

4-15-2020

Using A Tiered Approach for Implementing Networked Learning Communities: A Case Study on Developing the Capacity of Leaders to Implement Systemwide Innovations within International Training and Development Programs

James C. Anderson II
University of Georgia

Eric Kaufman
Virginia Tech University

Jama Coartney
Virginia Tech University

See next page for additional authors

Follow this and additional works at: <https://newprairiepress.org/jiaee>

Recommended Citation

Anderson, J. C., Kaufman, E., Coartney, J., Mitra, S., & Cash, C. (2020). Using A Tiered Approach for Implementing Networked Learning Communities: A Case Study on Developing the Capacity of Leaders to Implement Systemwide Innovations within International Training and Development Programs. *Journal of International Agricultural and Extension Education*, 27(1), 6-14. DOI: <https://doi.org/10.5191/jiaee.2020.27101>

This Research Article is brought to you for free and open access by New Prairie Press. It has been accepted for inclusion in Journal of International Agricultural and Extension Education by an authorized administrator of New Prairie Press. For more information, please contact cads@k-state.edu.

Using A Tiered Approach for Implementing Networked Learning Communities: A Case Study on Developing the Capacity of Leaders to Implement Systemwide Innovations within International Training and Development Programs

Abstract

This case study demonstrates how change agents can utilize networked learning communities (NLCs) with shared leadership to provide the structural supports for learning and influence the implementation of innovations within a social system. Our focus is the Department of Defense Education Activity (DoDEA), a large school system operating 164 accredited schools domestically and internationally. As part of their systemic priority of implementing innovations for educational improvement, DoDEA worked with extension specialists to create NLCs for instructional leaders using the Engelbart's Organizational Learning and Improvement Schema. The schema is a three-tiered approach to non-formal learning that facilitates leader capacity building at the individual, team, and systemwide levels. To support these learning communities, DoDEA also created regional support teams or opinion leaders to assist with the implementation of systemwide educational technologies through non-formal professional learning. Focus group discussions provided insights on the impact of this model as a mechanism for diffusing educational innovations throughout the system. Findings suggest that implementation of this approach in other international training and development settings can yield positive impacts on the innovation-decision process.

Keywords

Shared leadership; international training & development; social learning; systemic change; Diffusion of Innovation

Funding Source

This material is based upon work that is supported by the National Institute of Food and Agriculture, U.S. Department of Agriculture, under award number 2016-39590-25894

Erratum

A correction has been issued for this article. The DOI of the article was incorrect as published. The correct DOI is: 10.5191/iaee.2020.27101. Link to Erratum: <https://doi.org/10.4148/2831-5960.1467>

Authors

James C. Anderson II, Eric Kaufman, Jama Coartney, Shreya Mitra, and Carol Cash

doi: 10.5191/jiaee.2020.27101

Using A Tiered Approach for Implementing Networked Learning Communities: A Case Study on Developing the Capacity of Leaders to Implement Systemwide Innovations within International Training and Development Programs

James C. Anderson II
University of Georgia

Eric Kaufman
Jama Coartney
Shreya Mitra
Carol Cash
Virginia Tech University

Abstract

This case study demonstrates how change agents can utilize networked learning communities (NLCs) with shared leadership to provide the structural supports for learning and influence the implementation of innovations within a social system. Our focus is the Department of Defense Education Activity (DoDEA), a large school system operating 164 accredited schools domestically and internationally. As part of their systemic priority of implementing innovations for educational improvement, DoDEA worked with extension specialists to create NLCs for instructional leaders using the Engelbart's Organizational Learning and Improvement Schema. The schema is a three-tiered approach to non-formal learning that facilitates leader capacity building at the individual, team, and systemwide levels. To support these learning communities, DoDEA also created regional support teams or opinion leaders to assist with the implementation of systemwide educational technologies through non-formal professional learning. Focus group discussions provided insights on the impact of this model as a mechanism for diffusing educational innovations throughout the system. Findings suggest that implementation of this approach in other international training and development settings can yield positive impacts on the innovation-decision process.

