, a student with a disability must contact the appropriate disability services office at the campus where you are officially enrolled, participate in an intake interview, and provide documentation: <https://ods.rutgers.edu/students/documentation-guidelines>. If the documentation supports your request for reasonable accommodations, your campus's disability services office will provide you with a Letter of Accommodations. Please share this letter with your instructors and discuss the accommodations with them as early in your courses as possible. To begin this process, please complete the Registration form on the ODS web site at: <https://ods.rutgers.edu/students/registration-form>.

Course Schedule:

Tentative list of topics for discussions (by week)

Week	Week Of	Topic	Assignments/ Readings
1	1.22.2015	Course introduction; <i>Pre-Assessment</i> ; Theory and Research of Using Data; Types of data; elements of data; databases; basic data manipulation	Assigned Reading(s): <i>Read Chapters 2 & 3 (Baker & Richards)</i> <i>*All assigned reading is homework due by the next week's class</i> Course <i>Pre-Assessment</i> : Why is quantitative analysis important to educational or organizational decision-making? What data tools can be utilized to promote sound analytical expertise to support decision-making in organizations?
2	1.29.2015	Descriptive Statistics; Mining Data; Presenting Descriptive Statistics [Writing and Visual]; Writing Policy Briefs and Memos; Organizing Data; Cleaning Data; Data Management; Filtering; Sorting; Manipulation;	Assigned Reading(s): <i>Read Chapter 4 (Baker & Richards)</i>
3	2.5.2015	Indicators and Ratios; Mining Data and Making Interpretations from Descriptive Data; Ratios; Value-Added Models (VAM); Building Simple and Advanced Indexes	Assigned Reading(s): <i>Read Chapter 5 (Baker & Richards)</i> Introduce Assignment #1
4	2.12.2015	Standard Distributions; Understanding a Descriptive Statistics Array; Ranks;	Assigned Reading(s): <i>Read Chapter 6 (Baker & Richards)</i>

		Percentiles; Comparing Distributions and Statistical Significance	Assignment #1
5	2.19.2015	Similarities and Differences; Group Analysis; Educational Research and Practice- what to believe?	Assigned Reading(s): <i>Read Chapter 7 (Baker & Richards)</i> Assignment #1 Due
6	2.26.2015	Time as a Variable; Organizational Relationships; x and y values; Scatter plots; Simple Correlation and Significance; Effect Sizes; Lines of Best Fit; Input-Outcome Relationships	Assigned Reading(s): <i>Read Chapter 8 & 9 (Baker & Richards)</i> Introduce Assignment #2
7	3.5.2015	Evaluating Data and Trends over Time; Manipulating Data to Find Patterns	Assigned Reading(s): <i>Read Chapter 10 (Baker & Richards); Chapter 1 (Hoy & Tarter)</i> Assignment #2
8	3.12.2015	Quasi-Action Research; Data Work; The Rational Model of Decision Making; In-Class Case – Sour Notes (5.8)	Assigned Reading(s): <i>Read Chapter 2 (Hoy & Tarter)</i>
	3.19.2015	Spring Break	
9	3.26.2015	Decision Making: Optimizing and Satisficing; In-Class Case – The Teachers' Council	Assigned Reading(s): <i>Read Chapter 3 (Hoy & Tarter)</i> Assignment #2 Due
10	4.2.2015	Decision Making: Muddling and Scanning In-Class Case – Crisis in Marshall Creek	Assigned Reading(s): <i>Read Chapter 4 (Hoy & Tarter)</i> Presentation
11	4.9.2015	Decision Making: Garbage and Politics ; Demonstration Task – Introduction	Assigned Reading(s): <i>Read Chapter 6 (Hoy & Tarter)</i>
12	4.16.2015	Demonstration Task; Leadership Profile (interview)	Leadership Profile Paper; Demonstration Task
13	4.23.2015	Shared-Decision Making: A Comprehensive Model; In-Class Case – The Curriculum Dilemma; Demonstration Task	Assigned Reading(s): <i>Read Chapter 7 (Hoy & Tarter)</i> Leadership Profile Paper Due; Demonstration Task
14	4.30.2015	Shared-Decision Making: A Simplified Model; Demonstration Task Demonstration Task Due	Assigned Reading(s): <i>Complete (Hoy & Tarter)</i>
15	5.7.2015	Demonstration Task Revisions Due Class Presentations	Complete Demonstration Tasks

Recommended Readings

- Bloom, B. (1984). The 2 sigma problem: The search for methods of group instruction as effective as one-on-one tutoring. *Educational Researcher*, 13(6), 4-16.
- Choi, K., Goldschmidt, P., & Yamashiro, K. (2005) Exploring models of school performance: *From theory to practice*. In J.L. Herman & E.H. Haertel (Eds.), *Uses and misuses of data for educational accountability and improvement: The 104th yearbook of the National Society for the Study of Education* (pp. 119-146). Malden, MA: Blackwell Publishing.
- Coleman, James S. (1966). Equality of educational opportunity study [Computer file]. ICPSR06389-v3. Washington, DC: U.S. Department of Health, Education, and Welfare, Office of Education/National Center for Education Statistics [producer], 1999. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor], 2007-04-27. doi:10.3886/ICPSR06389
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Erlbaum.
- Goodlad, J. (1984). *A place called school: Prospects for the future*. New York: McGraw-Hill.
- Smith, E.R., & Tyler, R.W. (1942). *Appraising and reporting student progress*. New York, NY: Harper and Row.
- Tramaglino, T.W. (2007). Dangers of percentages proficient: Analysis of interpretations of high-stakes assessment results on the New Jersey School Report Card. *New Jersey Journal of Supervision and Curriculum Development*, 52(1), 18-32.
- Wang, M.C., Haertel, G.D., & Walberg, H.J. (1993). Toward a knowledge base for school learning. *Review of Educational Research*, 63(3), 249-294.
- Zhao, Yong. (2009). *Catching up or leading the way: American education in the age of globalization*. Alexandria, VA: Association for Supervision and Curriculum Development.