Assessing the Intra-Departmental Social Networks of Male and Female STEM Faculty: A Preliminary Analysis

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Recommended Citation
Holloway, Stacie F. PhD; Kallen, Rachel PhD; Howe, Steve PhD; and Eiler, Brian, "Assessing the Intra-Departmental Social Networks of Male and Female STEM Faculty: A Preliminary Analysis" (2014). ADVANCE-Purdue Gender and STEM Research Symposium. 1.
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Brian Eiler, Stacie Furst Holloway, Rachel Kallen, and Steve Howe

UC LEAF
Introduction

• Social relationships and intra-organizational networking have repeatedly been shown to predict career success (Sparrowe, Liden, Wayne, & Kraimer, 2001)

• Building social networks may be difficult when STEM women enter into an area where they are judged, implicitly or explicitly, to be less competent outsiders.
Specific Aims

• A key component to analyzing the success of the ADVANCE program at the University of Cincinnati (UC LEAF) entails assessing the social climate through real connections between people within UC.

• We will use data to examine whether the networks of men and women faculty within each department differ according to various network characteristics.
Method

• Closed network data from faculty in each of UC’s STEM departments to assess department-level network characteristics.

• Differences between networks of men/women
  – Number of ties
  – Tie types (e.g. research, professional, support)
  – Quality of ties (e.g. rank of others)
Networks in the Department of Biological Sciences

• Support networks
  – Mentorship
  – Trust
  – Friendship
  – Diversity

• Collaboration networks
  – Research (support, desired, actual)

• Comparisons between men and women
  – Likelihood to leave UC
Biology Mentorship Network

http://docs.lib.purdue.edu/advancegst/2013/presentations/4
Biology Trust Network
Biology Friendship Network

http://docs.lib.purdue.edu/advancegrs/2013/presentations/1
Biology Diversity Network

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Biology Research Collaborator Support Network

http://docs.lib.purdue.edu/advancegsr/2013/presentations/1
Biology Research Desired Collaborators Network

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Biology Research Actual Collaborators Network

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Application

• Logic models to be used in trainings with department heads to address department specific issues

• Individual feedback during workshops aimed at improving networking skills and developing better networks

• Better understand what constitutes a ‘good’ network
Future

• Network data to be compared longitudinally as a measure of UC LEAF success

• Archival data (e.g. publication, funding) and climate survey results to be integrated with social network data