Career Pathway Development: An Analysis of Social Networks As a Strategy for Transformative Change in Community Colleges

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IMPAQ International, LLC (IMPAQ) serves as the third-party evaluator of a regional workforce development program, "ABC". ABC is administered through a consortium of 11 California community colleges, a lead community college district ("ABC Lead"), and multiple partners and is funded by a U.S. Department of Labor (DOL) grant to support the development of career pathway programs in high-wage job sectors. ABC program offerings vary across the 11 participating colleges, but all target at least one of three priority career clusters (i.e., Advanced Manufacturing, Biotech, and Transportation and Logistics) each semester. The evaluation design is quasi-experimental, with two major components—an outcomes study and an implementation study, which includes a social network analysis (SNA).

This poster focuses on the SNA, through which the IMPAQ evaluators examine the relationships and information sharing between key partners in the grant funded ABC consortium.

RESEARCH OBJECTIVES

- The objective of the SNA is to better understand collaboration around career pathway development throughout the region.
- The analysis presented here provides information necessary for evaluators to begin to understand how the collaborative structures supported through the ABC program have contributed to effective career pathway development in this region.

METHODS

- A social network questionnaire asked consortium participants about their organization, industry cluster and the names of people with whom they collaborate.
- Evaluators invited 270 individuals to complete the questionnaire and collected responses from 169 (63 percent) of them.
- Survey responses were tabulated by participants' organizations and industry cluster.
- The network data was imported into UCINET 6 (Borgatti, Everett & Freeman 2002), a software package designed for network analysis.
- Betweenness centrality scores for each organization, or node, in the network represent the extent to which a node is directly connected to nodes that are not directly connected to each other.
- Two network maps for each cluster are displayed. One with all partners and one without the ABC Lead, their consultants and the Deputy Sector Navigators (DSNs), positions funded by the CA Community College's Chancellor's office also aimed at building career pathways.

Exhibit 1. Advanced Manufacturing Cluster, All Partners

105 Nodes
289 Ties

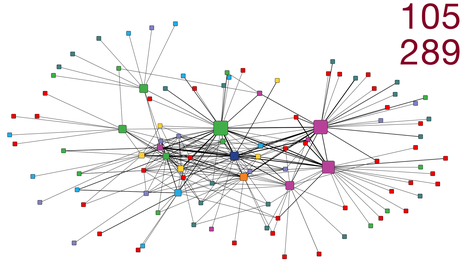


Exhibit 2. Advanced Manufacturing Cluster, without DOL Grant and State Grant Partners

94 Nodes
172 Ties

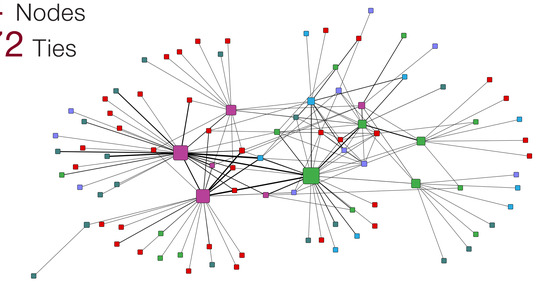


Exhibit 3. Biotech Cluster, All Partners

77 Nodes
233 Ties

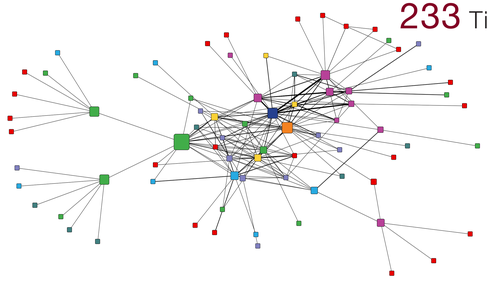


Exhibit 4. Biotech Cluster, without DOL Grant and State Grant Partners

62 Nodes
125 Ties

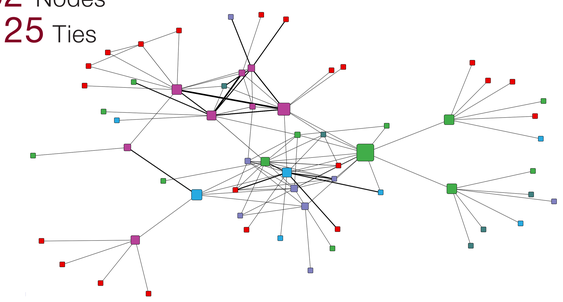


Exhibit 5. Transportation and Logistics Cluster, All Partners

74 Nodes
208 Ties

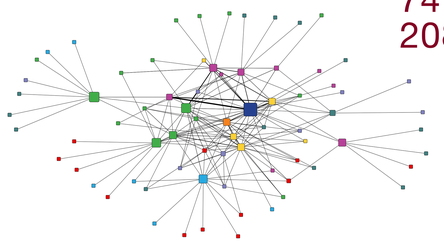
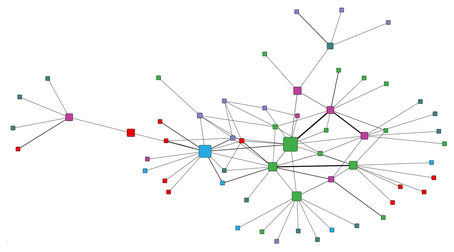


Exhibit 6. Transportation and Logistics Cluster, without DOL Grant and State Grant Partners

60 Nodes
99 Ties



- DBS Lead
- Education Partners
- Economic Development Partners
- Workforce Development Partners
- Deputy Sector Navigator Grant
- DBS College
- DBS Consultants
- Employer Partners
- Other Comunity Partners

FINDINGS

- More than half of respondents work outside the participating ABC colleges, which receive the bulk of DOL grant funds.
- The Advanced Manufacturing cluster has more participating organizations (105) than both Biotech (77) and Transportation and Logistics (74).
- Across clusters the ABC Lead, consultants and DSNs are central and have a large proportion of the network ties.
- When these nodes were removed from the network, the number of ties decreases by 40% within the Advanced Manufacturing cluster, 46% within Biotech and 52% within Transportation and Logistics.
- When the DOL grant and DSN funded organizations are removed from the networks, workforce development partners and to a lesser extent participating colleges have relatively high betweeness scores.

IMPLICATIONS

- Our analysis suggests that the DOL and state grant funding has supported the development of partnerships in the early phases of grant implementation.
- The grant funded organizations are not consistently serving a brokering function within the networks.
- Because workforce development and community college partners are positioned to act as brokers within the networks, there is potential for this regional collaboration to be sustained after the grant funding ends.

NEXT STEPS

- Evaluators will administer a second survey in Fall 2015 when the collaborative networks are more developed.
- We will consider new and improved ways of presenting descriptions of the various networks and will focus on network measures that will be most meaningful to the client, the ABC consortium.
- Futher analyses will focus on the distinction between new collaborations (arising as a result of the grant) versus pre-existing partnerships as well as changes in network density and network centralization over time.

REFERENCES

Borgatti, S.P., Everett, M.G. and Freeman, L.C. 2002. Ucinet 6 for Windows: Software for Social Network Analysis. Harvard, MA: Analytic Technologies.

Burt, R. (1980). Models of Network Structure. Annual Review of Sociology 6 (August): 79-141.

DISCLAIMER

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