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Overcoming Resistance to Service-Learning's Use in the Preparation of Teachers for Secondary Agricultural Education: A Reframing of the Method's Diffusion Challenges

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Abstract

Although service-learning (SL) has shown promise, its adoption as a method of instruction in secondary agricultural education remains tentative. As such, this philosophical investigation examined how resistance to SL might be uniquely manifested in the context of teacher preparation and the implications for agricultural education if viewed through the lens of Rogers' (2003) diffusion of innovations theory. After synthesizing related research and theory, we argue the method of instruction's barriers to adoption include not only a misalignment between teacher educators' beliefs and practices, but also result from a lack of knowledge, including (a) awareness, (b) how-to, and (c) principles (Rogers, 2003). We also posit that contextual influences at three levels – personal, institutional, and societal – drive or constrain teacher educators' knowledge of SL during the innovation-decision process. By reframing the problem in this way, implications emerge regarding the difficulties teacher educators may experience as they cross contextual borders and attempt to overcome the knowledge deficiencies likely to influence their pedagogical decision-making. In this regard, we offer an expansion to Rogers' (2003) innovation-decision process so teacher educators can forecast, isolate, and address better the contextual challenges and knowledge-related problems likely foregrounding their resistance to adopting SL as a method of instruction.

Keywords: Diffusion of Innovations theory; innovation-decision process; resistance; service-learning; teacher preparation

Introduction

During the 1960s and 1970s, university campuses experienced one of the most *tenuous* and *turbulent* periods in U.S. history (Fraser, 2014; Urban & Wagoner, 2014). From the War on Poverty to protests about civil rights and the Vietnam War, campuses often became *ground zero* for illuminating the nation's social, cultural, and economic inequities and shortcomings (Speck & Hoppe, 2004). During this tumultuous period, student activists and humanistic-oriented faculty questioned many of *the academy's failing structures* (Bloom, 1978; Stanton, Giles, & Cruz, 1999). For example, as institutions of higher education across the nation diversified regarding sex, race, and social-economic status, these actors devoted effort to community-based movements intended to address societal inequalities (Crews, 2002). This *chipping away* at public problems caught the attention of individuals who saw value in curricular aims also calibrated to address the needs of communities (Speck & Hoppe, 2004). Even though early pioneers of this movement often worked *against the grain and independent of one another*, by the end of the 1960s, they began to discover one another's work, conceptualize the movement's pedagogical worth, and establish *service-learning* (*SL*) as a method of instruction (Zieren & Stoddard, 2004).

Although scholars struggled to define SL during its formative years, Bringle and Hatcher (1995) suggested it was an instructional method that engaged students in service-based experiences that enhanced their understanding of course concepts while also allowing them to make meaningful contributions in their local communities. After the method's emergence at the close of the 1960s, its use soared in U.S. universities, especially during the past two decades (Hou & Wilder, 2015). Due to its diffusion in higher education, researchers have had opportunities to demonstrate that SL can be used to improve students' academic learning, civic responsibility, personal development, and attitudes toward working with individuals from diverse backgrounds and viewpoints (Conway, Amal, & Gerwein, 2009; Warren, 2012; Yorio & Ye, 2012). Such findings as well as increasing demands on universities to provide students with experiences to apply their learning in real-world settings appear to have further catalyzed SL's adoption as an instructional method (Bulot & Johnson, 2006; Butin, 2006; Heckert, 2009). However, disagreements about the role of the university and faculty regarding public service continue to intersect with the use of SL as a method to facilitate student learning (Hou & Wilder, 2015; Stanton et al., 1999). As a consequence, university faculty, including teacher educators, have often found themselves in precarious waters through which they must steer the primary aims of higher education – while navigating the crosscurrents of competing *discourses*, *motivations,* and *policies* (Butin, 2006, 2010).