Keywords: Shared leadership; international training & development; social learning; systemic change; Diffusion of Innovations

Funding: This material is based upon work that is supported by the National Institute of Food and Agriculture, U.S. Department of Agriculture, under award number 2016-39590-25894.

Introduction

Over the decades, the US Federal Government has invested billions of dollars, intellectual resources, and human capital to assist partners globally with addressing challenges related to human development and welfare. This support has reached across many sectors, including agricultural and food security, human rights and governance, health, water and sanitation, and education (USAID, 2018). Unfortunately, leaders who have been charged with facilitating change through these projects often find themselves facing leadership challenges related to capacity, continuity, cohesiveness, and support (Maslin-Ostrowski & Drago-Severson, 2014). In light of the increasing demand for finite resources, federal agencies have sought efficient models for diffusing innovations that yield sustainable improvement. Extension systems have been successful at establishing networks and building strong relationships domestically that provide a space for learning about and adopting new ideas and technologies (Currie & Spyridonidis, 2019; Davis, Dolly, Lamm, & Lamm, 2018). However, this success has yet to be realized through international extension projects. Accordingly, there is an opportunity for extension systems to have an impact on structures that successfully aid in the development of sustainable global learning networks. History supports the claim that the innovation-decision process in international settings can be accelerated by tapping into existing global knowledge and know-how and facilitating the exchange of both external and local knowledge within a country (Fu, Mohnen, & Ventresca, 2015).

Opinion Leaders & Change Agents

Rogers (2003) proposed the Diffusion of Innovations theory to explain how new ideas and technologies are spread. Diffusion is a multi-step process that focus on the conditions that increase or decrease

the likelihood that the innovation will be adopted by members of a given system. Rogers (2003) considered diffusion as a type of communication in which members of a social system create and share information with one another through certain channels over time in order to reach a mutual understanding. He suggested five categories of adopters and a 5-step innovation-decision process by which the individuals seek information concerning an innovation. The five steps are:

1. **Knowledge:** The individual is first exposed to the innovation and acquires knowledge on how it works.
2. **Persuasion:** The individual forms and opinion regarding the innovation.
3. **Decision:** The individual decides whether to adopt or reject the innovation.
4. **Implementation:** The individual applies the innovation to determine its usefulness.
5. **Confirmation:** The individual seeks affirmation about his/her final decision to innovate.

To aid in the implementation and adoption of the innovation, Rogers (2003) emphasized the role two types of influencers of adoption behavior within the innovation-decision process, the *opinion leaders* and the *change agents*. Opinion leaders are members of the social system who exert their influence whereas change agents are influencers who are external to the system. Due to the increasingly complex tasks associated with systemic change, the desire to structure the innovation-decision process around shared member leadership has become more prevalent. However, the question remains, what structural supports do these influencers need in order to help potential adopters implement the new

technologies and/or practices with fidelity and sustainability?

Conceptual Framework

Engelbart's Organizational Learning and Improvement Schema (Bryk, Gomez, Grunow, & LeMahieu, 2015) provides a structure for implementing NLCs to aid in the diffusion of innovations throughout a social system. Originating from his work in systems science, Engelbart sought to find ways to increase human productivity by using the computer as a medium to enhance idea development, collaboration, and organizational communication (Engelbart, 1992). Engelbart articulated this networked community as a model that could enhance human intelligence and the ability to solve complex problems by using technology and an interrelated tiered structure to facilitate social learning and systemwide

practice of quality improvement methods. Finally, *Level-C learning* is when multiple *Level-B* learning communities connect as a network, using various technologies, to enhance the capabilities of the social system by engaging the members in inter-community learning and improvement work. A key characteristic of this three-tiered approach is the inclusion of a double-loop learning process in which members are able to actively engage in learning by asking questions about changing fundamental aspects of the community (LeMahieu, Grunow, Baker, Nordstrum, & Gomez, 2017), a key component to facilitating organizational improvement through change. In this case study, the change agents used this three-tiered approach to train the CIL personnel, who then used it to train the local instructional leaders who will train school teachers. While the priorities were vetted

