

**EXPLORING EDUCATIONAL INITIATIVES IN
NANOTECHNOLOGY NETWORKS**

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ABSTRACT

Nanotechnology has captured the attention of governments and corporations around the globe. It has become the subject and context for numerous conferences, media articles, websites and scientific research papers. Nano enthusiasts and government officials claim that it is an area that promises new understandings of nature, and use of that understanding to build technologies that might change our lives. Despite the growing hype surrounding this new science, what appears to be lacking is scholarly literature that examines its growth and expansion from a social science perspective. This study addressed this limitation through a sociological analysis of the network of actors, events, rhetorical strategies, practices and instrumentation that went into the construction and growth of nanotechnology. Relying heavily on actor-network theory (ANT), this study focused on a small part of the total network referred to as the knowledge education production process, which involved the enrolment of high school teachers into the nanotechnology network through a series of collaborative workshops – the Nanotechnology Curriculum Development Project (NCDP) – with Virginia Polytechnic and State University (Virginia Tech) scientists over a period of two years. By investigating how the nanotechnology network was constructed and maintained, this case study examined the relevance of ANT as nanotechnology moved beyond the laboratory into the public domain of high school education. It looked at the intermediary role of high school science and math teachers and revealed the function of conflict, power, authority, hierarchy, interests, motivations, gender and race in the construction and expansion of scientific networks.