Uncovering changes in university teachers' professional networks during an instructional development program

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ABSTRACT

This study examined (1) the extent to which university teachers' networks changed while they participated in an instructional development program, (2) which mechanisms supported or constrained network change, and (3) the extent to which value was created through networks. Longitudinal social network data combined with follow-up interviews were collected over a 2-year time frame from 16 university teachers participating in an instructional development program. Results showed that teachers' networks increased and remained relatively stable after the program had finished. Several underlying mechanisms for network change throughout the program were identified (e.g., departmental culture, network intentionality, trust). Moreover, both expressive (e.g., venting) and instrumental value (e.g., getting ideas or feedback) were created through teachers' networks. This research contributes to our understanding of the social side of instructional development.

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Introduction

Traditionally, university teachers begin teaching in higher education with little or no formal training. Being an expert in the content field is assumed to be a sufficient condition to teach others (Denicolo & Becker, 2013). Over the past two decades, improving university teaching standards has been the driver of interest in academic development internationally (Baume, 2006; Devlin & Samarawickrema, 2010). To enhance the quality of teaching and learning, instructional development programs have emerged in higher education institutions around the globe. *Instructional development* is a type of development that explicitly aims to develop faculty members in their role as a teacher (Centra, 1989; Taylor & Rege Colet, 2010). Programs for instructional development are 'those formal programs that induct and develop university teachers with the aim of fostering and supporting the quality of teaching and learning in the university' (Hicks, Smigiel, Wilson, & Luzeckyj, 2010, p. 18).

While most studies into the impact of instructional development regard instructional development as an individual endeavor, by examining teachers' attitudes (e.g., Postareff, Lindblom-Ylänne, & Nevgi, 2007), teachers' conceptions (e.g., Hubball, Collins, & Pratt, 2005), teachers' knowledge (e.g., Howland & Wedman, 2004), teachers' skills (e.g., Stepp-Greany, 2004) and teachers' behavior (e.g., Stes, Coertjens, & Van Petegem, 2013), the social context in which teaching occurs is often overlooked (Van Waes, Van den Bossche, Moolenaar, De Maeyer, & Van Petegem, 2015; Rienties & Kinchin, 2014). Recent work on faculty's communities of practice and learning communities emphasized that university teaching is both individually constructed as well as socially influenced (Anderson & McCune, 2013; Furco & Moely, 2012). Multiple studies recognize the importance of informal, situated social learning in shaping thinking and practice (Mathieson, 2011; Stes, Clement, & Van Petegem, 2007; Warhurst, 2008).

However, in higher education, issues of privacy, autonomy, and even isolation of faculty have been quite prominent (Cox, 2004; Johnsrud & Heck, 1998). Faculty members' research work often involves elaborate and strong networks of collaboration and support (Baker & Zeyferrell, 1984; Gizir & Simsek, 2005), but

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university teaching remains a relatively solitary business (Ramsden, 1998). In contrast to other professions, teachers often lack continuous interaction with colleagues that could help them grow more fully into the demands of the teaching profession (Little, 1990). In an essay, Palmer (1999) argued that without collegial socialization a privatization of teaching creates institutional incompetence. The outcome of privatized teaching is that performance becomes more conservative, and few stray far from the silent consensus of what 'works', even when it does not work. Prior research also reveals that feelings of disconnectedness and loneliness have consistently been expressed by faculty (Barnes, Agago, & Coombs, 1998; Boice, 1992; Schoenfeld & Magnan, 1992). Work by Fouche (2006) showed that feelings of isolation can be significantly curbed by regular contact and collaboration amongst colleagues, and regular training (see also Lockwood & Latchem, 2004; Schrum & Ohler, 2005).

In recent years, the 'social side' of instructional development programs is increasingly recognized. The benefits of socially co-constructing and sharing information in instructional development programs are emphasized, as well as the novelty of encountering different teaching cultures and working practices (Gale, 2011; Stewart, 2014). Moreover, the impact of instructional development programs is influenced by interacting with colleagues and exchanging experiences (Postareff et al., 2007; Stes, Min-Leliveld, Gijbels, & Van Petegem, 2010).

