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Expediting and Sustaining Change: Diffusing Innovation in Dynamic Educational Settings

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Change is critical in most organizations. International schools attempting to redefine 21st century education for their students are constantly innovating pedagogies and school structures. International schools tend to be dynamic, fast paced, nimble learning environments constantly innovating to meet the demands of evolving student populations. Hayden, Rancic, and Thompson (2000) found common characteristics of international schools included open-mindedness, flexibility of thinking, and action with the pragmatic skills of students. International schools in the East Asia region are well resourced and often looking for ways to differentiate themselves in the highly competitive global educational marketplace. The International School Consultancy (2016) reported international schools in Asia are growing faster than any other market in the world claiming 54% of international schools worldwide. All too often, though, international schools wanting to remain relevant adopt innovations only to see them lose momentum and evanesc. Indeed, sustaining changes and making them remain in light of staff or school leadership turnover in many ways is the holy grail of institutionalizing educational innovations in international schools.

However, ask someone what the word innovation in the context of international education means to them and you are likely to get many different answers. Indeed, defining the term innovation can be somewhat nebulous. Everett Rogers (2003), the preeminent scholar on diffusion of innovations, defined an innovation as "an idea, practice, or object that is perceived as new by an individual or other unit of adoption" (p. 12). The Organisation for Economic Co-operation and Development (OECD, 2014), a seasoned research institution of innovation and education, defined educational innovation as the "introduction of new products and services, processes for delivering services, ways of organizing activities, and new marketing techniques to improve the provision of education based on the social and educational objectives as measured by stakeholders" (p. 25). Diffusing innovations is largely a social construct. The viability of diffusing and sustaining change depends on the support of school leaders, leveraging targeted staff members who are perceived as change agents and opinion leaders within the school, and vetting innovations based on characteristic criteria to increase diffusion rates and expedite the diffusion of an innovation.

Recently, two studies were conducted in the Asia region as part of two different doctoral dissertations. Dungan (2017) studied EARCOS school leaders’ use of formalized planning including diffusion of innovation theory and opinion leadership when diffusing innovations within their schools. Dungan’s main focus was how these aspects of innovation diffusion influenced their decision to adopt distance education into their delivery of instruction. Hale (2017) examined international schools in the Asia region to determine identifiable characteristics of innovation in a school. Hale sought to find both perceived characteristics of innovation and global leaders’ observed characteristics of innovation. Conclusions from Hale’s study established specific practices of innovative schools and a support model for leaders desiring to create an innovative environment. Although these studies differed in objectives, sampling, and methodology, similarities did emerge regarding the role of leadership, opinion leadership, and the characteristics of innovations that led to school-wide adoptions. The authors believed that by
isolating some of these similarities in their studies, international schools may benefit in being able to vet innovations and diffuse them more rapidly within their schools. Additionally, schools and school leaders that are open to the notion that an innovation can be modified and remixed as an entirely new innovation, known as positive deviance (Pascale, Sternin, & Sternin, 2010), are more likely to see innovations remain even in light of staff and leadership turnover.

**School Leadership’s Role in Diffusing Innovations**

Hale’s (2017) study found a leader’s role in innovation in a school included characteristics of support, collaboration, communication, and being connected or networked. Innovative school leaders were perceived as those who fostered an openness to risk-taking and built a culture where staff experienced a freedom to fail. Participants unanimously claimed support from leadership as the most important characteristic to ensure an innovative environment in a school. More specifically, leaders who provided support through vision, establishing relationships, and the use of existing resources were found to foster empowered communities capable of generating novel ideas and implementing innovations. Leadership’s role was not to introduce the innovations themselves but, instead, to provide support to organizational stakeholders tasked with implementation of an innovation (Hale, 2017).

Furthermore, participants in Dungan’s (2017) study noted that organizational positioning was an important factor for individuals to be perceived as critical to successful implementation of an innovation. Individuals in administrative positions were perceived as better positioned than teachers, specialists, or instructional coaches due to a wider sphere of influence and having more time to dedicate to diffusing and institutionalizing innovations at the organizational level. School administrators were also noted to have greater access to financial resources to facilitate training and professional development groups that were impacted by an innovation. Similarly, Hale’s (2017) study noted individuals in mid-level administrative roles are better positioned to identify areas for innovations and gauging community support. Thus, these individuals play an integral role in supporting school leaders’ initiatives by leveraging their social networks in order to rally support for implementing change.

