MEASURES OF INTERDISCIPLINARITY

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What is interdisciplinarity?

- Faculty
  - Joint appointments
  - Research efforts
- Disciplines
  - Emerges from 2 or more other disciplines
    - Psychology + Neurology + Molecular & cell biology = Neuroscience
- Students
  - Interdisciplinary degree programs
What is interdisciplinarity?

• “Interdisciplinary research is a mode of research by teams or individuals that integrates information, data, techniques, tools, perspectives, concepts, and/or theories from two or more disciplines or bodies of specialized knowledge to advance fundamental understanding or to solve problems whose solutions are beyond the scope of a single discipline or area of research practice.”

• National Academies
Benefits of interdisciplinarity

• Innovation
• Pushes fields forward and accelerates scientific discovery (NSF)
• We are not students of some subject matter, but students of problems. And problems may cut right across the borders of any subject matter or discipline.
  • Karl Popper
Call to measure interdisciplinarity

• Mizzou Advantages
  • Food for the Future
  • Media of the Future
  • One Health, One Medicine: The Convergence of Human and Animal Health
  • Sustainable Energy
  • Managing Innovation: Navigating Disruptive and Transformational Technologies
  • Educational Programs

• National Research Council Interdisciplinarity - % Faculty Interdisciplinarity

• National Science Foundation
Issues of measuring interdisciplinarity

• Collection of data
  • Joint appointments
  • Publications/citations
  • Grants – PI and CoPI
  • Dissertation committees

• Reporting tool
  • Matrices
  • Networks
Matrix
Networks

- Konisberg Bridge Problem
Network Analysis
Questions/issues

• Data
• Is it possible to quantify matrices?
• How to describe visual networks?
• Other?
For more information/ideas

- Email: feltsk@missouri.edu
- Presentation will be made available at:
  - http://ir.missouri.edu/reports-presentations.html