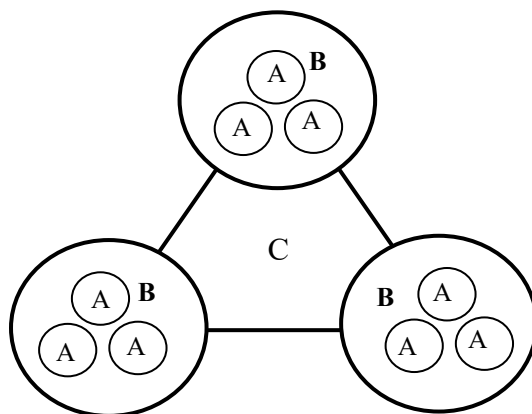


Figure 1. Schema for Social Learning

improvement (see Figure 1). Starting at the individual level, *Level-A learning* is the process in which individuals seek to acquire the knowledge needed to improve their technical competencies. Members reflect on their practices and ways to improve them, focusing on how these practices can contribute to the work of the system. During *Level-B learning*, members participate in a professional learning community to further increase their *Level-A* performance capabilities through the implementation and

internally, DoDEA coordinated with the change agents to facilitate professional learning based on these internal priorities. Previous studies have shown the introduction of external influencers have a positive impact on establishing team empowerment when compared to systemic change implemented by only the established leaders (Rapp et al., 2015). This occurs because change agents come onto the team with the understanding that their role is to empower the team to engage in systemic

change; whereas, established system leaders are more closely connected to the system and may not be as willing or able to relinquish power to members (Rapp et al., 2015). The change agents provided professional learning to the CIL personnel through virtual webinars (Level-A) and follow-up regional visits (Level-B). To create a culture of innovation systemwide, all three CILs came together for face-to-face leadership summits and summer symposia to develop a common vision, purpose, language and supports tools for implementation; they also participated in virtual communities of practice (Level-C).

Purpose & Objectives

The purpose of this case study is to present a three-tiered approach to networked learning communities (NLCs) with shared leadership that was employed by a team of extension specialists, serving as change agents, to train and support opinion leaders with the US Department of Defense Education Activity (DoDEA) as they developed, trained and influenced the implementation of new educational technologies that improve teaching and learning within their schools globally. These opinion leaders who were organized into regional teams in the Americas, Europe, and the Pacific called Center for Instructional Leadership (CIL) were charged with assisting instructional leaders systemwide with going through the 5-step innovation-decision process.

Networked learning with shared leadership occurs when team members who are innovators or early adopters share responsibilities for influencing the other members in the hopes of maximizing sustained adoption throughout the social system (Bergman, Rentsch, Small, Davenport, & Bergman, 2012). Studies on the impact of these collaborative learning teams with shared leadership have

concluded that, when applied properly, the opinion leaders encourage increased productivity, more effective use of resources, better problem solving and decision making, and greater innovation and creativity because they impact both the type of motivation community members have for the innovation as well as the efficiency of communication across time and space (Deci, Olafsen, & Ryan, 2017; Kogler-Hill, 2016; Parker, 1990; Rapp, Gilson, Mathieu, & Ruddy, 2015).

Although confirmed by influencers, the decision to innovate is self-regulated. Self-regulated activities are intrinsically motivating and tap into the psychological need for *autonomy* or self-determination, *competence* or professional contribution, and *relatedness* or belonging (Deci et al., 2017). Adopters benefit from these NLCs with shared leadership because they provide a structure to fulfill these three basic psychological needs, leading to a sense of willingness, volition, persistence, and authenticity among team members (Anderson, 2013).