Yet, to date relatively little is known about the extent to which university teachers actually engage with colleagues and others during and beyond instructional development programs (Rienties & Kinchin, 2014). There is limited research on how collegial interactions might matter in instructional development programs, and under which conditions collegial interaction can support instructional development in higher education. This paper argues that a social network perspective may offer a new and unique perspective on interactions between university teachers. Social network theory offers a valuable lens and tools to capture the interactions or networks of educators (Carolan, 2014; Daly, 2010). The current study draws upon longitudinal social network data, triangulated with in-depth interview data, collected over the course of an instructional development program. Our aim is to further uncover the social side of instructional development programs.

A social take on instructional development

Studies evaluating the impact of instructional development initiatives have acknowledged the role of collegial interactions within and outside the instructional development initiative. Participating in an instructional development program has shown to enhance collegial interactions in departments, and teachers discussed their teaching practice with colleagues more often (Skeff, Stratos, Bergen, & Regula, 1998). Moreover, they shared more information and teaching material among colleagues after the program (Harnish & Wild, 1993), interdisciplinary collegiality tended to increase (Fidler, Neururer-Rotholz, & Richardson, 1999; Pololi et al., 2001), and a preference for peer collaboration was found (McDonough, 2006). However, most of these findings arose as a 'side-effect' while examining the impact of instructional development. Few studies have actually carried out an in-depth study on how collegial interactions might matter and evolve during instructional development programs, and which mechanisms may support or inhibit these interactions. Social network theory provides a useful framework to examine university teachers' interactions during instructional development programs.

A social network perspective on instructional development programs

Recent work in the field of learning and professional development has demonstrated the potential of adopting a social network perspective to study the transfer and impact of development programs (Hatala, 2006; Van den Bossche & Segers, 2013). The main stance of social network theory is that individuals' behavior and performance are significantly affected by the way they are tied into a larger web of social connections (Carrington, Scott, & Wasserman, 2005). In social network theory the people or actors in the network are termed 'nodes', and the relations connecting them are 'ties' (Wasserman & Faust, 1994). Social network theory has proven a valuable lens to capture the interactions or networks of educators (Moolenaar, 2012), and provides methods to track network change in a fine-grained way (Snijders, 2005). Until now, previous methods have not been able to map (changes in) interactions, which is an important first step in further theorizing the role of interactions for instructional development in higher education.

Recently, scholars started to explore faculty members' teaching networks (Jippes et al., 2013; Pataraia, Margaryan, Falconer, & Littlejohn, 2013; Van Waes et al., 2015). Within the context of higher education, relatively little is known about how collegial interactions might shape the effects of instructional development programs. To our knowledge, only three studies have examined university teachers' social networks in instructional development programs. Moses, Skinner, Hicks, and O'Sullivan (2009) conducted interviews with 43 participants at the end of an instructional development program in the health sciences. Their findings showed that the number of connections between participants increased from 6 to 36 over the course of the program, and that participants increasingly connected to faculty in educational central services (from 6 to 70 connections). Rienties and Kinchin (2014) studied networks between participants and networks with people outside the program. Their study of 54 participants showed that participants developed on average four relations with other participants, and three to four relations with people outside the program. Network relations were primarily formed according to participants' departments and the group division in the program. Triangulation with a qualitative free-response exercise showed 'friendship' and 'persistence of initial groupings' as key emerging themes for the formation of relations. Jippes et al. (2013) studied participants' networks outside the program, i.e., departmental networks of clinical supervisors participating in a 2-day medical education program on a specific innovation. Their findings showed that adoption of the innovation was related to the connectedness of the participants in their departmental network.

These studies offer insight into the potential of social networks in instructional development programs. However, as they have cross-sectional designs, they provide limited understanding of the process of network change over the course of instructional development programs. Research has shown that social networks are dynamic and may evolve over time (Kilduff & Tsai, 2003; Snijders, 2005). Recent scholarship also criticizes that most studies examining instructional development only collect data once, upon completion of the program, instead of over the course of the program and longer after completion (Rienties & Kinchin, 2014; Stewart, 2014). The current study adds to earlier findings by tracking social networks over a 2-year timeframe, over the course of a 16-month long instructional development program, thereby deepening insight into network change. Moreover, it examines mechanisms underlying changes in networks.

Underlying mechanisms for network change

Different mechanisms may underlie change in teachers' networks. Networks are often considered positive relations. However, they can also comprise negative relations or constraining mechanisms, termed 'negative or difficult ties' (Everett & Borgatti, 2014; Labianca, 2014). Therefore, we explored mechanisms that supported and constrained network change over the course of an