Dungan (2017) found that school leaders articulated pressures from various school stakeholders to maintain the status quo. Fear of being perceived as a disruptive innovator by their leadership peers and school, stakeholders diminished their desire to make disruptive pedagogical innovations, even when they saw value in doing so. Interestingly, the notion of school leaders who were perceived as highly innovative by other international school leaders was shown to be a function of their cosmopoliteness (degree of networking and connectedness to other school leaders), the degree to which their networks were heterophilic (made up of ideas and opinions from different sources and fields), their perceived competence, and the schools they led (Dungan, 2017; Rogers, 2003).
Change Leaders and Opinion Leadership

Change leaders and opinion leaders carry different roles in diffusing innovations in an organization. Fullan (2011) identified change leaders as those who are driven towards practice instead of theory, exercising the characteristics of resolve, motivation, collaboration, confidence, impact, and simplicity. Rogers (2003) noted that opinion leaders serve as direct conduits for innovations to enter organizations, help change organizational norms, and accelerate changes in behaviors or systems within organizations. Differentiating these two roles can have a powerful impact on identifying individuals within an organization to effectively identify and implement organizational changes.

**Change Leaders.** Fullan (2011) described a change leader as "having the capacity to generate energy and passion in others through action." Foundational to leading change, Fullan advocated practice driven theory. In other words, engaging in theory as a way to move forward instead of as a constraint. Change leaders learn through experience and utilize theory to support and inform behavior. Similarly, Pascale et al.’s (2010) concept of "Positive Deviance" claims an individual's ability to react effectively to difficult situations is rooted in learning from experiences rather than theory. Learning through practice and real-world experiences tends to be abstract and ultimately creates an adaptive (and effective) decision-making process that can be utilized in complex situations. Exercising resolve through purpose and practicing empathy requires time to build meaningful relationships. Change leaders are coalition builders that develop relationships through trust and consistency.

Participants in Hale’s (2017) study identified the need for leadership to draw on people’s expertise and make them feel valued. Javidan and Walker (2012) described social capital of global leaders as the capacity to build trusting relationships. Similarly, Fullan (2011) claimed the most effective change leaders are able to intrinsically motivate individuals to do more while fostering environments that allows for individuals to positively influence their peer group. For example, Anderson-Butcher et al. (2010) identified innovative factors for school improvement. These included identifying change leaders who could make recommendations and ultimately influence the entire community while building organizational capacity through professional learning structures. Breaking autonomy in schools and working across learning environments will create a bottoms-up approach for learning. Similarly, Dungan’s (2017) study described change leaders as capable of building coalitions and getting "others on board." Participants noted change agents in their network or their schools had earned the trust and established the rapport of their peers or other stakeholder groups. Fullan supported this notion finding that a collaborative culture is built through focus, coalitions, and capacity building. In fact, the OECD (2013) identified collaboration through networking and knowledge sharing as one of the most important sources or "pumps" of innovation.

Dungan (2017) and Hale’s (2017) studies both found networked/connectedness as a characteristic of change/innovative leaders. Moreover, both studies advocated the use of social media as a space for leaders to connect and collaborate. Dungan’s study found that change leaders were described as "technologically savvy" and leveraged technology for their own
learning and to find and explore potential innovations. Additional characteristics that were consistently recognized in change leaders within schools were high levels of proficiency in their current roles, a growth mindset, risk taking, and a confidence in how their role influences the organization. Thus, change leaders are confident through humility because they are ultimately learners. Christensen, Allworth, and Dillon (2012) labeled this the "school of experience," a place where one develops skills through real-world situations. Therefore, the attributes of change leaders are rooted in using their own practice as a testing ground for learning through reflection and applying research relevantly and contextually. Earl and Fullan (2003) expressed the importance of utilizing data to demonstrate successful diffusion and institutionalization of innovations in order to promote efficient decision making. It is through analyzing data change leaders are able to both see their impact and identify areas for improvement.

**Opinion Leadership.** Opinion leaders are instrumental in diffusing innovations within organizations. Opinion leaders accelerate organizational shifts by removing barriers that might otherwise impede the progress of diffusing an innovations change (Valente & Davis, 1999). Rogers (2003) observed that opinion leaders were critical in organically diffusing innovations within organizations and were more successful in doing so than mandates for change offered by superiors. Dungan’s (2017) study observed and supported Rogers’ findings; nearly all of the EARCOS school leaders included in his study consistently referenced three qualities that functioned in opinion leadership: (a) the opinion leaders’ values and traits, (b) the individual opinion leaders’ perceived competence or expertise, and (c) the opinion leaders’ social position and network within an organization.