The CILs were charged with the role of providing non-formal professional learning and support for district instructional leaders who would then replicate this professional learning structure with the local school instructional leaders and teachers. As a large system operating 164 accredited schools in 11 foreign countries and 9 US states and territories (DoDEA, n.d.), DoDEA provides an example of success that can inform Extension services related to building the capacity of international social system leaders to implement systemic change. Objectives guiding this case study were to glean insights on:

- (1) How well the networked learning communities that were facilitated by Extension specialist as change agents contribute to the development of DoDEA CILs; and

(2) The contribution of CILs as opinion leaders toward influencing sustained adoption of educational innovations by DoDEA's local instructional leaders.

Methods

The professional learning identified generally focused on building the capacity of local instructional leaders to develop and sustain a culture of innovation, collaboration, continuous improvement, and caring relationships within each school (DoDEA, 2018). Six professional learning sessions supported this initiative, and they were based on:

- (1) identifying the components and conditions necessary to support the adoption of educational innovations;
- (2) understanding the collaborative cycles of professional learning communities;
- (3) facilitating professional learning as an opinion leader;
- (4) implementing enhanced professional learning using virtual and blended models of instruction;
- (5) understanding approaches to coaching the early majority; and
- (6) implementing coaching model to support the early majority.

After the change agents completed professional learning for the opinion leaders, three 60-minute focus group sessions were conducted with CIL personnel related to how well the NLCs contributed to their development as internal influencers. In addition, thirteen 60-minute focus group sessions were held with the local instructional leaders in all three regions to glean insights on the contribution of CILs with influencing them to implement the educational innovations. The sessions were recorded, transcribed, loaded into Dedoose web applications for qualitative research,

and analyzed using constant comparison analysis (Onwuegbuzie, Dickinson, Leech, & Zoran, 2009).

Findings

The following sections provide a high-level summary of the key takeaways from the discussions by the CILs related to using NLCs and the local leaders related to the impact of the opinion leaders with influencing adoption of the educational innovations taught in the six sessions.

CIL Personal Reflection on the Use of NLCs

When asked about the impact of the professional learning using this networked approach, one CIL member stated, "When we learn together, we grow together. You know; and we're learning, and we're working, and we're growing stronger... We just need to be able to replicate these opportunities, whether virtual or face-to-face." Another mentioned:

We talked about whole-group, small-group, and individualized, and we're modeling that for them as well. So, I think those are some things that are very important. We're trying to model and practice what we preach, so to speak.

Using the Engelbart's Organizational Learning Schema, an organization can articulate and promote its vision through appropriate professional learning at all levels. One CIL team member discussed an example of how they are implementing what they have learned: "The [DoDEA] Blueprint [for educational innovation] is our driver now, and our summit is around [understanding and implementing] the Blueprint." Another CIL member reflected on how they are contributing to creating a culture of collaboration using high-powered teams:

We are extremely focused and aligned to organizational priorities and continuing with them throughout the year... Our priorities are aligned to the DoDEA-wide priorities, and then we develop our plan off of that... We just don't veer from the system priorities.

Overall, the opinion leaders did not express concerns with using NLCs, but did express a desire to be an integral part of the identification of the content to be covered in the NLCs, which was decided by the organizational leaders in consultation with the change agents. In addition, the virtual learning experience and use of technology varied for some locations due to issues with infrastructure.

Instructional Leaders' Reflections on the Impact of the CILs as Influencers

When the CILs were created, one of the primary purposes of these internal influencers was to provide systemic leadership development and support based on DoDEA policies, procedures, and programs for teacher leadership, school-level administrators, district specialists, and superintendents (DoDEA, 2016).

Accordingly, district- and school-level instructional leaders expressed appreciation for how the CILs have been meeting their individual needs and empowering them to create desired changes, but stated this appreciation took a while to realize as the structure was new and not well articulated to the members. One participant stated: "They are our messengers to help the districts tie in our vision, our priorities, our Blueprint, our AdvancEd [assessment program]. All of those things...have to go together."

Instructional leaders highlighted specific CIL services, which included personal visits to their schools and timely professional learning opportunities. The instructional

leaders discussed how the CILs' work extends beyond offering standardized professional learning, it encompasses tailored support. For example, another participant shared:

Well I think more important, is the professional development that DoDEA has provided for the administrators too, because I think for a long time that wasn't there. And implementing the CIL in order to have that kind of training for us available was crucial and—I think—critical to making this move forward for us and helping us along with it. [Without it,] I don't think we'd be as far along as we were/are.