For example, a cardinal assumption in the academy is that faculty have the knowledge and skills to provide quality instruction to students in their respective content areas (Gelmon, Holland, Driscoll, Spring, & Kerrigan, 2001). However, evidence (Bringle & Hatcher, 1996; Matofari & Edwards, 2017) demonstrates that university faculty often receive little formal training about teaching and learning, especially for instructional methods such as SL (Gelmon et al., 2001). Even though some higher education institutions do provide training and support to improve faculty members' instructional acumen, these efforts tend to emphasize emerging trends in collaboration, course design, and syllabi development (Cranton, 2011; Schumann, Peters, & Olsen, 2013) rather than specific

teaching methods. In response, some scholars (Bringle & Hatcher, 1996; Gelmon et al., 2001; Henderson, Fair, Sather, & Dewey, 2008) have called for placing more focus on professional development opportunities that feature SL as a method instruction. Through such initatives, faculty can learn how to provide students with real-world, service-based learning experiences in more integrative and complementary ways while supporting their universities' missions, which often include the elements of teaching, research, and service (Henderson et al., 2008).

To understand better the adopters of SL in higher education, McKay and Rozee (2004) examined attributes of faculty who used the method through the interpretive lens of Rogers' (2003) diffusion of innovations theory. Findings demonstrated that adopters saw SL as exhibiting relative advantage (Rogers, 2003) over other teaching methods because it could be used to enhance students' learning while also inducing positive change in local communities (McKay & Rozee, 2004). Adopters of the method also articulated that SL was *compatible* (Rogers, 2003) with their underlying philosophies about teaching and learning (McKay & Rozee, 2004).

In a similar investigation, Pribbenow (2005) reported that after a trialablity phase (Rogers, 2003) with the method, SL adopters perceived that their students' learning of course concepts was enhanced. The adopters also expressed forming more meaningful relationships with students and having had greater impact on society (Pribbenow, 2005). Cooper (2014) further distilled the defining characteristics of early faculty adopters of SL through a series of in-depth interviews. His findings indicated instructors adopted SL because they (a) had an interest in community engagement, (b) perceived SL produced positive student outcomes, (c) received encouragement from other faculty members, and (d) wanted to give back to society (Cooper, 2014). However, after embracing SL, faculty often encounter a number of complicated challenges (Conville & Kennell, 2002). For instance, faculty, students, and community members frequently hold different perspectives on the purposes of a SL experience as well as may have limited time and resources to support proper implementation of the teaching method (Abes, Jackson, & Jones, 2002; Hou & Wilder, 2015). Such obstacles have caused some instructors to abandon the method (Conville & Kennell, 2002); a behavior that Rogers (2003) described as *disenchantment rejection* regarding a previously adopted innovation.

SL, therefore, faces a critical juncture in higher education particularly regarding the preparation of future teachers, including instructors of agriculture for secondary schools (Roberts & Edwards, 2015, 2018). To this point, even though mounting evidence has demonstrated the important role SL could play in teacher preparation, Roberts, Edwards, and Robinson (2019b) reported that its use by teacher educators of agricultural education was largely *non-existent*. Given this, more work is needed to understand why teacher educators (a) resist using SL as a way to enhance the learning of preservice teachers, and (b) fail to feature how the method could be used to teach secondary agricultural education.

Purpose

This philosophical study examined the preparation of teachers for U.S. school-based, agricultural education regarding why the discipline has largely resisted the adoption of SL as a method of instruction by examining this phenomenon through the lens of diffusion of innovations theory (Rogers, 2003). To achieve this purpose, we

(a) synthesized existing research and theory on resistance to change; (b) reframed resistance to SL as a multifaceted knowledge problem; and (c) offered an expansion to Rogers' (2003) innovation-decision process to assist teacher educators of agricultural education in overcoming knowledge deficits and contextually anchored obstacles that may impede their adoption of SL and efforts to diffuse the method to preservice students. It is important to note that the aim of philosophical research is not to offer empirical truths, but rather stir debate and dialogue that pushes our thinking forward (Reichling, 1996). In particular, high quality philosophical investigations seek to explore various perspectives, evidence, and theories through a process of analysis, synthesis, and interpretive introspection to present new insights about emergent findings (Reichling, 1996). To accomplish this, we examined existing research and theory on SL and resistance to change in concert with Rogers' (2003) diffusion of innovations theory. Then, we synthesized our findings as a narrative and incorporated core features of that into Rogers' (2003) innovation-decision process, especially regarding the primal and catalytic role played by knowledge acquisition and its impact on the behaviors of potential adopters.

