

Social Network Analysis

Introduction

Social Network Analysis (SNA) is a research technique that focuses on identifying and comparing the relationships within and between individuals, groups and systems in order to model the real-world interactions at the heart of organisational knowledge and learning processes. Whereas an organisation chart shows formal relationships of function and responsibility, SNA aims to illuminate informal relationships: 'who knows whom' and 'who shares with whom'. This allows leaders to visualise and understand the diverse relationships that either facilitate or impede knowledge sharing. 'Because these relationships are normally invisible, SNA is sometimes referred to as an 'organisational X-ray' – showing the real networks that operate underneath the surface organisational structure'.

After social relationships and knowledge flows become visible, they can be evaluated, compared and measured. Results of SNA can then be applied at the level of individuals, departments or organisations to:

- Identify those (individuals and groups) playing central roles (thought leaders, key knowledge brokers, information managers, etc).
- Identify bottlenecks and those isolated.
- Spot opportunities to improve knowledge flow.
- Target those where better knowledge sharing will have the most impact.
- Raise awareness of the significance of informal networks.

Detailed description of the process

The SNA process involves information collection by means of questionnaires and/or interviews. Data targeted are those regarding relationships within a defined group or network of people. Then, using a software tool designed for the purpose, responses are mapped. Analysis of data arising from the responses can go on to offer a baseline. Using this baseline, it is then possible to plan and prioritise changes and interventions geared towards improving social connections and knowledge flows within the group or network.

There are various key stages involved:

- Identification of the target network (e.g. team, group, department).
- Background data collecting, obtained through interviewing managers and key players regarding specific needs and problems.
- Outlining and clarifying objectives and scope of analysis, and determining the level of reporting.
- Formulating hypotheses and questions.
- Developing the survey methodology and the questionnaire.
- Using these tools to interview the individuals in the network to identify relationships

and knowledge flows.

- Using a mapping tool to map out the network visually.
- Review of the map and of problems and opportunities highlighted, by means of interviews and/or workshops.
- Design and implementation of actions to bring about desired changes. • Mapping the network again after an appropriate period of time. Key points/practical tips

It is important that SNA involves knowing what information to gather in the first place. As a result, it is vital to put a great deal of thought into the design of the survey and questionnaire. Effective questions typically focus on a variety of factors, such as those that follow:

- Who knows whom and how well?
- How well do people know each others' knowledge and skills?
- Who or what gives people information about a specific theme/relationship/process?
- What resources do people use to find information, get feedback/ideas/advice about a specific theme/relationship/process?
- What resources do people use to share information about theme/relationship/process? Example: SNA in Mozambique humanitarian relief

In February 2000, Mozambique suffered its worst flooding in almost 50 years: 699 people died and hundreds of thousands were displaced. Over 49 countries, 30 INGOs and 35 local organisations provided humanitarian assistance. A team of researchers used SNA methods to examine the structure of inter-organisational relations among the 65 NGOs involved in the flood operations. The results showed a correlation between the central role of an organisation in the social network (i.e. the number and strength of connections with other organisations) and the numbers of beneficiaries served, specifically during the emergency period immediately following the flooding. This association was shown in turn to be affected by other factors, such as NGO type, sector of engagement and provincial presence. As an example, with the exception of the Mozambican Red Cross (which was the most central member of the network), local NGOs in general remained peripheral to the coordination processes. This suggests that local civil society capacity for responding to future disasters had not been developed over the course of the crisis, and that the response may have increased dependence on INGOs. Interestingly, the association between network position and beneficiary numbers did not hold during the post-emergency recovery period, a fact which was linked to the observed reduction of coordination levels during this phase.

By using social network analysis to determine how the network structure affects inter-organisational coordination and humanitarian aid outcomes, the study showed that the success of humanitarian aid operations ultimately depends on the ability of organisations to work together, and that working together was built on knowledge sharing, joint operations and projects, in an appropriate inter-organisational network structure.

Sources and further reading

- Davies, R. (2003) Network Perspectives in the Evaluation of Development Interventions: More Than a Metaphor, see: www.mande.co.uk/docs/nape.pdf.
- The International Network of SNA, with a comprehensive list of resources, see: www.ire.org/sna.
- Hovland, I. (2005) Successful Communication: A Toolkit for Researchers and Civil Society Organisations, ODI Working Paper 227, London: ODI, especially for the role of networks in communications strategies.
- Perkin, E. and J. Court (2005) Networks and Policy Processes in International Development: A Literature Review, ODI Working Paper 252, London: ODI.