

Handbook of Social Network Analysis and Education

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In the last years, a growing relevance of Social Network Analysis (SNA) in the field of education can be observed worldwide. One explanation for the increasing use of SNA in the educational context is that they help to close a methodological objective: The assessment of interactions between individual actions and social structures. With the help of SNA, it is possible to put social relations in the focus of analyses, which are of fundamental importance especially in the field of education. At the same time, there is no one network analytic method, but rather a variety of different quantitative, inferential statistical, and qualitative approaches that are more or less appropriate depending on data access, educational domain, and research question. These methods continue to evolve beyond education and social science, enabling analyses of increasingly large data sets as well as new data formats such as social media data.

With the present book, the editors seek to bring together applications of different SNA methods to answer current research questions at the micro, meso, and macro levels of educational research. At the micro level, SNA studies in the field of education usually focus individual aspects or a small group of individuals in a particular educational setting (e.g., students, teachers, parents, classes, families). At the meso level analyses typically address connections between the micro and macro levels such as school districts, educational administrations or other organizations. Macro levels, in contrast, regularly focus large populations or governance units such as education policy or global educational units.

Our aim is to advance the debate on SNA in education, identify and address some of the most important questions, apply novel and promising methodologies, and portray how this lively field of research has evolved over the past decade. By bringing together contributions from the most renowned scholars in the field, the book identifies current research gaps, develops innovative methodologies, presents new research findings, and points out perspectives for future research in an increasingly relevant field of research.

Each chapter will offer both a review of the relevant literature in its field and an outlook on future development and research desiderata.

Introduction

1. Chapter – Nina Kolleck and Oren Pizmony-Levy

This chapter will describe the development of the field of SNA and the recent growth in SNA research in education. The authors will discuss possible reasons for this growth: Desire to explore interactions between individual actions and social structures; the nature of the education sector that brings together different actors and entities; the relevance of social relations for educational issues; and reflection of the growth of SNA in the social sciences. Following a presentation of the structure of the book and a short summary of the chapters, the chapter will outline different ways of reading the book (e.g., by themes/concepts in education, by data sources, etc.)

Part 1: Research Design and Data

Introduction: The first part of the book includes chapters that examine different approaches for generating network data.

2. Chapter: Complete and ego networks

3. Chapter: Types of actors: people, organizations, documents, “things”
4. Chapter: Web-based data, online networks and social media
5. Chapter: Collecting network data with visual tools
6. Chapter: Dynamic networks in education

Part 2: Methods

Introduction: The second part of the book includes chapters that examine different techniques for exploring and analyzing network data. Each chapter will “make the case” for the technique (e.g., the type of research questions it can address, strengths and weaknesses compared to other techniques).

7. Chapter: Descriptive SNA and SNA measures
8. Chapter: Qualitative techniques
9. Chapter: Network ethnography
10. Chapter: Policy documents and bibliometric network analysis
11. Chapter: Socio-Semantic Network Analysis
12. Chapter: Discourse Network Analysis
13. Chapter: Sentiment Analysis
14. Chapter: Social Network Analysis and Natural Language Processing
15. Chapter: Stochastic Actor-Oriented Models for Network Dynamics (SAOM)
16. Chapter: Exponential Random Graph Models (ERGMs)
17. Chapter: Ego-ERGMs
18. Mixed Methods

Part 4: Application to Micro-Level

Introduction: Education is a multilevel and ecological phenomenon, with interactions and networks that operate at the micro, meso, and macro levels. The fourth part of the book includes chapters that apply SNA to the micro-level.

19. Chapter: Educational innovations
20. Chapter: Peer victimization
21. Chapter: Bullying and ethnic segregation

- 22. Chapter: Peers and academic achievement
- 23. Chapter: Individual Teachers
- 24. Chapter: School development

Part 5: Application to Meso-Level

Introduction: The fifth part of the book includes chapters that apply SNA to the meso-level.

- 25. Chapter: School networks
- 26. Chapter: Factors affecting student learning
- 27. Chapter: Improvement networks
- 28. Chapter: Collaboration networks in public school districts
- 29. Chapter: School districts
- 30. Chapter: Ministry of Education

Part 6: Application to Macro-Level

Introduction: The sixth part of the book includes chapters that apply SNA to the macro-level

- 31. Chapter: Non-governmental organizations
- 32. Chapter: Political Effects of Social Networks in Health Education
- 33. Chapter: Global Education Industry
- 34. Chapter: Education policy in a regional context
- 35. Chapter: Global policy networks
- 36. Chapter: Global Educational Movements: International Large-Scale Assessments

Coda: Teaching and Learning of SNA and Education

- 37. Chapter
The final chapter outlines ways to engage students with SNA and education. The chapter will review different resources that could be useful for instructors and students seeking to learn more about SNA.

Chapter Outline: Sample Structure of the Proposed Volume

Length: 5,000-5,500 words

Heading	Content	Word Limits
Introduction	A lead to catch the reader attention; overview of chapter	500
Backgroud	Why this method is needed? What research questions this method can address? Research desiderata considering methodological aspects	1000
Description of method	Historical development; assumptions; mechanics (shed light on the black box of the method); What is the state of the art in this approach/method?	2500
Conclusions	Current debates and critiques (if any) about this method What are the strengths and weaknesses (i.e, limitations) of this method?	500
Mini case study	Provide a mini-case study that discusses the application of this method	500
Further reading	Foundational readings + modern applications (books, articles, grey literature, etc.)	500
Total		5000-5500