Synthesis: Research and the Theory of Resistance to Change

In recent decades, the *construct of resistance* has been examined across a plethora of academic disciplines and perspectives regarding change. Although resistance can be interpreted as unfavorable, Solorzano and Delgado Bernal (2001) suggested that it is essential to the wellbeing of social systems because innovations can introduce unintended consequences with negative outcomes for society. Though having been well-studied, the literature remains largely divided about which forces should be attributed to what most profoundly manifests resistance to innovative educational practices. For example, Talke and Heidenreich (2014) asserted that resistance is largely fomented at the individual level through judgments made by potential adopters about an innovation's attributes such as its relative advantage, complexity, and cultural appropriateness. However, Burnes and Jackson (2011) as well as Dent and Goldberg (1999) maintained that an innovation's likelihood of achieving a critical mass of adopters in education is more closely associated with its acceptance within institutional or discipline-specific contexts. As such, a deficit of understanding endures about the factors likely to foreground potential adopters' resistance to new educational methods, including SL.

Despite this incongruity of studied opinion, both positions offer critical insights that if considered in tandem depict the complexity of resistance to SL as an often-used instructional approach. As an illustration, the general public might view teacher educators' roles in education as merely imparting practical knowledge to preservice teachers while also educating them about a range of pedagogical approaches to use in their future classrooms. However, the storied history of education demonstrates that teacher preparation is not so straightforward as may be thought (Fraser, 2014). Instead, teacher educators must navigate complex policies and initiatives coupled with limited time. As a result, these educators often prioritize advancing the methods viewed as most useful to preservice teachers in their future practice while resisting others perceived as less efficacious or important (Anderson & Pickeral, 1998). Therefore, whether teacher educators adopt or resist an innovation, such as SL, is grounded in a complex confluence

of their educational backgrounds, epistemological beliefs, personal experiences and knowledge, among other key factors (Chambers & Lavery, 2012; Hart & King, 2007). Given this, it was useful to examine the multiple dimensions of resistance expressed by teacher educators toward SL.

To begin, we must understand that for most potential adopters SL represents a departure, or *change*, from traditional classroom teaching (Roberts & Edwards, 2018). The implementation of SL would require many instructors to transition from a predominantly behavioristic approach in which they, as authority figures, passively impart knowledge to students to instead use a method that allows the sharing of power and the co-construction of learning by all participants, i.e., a constructivistic orientation to teaching and learning prevails (Doolittle & Camp, 1999; Zieren & Stoddard, 2004). For many educators, such a change would initiate *dissonance*, which is a cognitive process by which individuals begin to question their existing beliefs, values, and worldviews (Speck & Hoppe, 2004).

Dissonance can be an uncomfortable state of mind that contradicts an individual's natural inclination to maintain consistent beliefs and behaviors (Burnes & Jackson, 2011; Peters, 2012). Therefore, when individuals are exposed to incongruities regarding their beliefs, they may attempt to regain stability through *resistance* (Lewin, 1946, 1947; see Figure 1). For example, while learning about SL educators may perceive it gives too much autonomy to students; therefore, they dismiss it due to a fear of losing control. To this point, if individuals perceive a change violates existing expectations, norms, or established procedures in a given context, they often view it as an unreasonable and unacceptable choice to make (Dent & Goldberg, 1999). Further, if a proposed change too intensely disputes a person's worldview, the likelihood of he or she resisting by more assertive measures increases significantly (Cummings & Worley, 2009).