In contrast to change leaders, opinion leaders are not always the earliest adopters of innovations. The paradox of opinion leaders’ position within organizations means that although they may still adopt an innovation before the late majority does, they do not become the earliest proponents of an innovation because it could jeopardize their standing as an opinion leader. Participants in Dungan’s (2017) study noted that opinion leaders, more than change leaders, possessed significant organizational knowledge. Opinion leaders were able to see innovations through a lens of "existing school structures" and had the ability to examine innovations as being "complementary or congruent to the school’s mission and vision." In this way, participants noted opinion leaders tended to be more pragmatic than individuals they recognized as change leaders. Tenure was also noted as an indicator of an individual’s standing as an opinion leader within the school. Participants noted it was difficult to possess significant organizational knowledge if a teacher’s tenure at a school was brief (pp. 114-115). Opinion leaders when compared to change agents have greater influence over peer groups and will more often monitor organizational feelings toward an innovation. Opinion leaders exert their influence once the relative advantage and observability of an innovation are clear (Rogers, 2003; Valente & Pumpuang, 2007). In this way, opinion leaders tended to be perceived as more pragmatic than individuals perceived as change leaders by EARCOS school leaders (Dungan, 2017)

Opinion leaders greatest role within any organization is that of influencing others. Valente and Pumpuang (2007) found that opinion leaders influence their communities in at least
four different modalities: (a) persuading others, (b) establishing or reinforcing organizational norms or best practices, (c) leveraging existing organizational resources in aiding in the diffusion of an innovation, and (d) raising awareness of an innovation. More recently, scholars have begun to focus on social media’s effect on opinion leadership identification and emergence. The availability of knowledge and need for advice and opinions has reinforced the need and importance of opinion leadership in mediatized environments (Van der Merwe & Van Heerden, 2009). Numerous studies found opinion leaders, more than ever before, better positioned to offer advice, information, and opinion through social networks like Twitter, blogs, and other forms of multimodal communication (Erdal, 2011; Kavanaugh et al., 2006; Kavanaugh et al., 2007; Said-Hung & Arcila-Calderón, 2011). Schäfer and Taddicken (2015) argued that opinion leadership is as important and prevalent as ever and that opinion leadership is still prevalent in social media environments. Schäfer and Taddicken noted that opinion leaders today have the ability to enact leadership "in novel, mediatized, and potentially more powerful ways" (p. 973). The ever-increasing availability of media and interconnectedness of people via social media networks provides more opportunities and need for advice and orientation. Dungan (2017) noted similar findings. EARCOS school leaders consistently identified opinion leaders as being more connected and networked than individuals whom they did not consider EARCOS school leader opinion leaders. Network school leaders cited included social media networks, namely Twitter and individuals who presented at regional educational conferences.

**School Practices that Promote Innovation**

Not all innovations are the same; innovations often differ in their size and scope. Smaller innovations are often introduced by teachers at schools diffusing horizontally before diffusing vertically to other grade levels or teams. In contrast, larger innovations or programmatic innovations in schools were found to be introduced by school leadership and diffused downward throughout a school (Dungan, 2017). Characteristics of innovations themselves play a major role in school introduction and adoption of an innovation. Rogers (2003) noted that in order for innovations to be considered they must meet the following criteria: (a) Relative Advantage: does the innovation offer advantages over existing systems or practices; (b) Compatibility: how well the innovations fits into existing organizational norms and cultures; (c) Complexity: what is the perceived ease of use of an innovation? Innovations seen as more complex are less likely to be adopted by the end user; (d) Trialability: can the innovation be piloted and tested before being diffused to a larger population; (e) Observability: can the effects of an innovation be seen. School leaders in both studies expressed characteristics of innovations that had successfully diffused in their schools that closely matched Roger’s theoretical criteria (Dungan, 2017; Hale, 2017).

**Characteristics that Foster Innovation in a School.** Hale’s (2017) study concluded with findings of observed characteristics of innovation in a school. Participants from international schools in Asia shared elements of their school that contribute to an innovative environment. These characteristics include the following:
• **Freedom to Fail: space to take risks, experiment, and try new things.** Participants claimed innovative schools create a culture of trying new things and experimenting. In schools where teachers were not afraid of negative consequences, if they failed, participants reported they were more likely to take risks. Failure was viewed as part of the process. Without a culture of freedom to fail, teachers (and students) will be afraid to try new things and, ultimately, stifle innovation in the school.

