Navigating the interdisciplinary landscape in a pseudo-community of practice:
Crossing boundaries or building roadblocks?

Abstract: While institutes of higher education in the United States and abroad continue to heed calls for increased interdisciplinary collaboration, research outlining effective methods of interdisciplinary collaboration is lacking. This paper addresses that gap by describing the ways in which a cross-campus team of content and pedagogy specialists in the STEM and literacy areas planned and implemented an interdisciplinary institute for in-service and preservice elementary teachers. This paper analyzes that team as a community of practice (COP) stalled in the pseudocommunity stage of community-making due to epistemological and logistical roadblocks and offers recommendations to enable university colleagues to move beyond the pseudocommunity and cross disciplinary boundaries.

Purpose:

This paper (a) describes the process by which a cross-campus team of six content and pedagogy specialists in the STEM and literacy areas planned and implemented a ten-day, grant-funded interdisciplinary institute for elementary mentor and preservice teachers; (b) analyzes this cross-campus team as a pseudo-community of practice that moved slowly and haltingly through the first of four stages of community-making; (c) identifies the ways in which epistemological boundaries within the planning team created roadblocks to authentic, transformative learning; and (d) makes recommendations to enable university colleagues to move beyond the status of pseudocommunity and cross disciplinary boundaries.

Theoretical Framework:

Framing this cross-campus team as a community of practice (COP) sheds light on important group dynamics. Lave and Wenger (1991) defined a COP as "a system of relationships between people, activities, and the world; developing with time, and in relation to other…overlapping communities of practice" (p. 98). Wenger (2010) explained that a community of practice functioned as a naturally occurring learning community, and the term COP helped to "distinguish practice from prescription" (Wenger, 2010, p. 11). As the popularity of COPs has spread, however, COPs have been adapted in ways that are at odds with the original model. COPs are now often used to "create, cultivate, or capitalize on the [COP] process—almost as a technique" (Wenger, 2010, p. 11). As Pharo et al. (2014) pointed out, COPs that are not naturally occurring must be carefully planned and supplied with adequate support to function optimally. Failure to do so can lead to their inability to function coherently (Pharo et al., 2014; Wenger, 2010, p. 11). Some scholars have acknowledged the "challenges involved in community formation" (Grossman, Wineburg, & Woolworth, 2001, p. 4) and have pointed out the inevitability of boundaries within communities (Wenger, 2010, p. 4)

Boundaries within a COP can derail a community from larger goals. Arising from a lack of "shared history of learning" among community members, boundaries can also be understood as a "sociocultural difference leading to discontinuity in action or interaction" (Wenger, 2010, p. 4; Akkerman & Bakker, 2011, p. 133). Because boundaries constitute liminal spaces defined by ambiguity and confusion, they can serve as sites of innovation or make "engagement at the boundaries a potential waste of time" (Wenger, 2010, p. 4). According to Suchman (1994), innovation at the boundaries depends on the ability of community members to engage in boundary crossing, or the act of entering into unknown intellectual territory. A "boundary

crosser" possesses the ability to simultaneously embody two different epistemological worlds, but this precarious position often puts them at risk of belonging to neither world. Similar to a boundary crosser is the boundary object, an object "that both inhabit[s] several intersecting worlds" and "satisf[ies] the informational requirements of each" (Akkerman & Bakker, 2011, p. 134). While there is great potential for boundary crossing to transform a COP, this outcome is not a given (Akkerman & Bakker, 2011). Instead of leading to transformation, the presence of boundaries can create a "nobody's land, belonging to neither one nor the other world" (Akkerman & Bakker, 2011, p. 141).

Analyzing boundaries and the development of COPs within Peck's (1998) framework of community-making sheds light on the impossibility of boundary crossing at early stages of community formation. In fact, the possibility of ending up in a "nobody's land" is far more likely in a *pseudo*-community of practice, the first of Peck's (1998) stages of community making, than in a community of practice. The stages of community-making include 1) *pseudocommunity*, or the politeness stage in which all large-group tension is avoided. According to Grossman et al. (2001), "the maintenance of pseudocommunity pivots on the suppression of conflict" and group members avoid pressing "too hard for clarification," thus leading to continued misunderstandings (Grossman et al., 2001, p. 20). Pseudocommunities give way to 2) *chaos*, or the stage of community building that occurs after individual differences within the group have been made visible. Chaos leads to 3) *emptiness*, or the third stage of community-making, in which group members empty themselves of ideology, prejudice, and the need to control. The fourth stage 4) *community* exists only after all group members have passed through the emptiness stage. According to Peck's framework, when group members fail to pass through the emptiness stage, the potential for transformative learning and innovative practice is severely limited.

Methods:

The researcher used a qualitative case study approach, which "allows investigators to retain the holistic…characteristics of real-life events" (Yin, 2009, p. 2). The cross-campus planning team served as the "contemporary bounded system" (Creswell, 2013, p. 97) required for in-depth case study research. Data collection was initially intended to aid the planning team in the development of the content institute. However, as the planning team struggled to cohere into an interdisciplinary COP, observers of the team and team members themselves began to question the source of the planning team's frustrations. This wondering led to the research question: What sorts of roadblocks appear on the path towards interdisciplinary curriculum planning in an emerging community of practice?