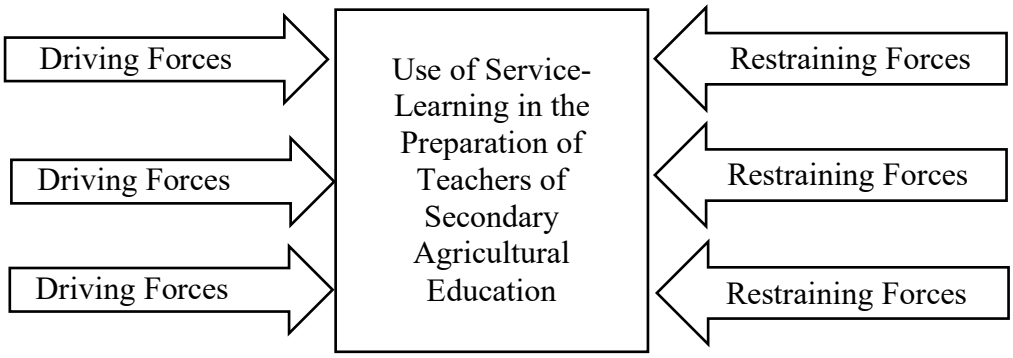

Figure 1. Application of resistance to change (Lewin, 1943) as contextualized to the adoption of service-learning (SL) by teacher educators of agricultural education.

The literature, therefore, has primarily focused on the role that personal factors, such as perceptions of dissonance, have played in shaping resistance to embracing an innovation. However, when Lewin (1943) first introduced the concept of resistance to change, he placed greater focus on the *context* in which the resistance was manifested. In particular, Lewin (1943) argued that behaviors, whether individual or

group, are the result of a combination of forces that *drive* or *restrain* an action, such as teacher educators deciding to adopt SL or rejecting such a change to their practice (see Figure 1). For example, if the combination of forces in a given context were generally supportive of SL, then the method of instruction would be more readily adopted while the opposite is likely if perceived forces were mostly contrarian. The restraining forces that have been consistently identified to influence the adoption of SL by faculty in higher education include accountability, curriculum requirements, institutional culture, teaching evaluations, tenure policies, testing procedures, and unclear standards (Abes et al., 2002; Antonio, Astin, & Cress, 2000; Banerjee & Hausafus, 2007; Burch, 2013; Colbeck & Wharton-Michael, 2006; Conville & Kennell, 2002; Cooper, 2014; Demb & Wade, 2012; Hou & Wilder, 2015; Jaeger & Thornton, 2006; Kezar, 2013; Russell-Stamp, 2015; Ward, 2003).

Through a synthesis of research findings and theoretical perspectives, we demonstrated the importance that personal and contextual factors play in influencing individuals' resistance to change within the social milieus in which they operate and perform their professional roles. Such was necessary to illustrate resistance to change as a multidimensional construct. This also illuminated the need to reconceptualize the resistance of teacher educators to adopting SL as a method of instruction. We next address how resistance to SL could be reframed to better facilitate its adoption in the preparation of secondary agricultural education teachers for the United States and perhaps that of teacher education practitioners elsewhere in the world.

Reframing Resistance to SL

To reframe resistance to SL, we must acknowledge its connection to *change*. For example, before using SL teacher educators would likely undergo a process by which they decided to adopt or reject the method, i.e., a conceptual model that Rogers (2003) posited as the *innovation-decision process* (see Figure 2). This process is initiated by an individual's desire to seek and process information regarding whether the adoption of an innovation may be beneficial, irrelevant, or potentially harmful. Rogers (2003) theorized that the innovation-decision process unfolds through five stages: (1) knowledge, (2) persuasion, (3) decision, (4) implementation, and (5) confirmation (see Figure 2).