As it relates to creating a culture of innovation, implementation and confirmation, one instructional leader stated:

The walkthrough tool...is their biggest contribution to school so far...We can meet from different schools [and] use a common vocabulary; we've all had the same training. We're all utilizing it; we're putting our stuff on the SharePoint page...We can network with a common vocabulary and a common vision and purpose, just as a first-level step—utilizing the walkthrough tool. I don't know what's coming next; but if they build on that, then we've already got kind of [an] expectation and a culture in place that we can communicate across.

While instructional leaders indicated they were already overwhelmed with responsibilities and the adoption of new practices were adding to that stress, they recognized the need to implement innovations that may be uncomfortable, and they appreciate the CILs' role in supporting

them through the change process. A stakeholder explained it this way:

One of the biggest obstacles is always how warm and cozy the status quo is. I mean, that's a tough place to leave. And the CIL can certainly help us point out the advantages to making that leap, in terms of our mission. Because, you know, that warm and cozy status quo: It's really hard to get some folks motivated to seek alternative ways.

Conclusions & Recommendations

Although the case was focused on the diffusion of educational innovations within an organization with members worldwide, it is relevant to various agriculture and extension situations when looking at how external influencers can work with internal influencers to implement training and development that encourages sustained adoption of an innovation throughout the social system. Both CIL personnel as opinion leaders and local instructional leaders as team members at various stages of knowledge, persuasion, and adoption agreed that using NLCs provided opportunities for individual and team development that influenced the implementation and confirmation of the innovations being taught.

A major benefit to this approach includes having consistent learning outcomes or messages about the innovation while being able to create training and support strategies that are tailored to meet the needs of the individual member by leveraging the power of social and self-regulated learning. Conversely, the biggest concerns with implementation was first understanding the purpose of the opinion leaders in the innovation-decision process, issues with infrastructure/resource related to implementing the innovation, and the lack of input by the opinion leaders when the

professional learning was being developed. Clarity of purpose, proper infrastructure for implementing the innovation, and inclusion of internal influencers from the beginning are key to positive persuasion and confirmation.

To this end, what do the outcomes for this case mean for project leaders who are interested in implementing systemic change within an international context? While the diffusion of innovations is not new to education or international development initiatives, implementing protocols with fidelity that can be sustained once the change agent leaves remains difficult (Anderson, Alegbeleye, Gichane, & Abaye, 2019; Park et al., 2013). The tiered approach to professional learning with shared leadership for developing and supporting members through the innovation-decision process presented in this case study is based on current literature in change management and professional learning, and the example, although not generalizable, provides extension specialists with a framework to follow when planning and facilitating systemic change that is based on the need to adopt an innovation within a community or organization. The creation of NLCs with shared leadership encourages a sense of autonomy, competence, and relatedness (Deci et al., 2017; Rapp et al., 2015), which translates into the establishment of shared goals, empowerment of members to be an active part of the process, adoption of a common vocabulary, and the implementation of new policies, procedures, and tools with fidelity and sustainability. However, some suggestions for moving forward are: 1) change agents must clearly articulate their role and the role of the opinion leaders; 2) take into account the infrastructure and resources of the social system when designing learning activities and considering what innovations to offer; and 3) ensure that

the internal influencers are brought to the table during the program development stage.