Data Sources:

Case studies require "in-depth data collection involving multiple sources of information" (Creswell, 2013, p. 97). This study made use of six 60-minute interviews with members of the planning team, transcripts from eight planning meetings lasting between 60 and 180 minutes each, field notes taken by the author during the ten-day institute, online communication between planning team members throughout the planning process, and unit/lesson plans created by the planning team. Data analysis followed an iterative process, in which initial data sources—planning meeting transcripts—were coded and analyzed for "emergent theory" (Hammersley & Atkinson, 2007, p.158; Yin, 2009). Subsequent data collection—a series of interviews and observational field notes conducted during the ten-day institute—was guided by "the prior development of theoretical propositions" (Yin, 2009, p. 18). Upon completion of data collection,

I sorted sources by type and followed Braun and Clarke's (2006) six phases of thematic data analysis. Transcripts were read in entirety, initial codes were generated, and themes were developed across codes. Themes were organized into a thematic map and each theme was evaluated after a review of the entire data set.

Findings:

        The findings of this study illustrate (a) the ways in which the cross-campus planning team operated as a pseudo-community of practice during the planning stages of the content institute; (b) the key failures in the design and resourcing of the planning team that led to its stagnation in the pseudocommunity phase of community-making; and (c) strategies that may be employed by future interdisciplinary planning teams to move beyond the disciplinary boundaries within the pseudocommunity.

        Throughout the planning period (January-June), the planning team remained stalled in the pseudocommunity stage of community-making. In this stage, epistemological and pedagogical differences were never discussed, leading to misunderstandings between members of the team. Differences most clearly manifested themselves in language use, as team members' definitions of critical terms such as "STEM" and "interdisciplinary" often conflicted. As one member of the team explained, "The hard part is communicating to other people what you want to do." Partly due to this linguistic issue, commonly agreed upon goals for the group did not emerge until early April, and those goals emerged only after a series of individual one-on-one meetings between key members of the group. True to the nature of a pseudocommunity, no "authentic sense of shared communal space" existed, "only individuals interacting with other individuals" (Grossman et al., 2001, p. 21). Indeed, when asked what did not work well in the planning process, all participants agreed that the large group meetings were unsuccessful, and it was only through individual meetings that they were able to complete necessary tasks. Otherwise, one team member noted, the group was "just too far apart." In fact, after April, the planning team determined that they would divide the institute participants into two groups, which allowed two planning teams to emerge from the larger group. One team consisted of two professors from the College of Liberal Arts and Sciences, while the other team consisted of one professor of education, one doctoral student in education, and one practicing teacher. Rather than crossing interdisciplinary boundaries, the group built their own roadblocks, cordoning off their academic disciplines and barricading against potential innovation at the boundary.

        Key failures in the design and execution of this community facilitated its stagnation in the pseudocommunity phase. The group was plagued by lack of leadership; failure to openly discuss individual, group, and institutional goals for the institute; lack of respect for other group members; and the inability to effectively use boundary objects to facilitate boundary crossing. For example, by June, no member of the planning team could identify a clear leader. Group members began asking in April, "Who's the leader here? Who's going to take charge?" Frustrations increased as it become clear that many members of the team lacked respect for other members. One member explained the root of this problem, "We didn't start off introducing ourselves and who we were and what we were bringing to the table. I think people thought that I was just a doc student. It wasn't clear that I had other experiences." Initial impressions were hard to break, and without knowledge of each other's expertise, each member of the group operated as if their subject area and pedagogical expertise were superior to the others. In this environment, boundary objects, such as lesson plans or K-5 standards, which might have helped group members think across boundaries, were used inefficiently or not at all.

While the group remained stalled in pseudocommunity, the data suggest strategies other emergent COPs may employ to facilitate movement through this stage. One member of the planning team did manage to serve as a boundary crosser throughout the planning stages. This member facilitated individual group meetings and used her subject area specialty, technology, as an interdisciplinary boundary object to enable her to exist in multiple disciplinary worlds simultaneously. Her success at crossing boundaries suggests the need for emerging interdisciplinary communities to identify specific disciplines that may be more interdisciplinary in nature and focus their efforts at incorporating their disciplines at these boundary-crossing hubs. Fully operationalizing boundary objects such as standards, lesson plans, and specific activities, and using them to make epistemological differences apparent in the group could also facilitate movement through the pseudocommunity phase. Moreover, individuals could begin to diminish the existence of boundaries in the pseudocommunity by embedding themselves in the culture of another discipline via frequent observations of classrooms and work sites of other members. Finally, leaders must define clear group goals, recognize tension in the group, and identify the underlying cause of tension. Choosing a leader for the group who is willing to engage in uncomfortable conversations that move discussions in the whole group out of the polite, pseudocommunity stage is essential for the growth of a healthy community.

Scholarly Significance

In the U.S. and abroad, the term "interdisciplinary" is used increasingly to identify valued activity in higher education (Brint, 2005; Davies & Devlin, 2007), encouraged by funders, the marketplace, and the institutions themselves. Although the value of interdisciplinary collaboration has gone unquestioned and an increase in organized interdisciplinary activity has been observed (Brint, 2005), 50% of these collaborations fail (Kezar, 2005). Kezar further notes that "there has been virtually no research on how to enable higher education institutions to conduct collaborative work" (p. 831). This study begins to fill that gap by identifying the roadblocks one interdisciplinary pseudo-community of practice faced while attempting cross-campus collaboration and suggesting practices that may enable interdisciplinary teams to transcend disciplinary boundaries.

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