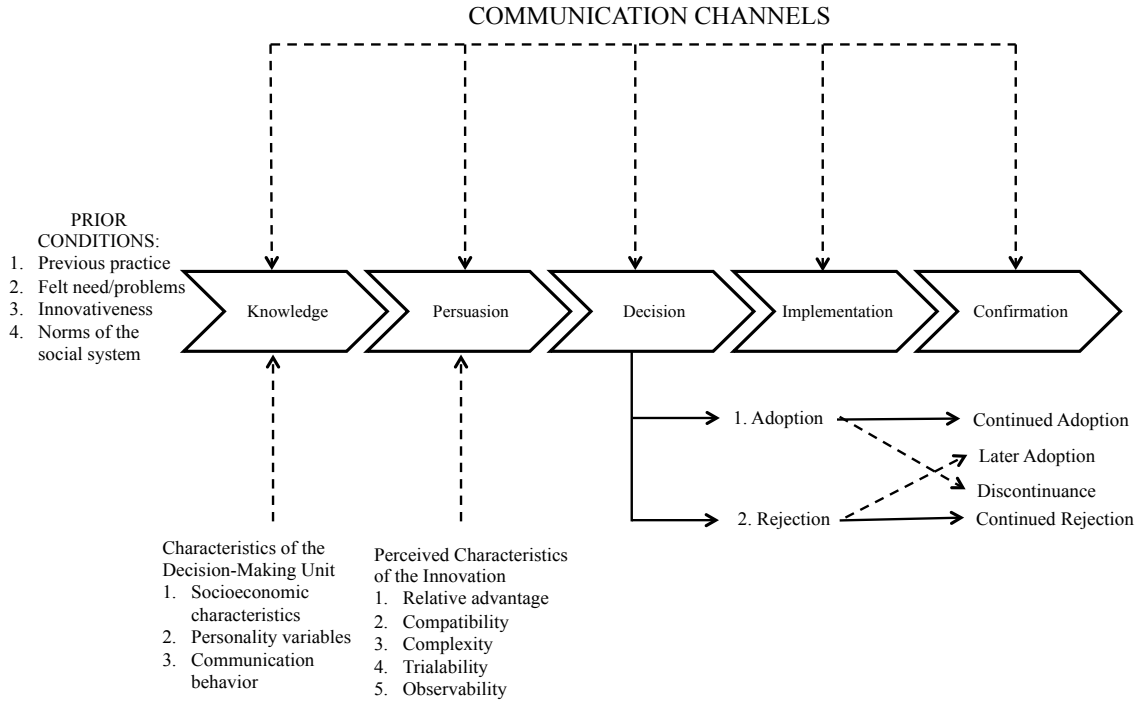

Figure 2. Rogers' (2003) Innovation-Decision Process. Adapted from *Diffusion of Innovations* (p. 170), by E. M. Rogers, 2003, New York, NY: The Free Press.

In the first stage, *knowledge*, individuals gain an understanding of the innovation's existence and seek to understand its purpose (Rogers, 2003). To this point, Rogers (2003) suggested that three types of knowledge exist and may be acquired about an innovation: (1) awareness-knowledge, (2) how-to knowledge, and (3) principles-knowledge (p. 173). *Awareness-knowledge* reflects a basic understanding of an innovation that an individual may form by asking questions such as "'*What is the innovation*?'" '"*How does it work?*'" and '"*Why does it work*'" (Rogers, 2003, p. 172). As individuals move beyond basic introductory awareness, they often seek information that will help them understand ways to appropriately use the innovation, or *how-to knowledge* (Rogers, 2003). The third type of knowledge identified by Rogers (2003), *principles-knowledge*, refers to when individuals seek to understand how an innovation functions by comprehending its underlying principles of operation which may imply having sufficient grasp of related technical, scientific, and mathematical concepts.