• **A learner-centered approach.** All but one participant identified learner-centered as a characteristic of innovation in a school. Specific approaches to learner-centered instruction included personalized learning experiences, teachers changing role as mentors and facilitators, inquiry-based instruction, and cross-curricular approaches to instruction. Although the use of technology did not emerge as a major theme in the study, it was identified as a facilitating factor for a learner-centered approach. Christensen, Horn, and Johnson (2008) advocated pedagogical change for student-centered instruction provides opportunities for students to become co-creators of their learning experiences.

• **Spaces are designed around learning.** Use of digital and physical spaces in schools are changing as a response to innovation. More than half of participants claimed the space should not determine the activity via architectural and digital barriers, instead, learning spaces are flexible so teachers can design spaces around tasks and activities (Blackmore, Bateman, Loughlin, O’Mara, & Aranda, 2011). Maker spaces and design spaces are prevalent in schools. A dedicated maker space was found to be a place where students could go to create and design with tactile physical pieces. These aspects were transformed spaces throughout the school, not purpose built. Additionally, flexible learning spaces was a common theme in the study. With mobile tables and chairs, little fixed furniture, the spaces can be designed and changed around learning tasks.

**Stages of Innovation Diffusion.** Dungan’s study (2017) noted several aspects to innovation diffusion planning by EARCOS school leaders that largely supported past research and reinforced Hale’s (2017) findings. Dungan’s study noted the following emergent themes when EARCOS school leaders were asked about procedures or stages they utilized when attempting to diffuse an innovation in their school:

• **Established and non-established innovation diffusion planning.** 40% of Dungan’s sample reported using formalized established procedures when considering an innovation. Among these were a stage of research and knowledge gathering about the innovation and the critical examination of the innovation through the lens of the school’s existing mission and vision, the impact on student learning, and established strategic plans;

• **Use of research and small pilot groups to strengthen rationale for an innovation.** Research appeared to be conducted by both teachers and school administrators depending on the scale of the innovation that was being considered for adoption.
However, with innovations that were diffusing from the school’s upper administration to the entire school population, research and information gathering appeared to be concentrated among a school’s administrative team. Research also included identifying potential barriers to diffusion and identifying the potential for innovation fatigue.

- **Assessment and refinement.** Piloting innovations with small groups allowed groups to modify the innovation to fit existing school constructs better. Participants noted the use of "leaders within their teams" as small pilot group members tasked with exploring and using the innovation. Positive deviance (Spreitzer & Sonenshein, 2004), where an innovation was introduced and then modified, and in so doing a different innovation was developed, was mentioned by two participants of the sample.

- **Stakeholder buy-in and coalition building.** Coalition building appeared to take place from the onset of the introduction of an innovation continuing through the research and piloting phases. In instances of school-wide innovations, purposeful information sharing and feedback gathering sessions for stakeholders were used.

- **Professional development and support in incorporating the innovation into current school practice and culture.** Administrators were seen as innovation amplifiers, facilitating widespread adoption of the innovation by providing time and structures for the innovation to be implemented. Structures for support of an innovation included small group and staff professional development sessions, the use of external experts to train staff, and clearly articulated expectations and normative behaviors related to the use of the innovation.

Finally, both studies corroborated Fullan’s (2011) claim of a clear and shared vision crucial to implementing change in a school environment. Innovative schools exhibit a greater openness to the notion that change often comes from within. School leaders who are consistently examining school practices and leveraging the experience and knowledge of their staff were found to be more likely to advocate for change and innovation within their schools (Dungan 2017; Hale, 2017).

**Recommendations for Creating Innovative School Cultures**

Diffusing innovations in any organization is a delicate dance. Navigating organizational politics, leadership structures, personalities, and the gamut of additional factors that can influence whether a diffusion persists or dissolves is never easy. In addition, international schools have an entirely unique layer, which adds additional complexity—regular staff turnover. This dynamic presents its own set of challenges when considering any innovation because turnover in school staff and leadership can often bring with it a shifting set of priorities and initiatives. However, school leaders can expedite diffusing innovations and mitigate some of the variability inherent with international schools by becoming familiar with basic aspects of innovation diffusion theories, establishing cultures that promote change agency and innovation, and identifying individuals within their organizations who are perceived as opinion leaders.

