Idle chatter or compelling conversation? The potential of the social media-based #NGSSchat network for supporting science education reform efforts

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Summary of the Research

- *Why we wanted to study #NGSSchat*: New, social-media based settings have a great deal of potential to support participants to extend their professional networks and share with and potentially learn from others, but have not been widely-explored or documented by researchers, especially in science education research. We were especially interested in understanding how #NGSSchat could coordinate the work of multiple stakeholders, which has been a persistent problem facing those trying to support educational innovation and change efforts.

- *What we did (and what data we used)*: We analyzed more than 7,000 posts from #NGSSchat participants ($n = 247$) during one year of one-hour chats. We studied the types of conversations that took place, the extent to which the involvement of teachers, administrators, researchers, and organizations was balanced, and what explains participation in the network over time. We used both qualitative (of the text of tweets) and quantitative methods (of the number of interactions between and posts by individuals), including social network analysis.

- *What we found*: We found that conversations were primarily either substantive, or providing opportunities for sense-making about the, and transactional, or social. Individuals from diverse roles participated, with teachers comprising the plurality of those involved. Additionally, researchers, administrators, and teachers were the most active in the network, with no differences in both initiating, or sending, and being the recipients of, or receiving, replies as a part of conversations. Finally, we found that being a teacher or administrator (as well as receiving replies from individuals who were important, or central, in the network) were positively related to sustained participation in the network in the following year.

- *Why we think this work is significant*: #NGSSchat—as a social media-based settings for professional—demonstrates features that are similar to those found in other (often face-to-face) effective networks. In addition, social media-based networks such as #NGSSchat invite new visions for how to implement ambitious, large-scale changes in science education.

Questions, Comments, and Feedback? Please Let Us Know!

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