The second stage of the innovation-decision process, *persuasion*, represents the perceptions of individuals about innovations, either positive or negative attitudes or dispositions, which largely influence their adoption decisions (Rogers, 2003). It is important to note that before this stage, some individuals have already questioned their need to adopt the innovation under consideration. However, it is when individuals enter the *decision stage* that they may decide to either, actively or passively, resist or *reject* an innovation (Rogers, 2003). If choosing to adopt, they transition to the *implementation stage* during which the innovation's use is incorporated into their regular practice. In the final stage of the innovation-decision process, *confirmation*, individuals seek to validate

their adoption decisions (Rogers, 2003). It is during this stage that they decide to continue to use an innovation, discontinue its use, adopt after having rejected earlier, or sustain their initial stance regarding rejection (see Figure 2).

Agricultural education's literature has provided only limited insight about the factors that influence whether, to what degree, how, and why teacher educators adopt SL. For instance, a recent study reported that the use of SL by teacher educators was largely *nonexistent*, i.e., they had resisted adopting the method of instruction in their teaching practice (Roberts et al., 2019b). Further, Roberts, Edwards, and Robinson (2019c) indicated that statistically significant and inverse relationships ($p < .05$) were found between teacher educators' beliefs about the benefits SL could provide to classrooms and communities and their intentions to use the method in teacher preparation courses. Teacher educators' beliefs about the barriers to using SL at the classroom level in agricultural education also demonstrated a statistically significant and positive relationship ($p < .05$) with their intentions *to not use* the method in teacher preparation (Roberts et al., 2019c). Although these investigations indicated the method could be beneficial, the teacher educators studied did not intend to use it due to perceiving barriers to implementation. The educators' views about obstacles reflected having insufficient *how-to* and *principles-knowledge* (Rogers, 2003), and, therefore, held sway in their decision-making processes (Roberts et al., 2019b, 2019c).

To further understand these teacher educators' resistance to SL, Roberts, Edwards, and Ivey (2019a) analyzed their study's quantitative variables yielding statistically significant relationships by using cluster analysis and qualitative research procedures. This analysis produced three unique clusters operationalized as typologies that represented the planned behaviors (Ajzen, 1991) of teacher educators in regard to using SL as a method of instruction: (a) *Optimistically Unaware*, (b) *Policy-focused Decision Makers*, and (c) *SL Implementers* (Roberts et al., 2019a). The *Optimistically Unaware* expressed positive beliefs about SL but did not understand how to integrate it in their teaching methods courses (Roberts et al., 2019a). The second cluster, *Policy-focused Decision Makers*, included individuals with SL intentions that varied considerably. In-depth analysis revealed that these teacher educators used established education policy standards as anchors when navigating the decision-junctures in their course design processes. Whereas, members of the third cluster, *SL Implementers*, espoused strong beliefs about the method's potential and emphasized how it could be used to enrich teacher preparation. By viewing Roberts et al. (2019a) findings through the lens of Rogers' (2003) diffusion of innovations theory it became apparent that teacher educators' innovation-decisions regarding SL are *nuanced* and *varied*.

As such, this literature on teacher educators' use of SL in the preparation of future instructors of agricultural education (Roberts et al., 2019a, 2019b, 2019c) explicates how variant forces intertwine and work together to influence their resistance to the instructional innovation. Such complexities in the literature reveal the need to reframe teacher educators' understanding of the method and confounding variables surrounding its adoption. Therefore, we argue that SL's barriers to adoption involve a misalignment between teacher educators' beliefs and practices emanating from a dearth of knowledge, including Rogers' (2003) three types of knowledge: (a) awareness, (b) how-to, and (c) principles. We also posit that contextual influences at

three levels – personal, institutional, and societal – either drive or restrain (Lewin, 1943; see Figure 1) teacher educators' knowledge- and information-seeking behaviors about SL during their innovation-decision processes (Rogers, 2003). By reframing the phenomenon in this way, implications emerge to understand better the difficulties teacher educators may experience as they cross contextual borders as well as the knowledge deficiencies to likely influence their pedagogical decisions, especially regarding the adoption of SL. To address this need, we offer the Reframing Resistance to Service-Learning Model (see Figure 3). Thereby, teacher educators can forecast, isolate, and address better the contextual challenges and knowledge-related deficiencies likely foregrounding their resistance to adopting SL as a method of instruction for the preparation of secondary agricultural education teachers.