Based on research conducted in Asia and examination of the literature on what works in
schools and businesses, the authors recommend promoting or establishing the following in their schools:

- **Facilitate collaborative experiences.** Collaboration skills are embedded in our school’s values, school-wide learning outcomes, and core competencies but are we facilitating these learning experiences with our faculty and staff?
- **Communicate vision and purpose.** Work toward communicating the ‘why’ to spur innovation. In order to encourage change and ultimately implementation of change, support school staff by clearly articulating the purpose for change. Findings suggest in order for organizational improvement and, ultimately, learning (Bain & Swan, 2011) to take place, it is important for leadership to communicate effectively.
- **Stay connected in order to gather and share new ideas.** Foster the ability to look beyond your own institution for best practices. This can provide powerful tools for implementation of new innovation within the context of your own school. Dyer, Gregersen, and Christensen (2013) identified being networked as one of the five skills of a disruptive innovator. Look for practical ways to network and gather new ideas.
- **Provide Support.** Participants in both Hale (2017) and Dungan’s (2017) studies agreed support from leadership is needed for innovation to take root. Support through relationships, finances, and a vision create an environment where teachers are empowered to both come up with new ideas and are empowered to implement them (Hale, 2017). Javidan and Walker (2012) linked relationships as an aspect of global leadership. Petko, Egger, Cantieni, and Wespi (2015) and Hofman, de Boom, Meeuwisse, and Hofman (2013) stressed the importance of financial resources. Finally, schools that are highly innovative encourage their teachers and staff to explore innovations. Bottoms-up support or “teacher lead” reform was identified as a powerful form of support in innovation (Wallace & Priestley, 2011; Ross, Van Dusen, Sherman, & Otero, 2012).
- **Establish a Knowledge Base.** Diffusion of innovation research in education is an underserved area of traditional educational research. But, school leaders can still implement aspects of innovation diffusion research into their schools and decision making processes.
- **Determine Your Innovation Sweet Spot.** Every organization is different in terms of the amount of innovations or initiatives they can handle before innovation/initiation fatigue becomes an issue (Reeves, 2012). School leaders are encouraged to develop an initiation inventory. Charting the number of current innovations, when innovations were introduced and timelines for implementations, and the individuals driving the diffusion of innovations can be useful in determining the innovation load on the school.
- **Recognize and Foster Opinion Leadership.** Opinion leaders will ultimately be the bridge for an innovation to early adopters and innovators to the rest of the school. Opinion leaders therefore play a crucial role in any school hoping to change.
leaders are encouraged to formalize their knowledge of opinion leaders and the identifiable characteristics common among opinion leaders. Taking time to inventory school staff who display the characteristics of opinion leaders can help to expedite the institutionalization of an innovation. Furthermore, if characteristics are identified by school leadership, these same attributes can be used when hiring new staff, clueing school leaders into individuals that will help to drive change instead of stifling it.

Conclusion

In conclusion, two studies on innovation in international schools in Asia identified the role of leaders in diffusing innovations, practices in schools that promote innovation, and how schools can create a culture of innovation. Although both studies examined innovation through different lenses, both concluded there are some fundamental aspects to innovation schools can leverage to make change more strategic within the constructs of existing cultures and norms. Both studies also illuminated the importance of school leadership in the diffusion process. School leadership plays several roles in diffusing any innovations including identifying criteria for innovations that enter the school to match the existing school’s mission and vision, developing a process for diffusing innovations, and identifying individuals within a school who act as change leaders and opinion leaders. Furthermore, school leaders who are familiar with the innovation they are attempting to institutionalize and who have cultivated a culture of innovation by communicating a clear vision are more likely to see innovations diffuse.

Innovations themselves were also found to influence the diffusion of an innovation. All innovations have attributes that may facilitate or hinder the diffusion process. Schools considering institutionalizing an innovation could avoid potential diffusion pitfalls by examining the characteristics of an innovation to ensure they meet the five essential attributes for diffusion. Similarly, schools need to inventory their current list of initiatives being implemented at a particular time to avoid risking innovation fatigue and the dreaded "just another thing" syndrome.

Innovations should be evaluated and contextualized based on the international school’s unique cultural and educational environment. International schools are a complex amalgamation of characteristics absorbed from the host country in which they exist and from the collective individualism that is inherent in schools where staff turnover is more the norm than not. Although the researchers sought to identify the leadership’s role in diffusing innovations utilizing cases of international schools in Asia, they realize that attempting to theorize a one-size-fits-all approach to diffusing innovations within international schools would be impossible given the cultural and organizational complexities given the cultural nuances of international schools. Rather, the aim is to provide school leaders and individuals who are drivers of educational change a more formalized knowledge base from which to draw when considering the introduction and diffusion of innovations within their organizations. The researchers are hopeful by providing a snapshot of best practices and current research in the field of innovation diffusion, school leaders will develop a deeper understanding and tools for implementation of innovations.
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