



Social Network Theory and the Writing Enriched Curriculum Program

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Driven to DiscoverSM



Introduction to WEC

Faculty-driven participatory model for understanding and improving writing in disciplines

Members of the WEC staff coordinate meetings of instructional faculty to answer “What constitutes good writing in our field? With what abilities should students in our majors graduate?”

Based on answers to these questions, we examine all courses and curricula to determine where and how these abilities are addressed and assessed.

60 departments, colleges, and programs comprising 100 majors



What is Social Network Theory?

Alan Dailey, in *Social Network Analysis and Educational Change*

“Change processes ultimately emerge and are maintained through interpersonal relationships, and it is the interdependence of relational ties that may ultimately moderate, influence, and even determine the direction, speed, and depth of a change.”

While programs and institutional bureaucracy serve both documentary and legitimation functions within institutions, successful educational change relies upon and encourages the development of networked relationships and networked knowledge.



What is Social Network Analysis?

A visual and statistical modeling technique that both describes a set of relationships and the qualities of their connections. Unlike an org chart, the map connects persons and events not based on lines of reporting, but on multiple potential connections.

Visually, the maps create the opportunity to identify central actors, frequent participants, and the flows, paths and boundaries of WEC participation.

Statistically, visualization software can render relationships in ways that illustrate the frequency and strengths of connections between actors, and suggest strategies for better establishing weak connections.



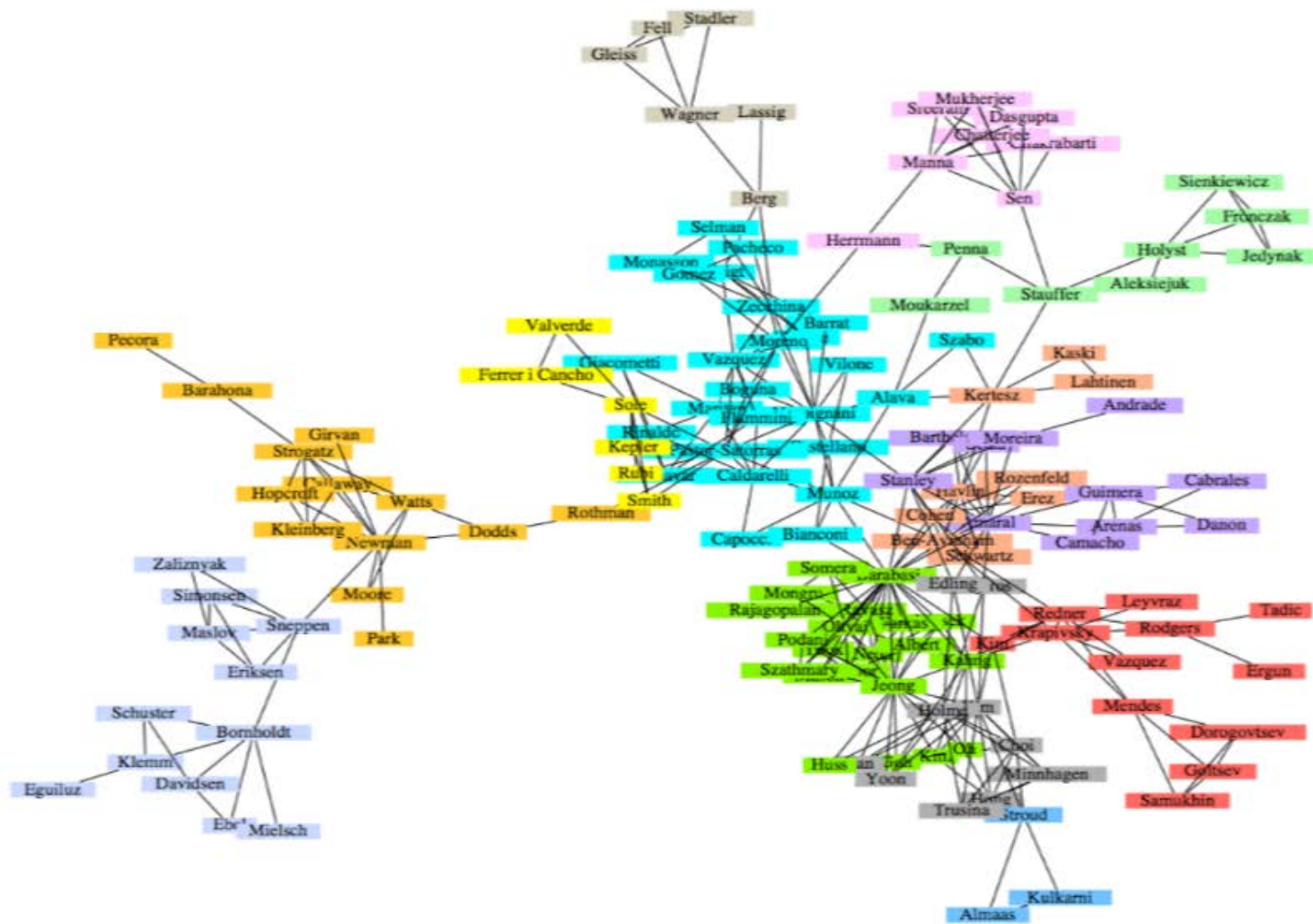


Figure 3.12: A co-authorship network of physicists and applied mathematicians working on networks [322]. Within this professional community, more tightly-knit subgroups are evident from the network structure.



What makes it cool for WAC work?

Accounts for the pockets of innovation effect (Tagg, etc)

Presents an opportunity to examine which sorts of interactions lead to the likelihood of desired outcomes (Miller, Hughes, Zawacki)

Demonstrates the advantage of a WEC model of writing across the curriculum and distinguished from earlier models like WI

Provides opportunities for additional statistical analysis, including longitudinal assessments of networks, network life cycles, knowledge transfer, and distributed knowledge and leadership.



What it will mean at Minnesota?

Retrospectively- categorizing the interactions of the WEC model and accounting for participation by department members (actors) and programming activities (events).

Which interactions and programs seem to illustrate the strengthening connections?

Which interactions and programming opportunities seem to generate new connections?

Prospectively- categorizing interactions between WEC participants at cross departmental WEC activities

WEC coffee talks: Quantitative reasoning and visualization, Clinical reasoning, Peer response technologies, College comparisons

We can use SNA to see if these meetings have consequences for the diffusion of implementation practices, the leveraging of existing collaborative and task oriented collaborations, and the emergence of new collaborative networks.



Bibliography

Daly, Alan J. *Social Network Theory and Educational Change*. Cambridge, Mass: Harvard Education Press, 2010. Print.

Hansen, Morton T. "The search transfer problem: the role of weak ties in sharing knowledge across organizational subunits." *Administrative Science Quarterly*, 44.1, 1999.

Kezar, Adrianna. "Higher education change and social networks: A review of research." *Journal of Higher Education*, 85.1, 2014

Mardsen, Peter. "Recent developments in network measurements." in *Models and Methods in Social Network Analysis*. Carrington, Scott, and Wasserman, eds. Cambridge: Cambridge UP, 2005.

Prell, Christina. *Social network analysis: History, theory and methodology*. London: Sage, 2012.

Reagans, Ray and Bill McEvily. Network structure and knowledge transfer: The effects of cohesion and range. *Administrative Science Quarterly*, 48.2, 2003.

Scott, John and Peter Harrington. *The Sage Handbook of Social Network Analysis*. London: Sage, 2013.