Driving Forces	Awareness-Knowledge	How-to Knowledge	Principles-Knowledge	Restraining Forces
Personal	• Accessing curriculum and other learning resources • Time • Opportunities to partner locally	• Applying SL models and examples • Motivating students through SL experiences • Self-efficacy to use SL	• Understanding theoretical perspectives undergirding SL • Understanding power relations among teachers, students, and community partners	Personal
Institutional	• Availability of resources • Tenure and promotion considerations • Lack of professional development opportunities	• Evaluating students' SL work • Integrating SL into university-mandated course syllabi formats and designs	• Managing school-community relationships • Deploying administrative support structures	Institutional
Societal	• Balancing perceptions of value – behavioristic vs. constructivistic views on learning and education as a public good • Perceived value of cooperative learning strategies	• Aligning SL experiences with state and national teacher preparation standards • Maintaining rigor and relevance	• Negotiating beliefs about ways to prepare secondary agricultural education teachers • Navigating issues of race, class, gender, and other antecedent variables	Societal

Figure 3. Reframing Resistance to Service-Learning (SL) Model. The model integrates Rogers' (2003) knowledge types and Lewin's (1943) conceptualization of resistance in a contextualized matrix regarding the use of SL in the preparation of secondary agricultural education teachers.

As depicted in the model, we suggest that personal forces contribute to teacher educators' knowledge deficits regarding SL's use. For example, researchers (Roberts et al., 2019a) have demonstrated that some teacher educators resist adopting SL because they lack a general understanding, i.e., *awareness-knowledge*, of the method, and may question its effectiveness. They also perceive lacking access to high quality curricular resources and information about potential community partners and to not

having the time needed to properly facilitate SL experiences for students (Roberts et al., 2019c). This absence of sufficient *awareness-knowledge* ultimately influences teacher educators' *how-to knowledge* (Rogers, 2003). In particular, teacher educators may be unaware of how to appropriately conceptualize and then operationalize the method, which diminishes their self-efficacy to implement it and thereby motivate students to take SL actions in the community (Roberts et al., 2019c). We also advance the notion that teacher educators' resistance to SL may be further entrenched by a lack of *principles-knowledge* because they lack proper understanding of the theoretical perspectives needed to navigate potential issues of power to likely emerge among key actors, including their students, community partners, and themselves (Roberts & Edwards, 2018).

Although personal forces may greatly affect teacher educators' resistance to SL, our reframing of this phenomenon also clarifies how institutional forces can influence their knowledge-based views regarding this instructional approach. As an example, tenure and promotion (T&P) expectations in higher education have been shown to influence how faculty allocate their time in regard to teaching, research, and service (Bringle & Hatcher, 1996; Gelmon et al., 2001; Henderson et al., 2008). Therefore, faculty may be dissuaded from seeking *awareness-knowledge* (Rogers, 2003) due to a paucity of resources and professional development opportunities perceived necessary to understand how SL could complement their fulfillment of T&P requirements. Further, teacher educators may also struggle with aspects of *how-to knowledge* (Rogers, 2003) concerning strategies to use in upholding institutional expectations for rigor when evaluating students' work. In this regard, they may struggle with describing a SL project's requirements in course syllabi and, therefore, forego including such as a learning expectation (Roberts et al., 2019a). As demand for academic rigor rises coupled with increasing state and national teacher credentialing standards, some teacher educators may be challenged due to lack of sufficient *principles-knowledge* (Rogers, 2003), especially regarding their institutions' expectations (Roberts et al., 2019a).