References

- Anderson II, J. C. (2013). An exploration of the motivational profile of secondary urban agriculture students. *Journal of Agricultural Education*, 54(2), 205-216. doi: 10.5032/jae.2013.02205
- Anderson II, J. C., Alegbeleye, I., Gichane, W., & Abaye, A. O. (2019). Senegalese professors' intention in engaging in learner-centered instructional strategies in higher education pedagogy. *Journal of International Agricultural Extension Education*, 26(1), 85-99. doi: 10.5191/jiaee.2019.26108
- Bergman, J. Z., Rentsch, J. R., Small, E. E., Davenport, S. W., & Bergman, S. M. (2012). The shared leadership process in decision-making teams. *The Journal of Social Psychology*, 152(1), 17-42.
- Bryk, A. S., Gomez, L. M., Grunow, A., & LeMahieu, P. G. (2015). *Learning to improve: How American schools can get better at getting better*. Cambridge, MA: Harvard Education Press.
- Currie, G. & Spuridonidis, D. (2019). Sharing leadership for Diffusion of Innovation in professionalized settings. *Human Relations*, 72(7), 1209-1233. doi: 10.1177/0018726718796175
- Davis, K., Dolly, D., Lamm, A. J., & Lamm, K. W. (2018). The future of Extension: A network emergence perspective from the case of the global forum for rural advisory services. *Journal of International Agricultural Extension Education* [Special issue], 25, 40-51. doi: 10.5191/jiaee.2018.25403
- Department of Defense Education Activity. (n.d.). *About DoDEA - DoDEA schools worldwide*. Retrieved from <https://www.dodea.edu/aboutDoDEA/today.cfm>
- Department of Defense Education Activity. (2016). *Centers for Instructional Leadership*. Alexandria, VA: Author. Retrieved from https://www.dodea.edu/Restructuring/upload/CIL_info_perspective_employees.pdf
- Department of Defense Education Activity. (2018). *Blueprint for continuous improvement*. Alexandria, VA: Author. Retrieved from <https://www.dodea.edu/Blueprint/>
- Deci, E. L., Olafsen, A. H., & Ryan, R. M. (2017). Self-Determination Theory in work organizations: The state of a science. *Annual Review of Organizational Psychology and Organizational Behavior*, 4, 19-43.
- Duckworth, A. L., Peterson, C., Matthews, M. D., & Kelly, D. R. (2007). Grit: Perseverance and passion for long-term goals. *Journal of Personality and Social Psychology*, 92, 1087-1101.
- Engelbart, D. C. (1992). Toward high-performance organizations: A strategic role for groupware. *Proceedings of the GroupWare*, 92, 3-5.
- Fu, X., Mohnen, P., & Ventresca, M. (2015). The creation and Diffusion of Innovation in developing countries: A systemic literature review. *Journal of Economic Surveys*, 30(5), 884-912. doi: 10.1111/joes.12126
- Hochanadel, A., & Finamore, D. (2015). Fixed and growth mindset in education and how grit helps students persist in the face of adversity. *Journal of International Education Research*, 11(1), 47-50.

- Kogler-Hill, S. E. (2016). Team leadership. In P. G. Northouse (Ed.), *Leadership: Theory and practice (7th ed.)* (pp. 363-390). Thousand Oaks, CA.: Sage Publications, Inc.
- Maslin-Ostrowski, P., & Drago-Severson, E. (2014). Leading and learning in the digital age: Framing and understanding school leader challenges. In *Handbook of research on education and technology in a changing society* (pp. 651-664). Hersey, PA.: IGI Global.
- Onwuegbuzie, A. J., Dickinson, W. B., Leech, N. L., & Zoran, A. G. (2009). A qualitative framework for collecting and analyzing data in focus group research. *International Journal of Qualitative Methods*, 8(3). 1-21. doi: 10.1177/160940690900800301
- Park, S., Hironaka, S., Carver, P. & Nordstrum, L. (2013). *Continuous improvement in education*. Stanford, CA: Carnegie Foundation for the Advancement of Teaching.
- Rapp, T. L. Gilson, L. L., Mathieu, J. E., & Ruddy, T. (2015). Leading empowered teams: An examination of the role of external team leaders and team coaches. *The Leadership Quarterly*, 27(1), 109-123. <https://doi.org/10.1016/j.leaqua.2015.08.005>
- USAID. (2018). *U.S. Agency for International Development: What we do* [Website]. Retrieved from <https://www.usaid.gov/what-we-do>.