We also contend that societal forces shape teacher educators' knowledge and beliefs about SL (Roberts et al., 2016; Roberts & Edwards, 2018). To illustrate, consider the plethora of training methods, models, and priorities in the preparation of secondary agricultural education teachers (Phipps, Osborne, Dyer, & Ball, 2008; Torres, Kitchel, & Ball, 2010). Depending on training and background, some teacher educators may place more value on behavioral outcomes, i.e., vocational skills development, rather than modeling SL as a method of instruction poised to imbue students with democratic principles and community-oriented actions supporting social justice (Roberts & Edwards, 2018). They may dismiss approaches not aligned with their instructional orientations and, therefore, fail to seek out *awareness-knowledge* (Rogers, 2003).

Societal forces and norms also complicate teacher educators' resistance to SL in other ways (Roberts & Edwards, 2018). For example, in their attempts to uphold state and national teacher accreditation policies, these educators may lack *how-to knowledge* (Rogers, 2003) about meeting such requirements while also engaging their students in meaningful SL projects (Roberts et al., 2019a). Moreover, some may require additional *principles-knowledge* (Rogers, 2003) to adroitly interpret and implement SL as an

instructional method that aligns with their beliefs regarding how best to prepare teachers. Finally, the difficulties teacher educators perceive in negotiating issues of race, class, gender, and other sources of injustice that their students will likely encounter may stymie the motivation to embrace SL as a method of instruction while preparing teachers of agricultural education (Roberts et al., 2016; Roberts & Edwards, 2018).

Often, teacher educators' resistance to SL begins with a series of questions: *Is SL vital enough that I should change my existing pedagogical practice? Is it my responsibility? And if so, how do I make SL an instructional priority?* Until now, researchers in agricultural education (Roberts et al., 2019a, 2019b, 2019c) have framed the answers to these questions as artifacts of teacher educators' beliefs and intentions. Our philosophical stance, however, is to problematize resistance to SL and reframe it as a knowledge problem that impedes teacher educators from advancing in Rogers' (2003) innovation-decision process, and, due to this impediment, their adoption of the method is negligible, if such occurs at all. Moreover, we assert that the dimensions of knowledge – awareness, how-to, and principles – as defined by Rogers (2003), if juxtaposed against critical levels of context – personal, institutional, and societal – either drive or restrain (Lewin, 1947; see Figure 1) teacher educators' adoption behaviors regarding SL. The need emerges, therefore, to conceptualize the convergence of these factors through an expansion of Rogers' (2003) theory as contextualized to the preparation of secondary agricultural education teachers.

An Expansion of Rogers' Innovation-Decision Process

This philosophical treatise examined the complexity of teacher educators' resistance to adopting SL as a method of instruction for preparing teachers of agricultural education. To wit, we clarified why teacher educators may perceive that SL is beneficial at the classroom and community levels (Roberts et al., 2019b) but they struggle with executing the method due in part to the restraints imposed by multilevel contextual forces (see Figure 3). This reframing provides new insights into understanding whether adoption of the instructional innovation will accelerate and reach a critical mass (Rogers, 2003) among teacher educators, and also illuminates the need to broaden our scope and appreciation of the larger phenomenon.

In Figure 4, we offer our expansion to Rogers' (2003) innovation-decision process. In particular, the expansion more prominently depicts the influence of communication, including sources and actors, on potential adopters acquiring the three types of knowledge described by Rogers (2003). The expansion also integrates Lewin's (1947) conceptualization of resistance to change by illustrating how driving and restraining forces at the personal, institutional, and societal levels may influence the knowledge of teacher educators regarding their adoption decisions about SL. We argue that this expansion can provide opportunities to overcome existing contextual restraints and knowledge deficits that foster and reinforce resistance to SL among teacher educators. We also posit that it may catalyze further research, additional theory-building, and more effective practices to likely augment the use of SL in the preparation of secondary agricultural education teachers and similar professionals.

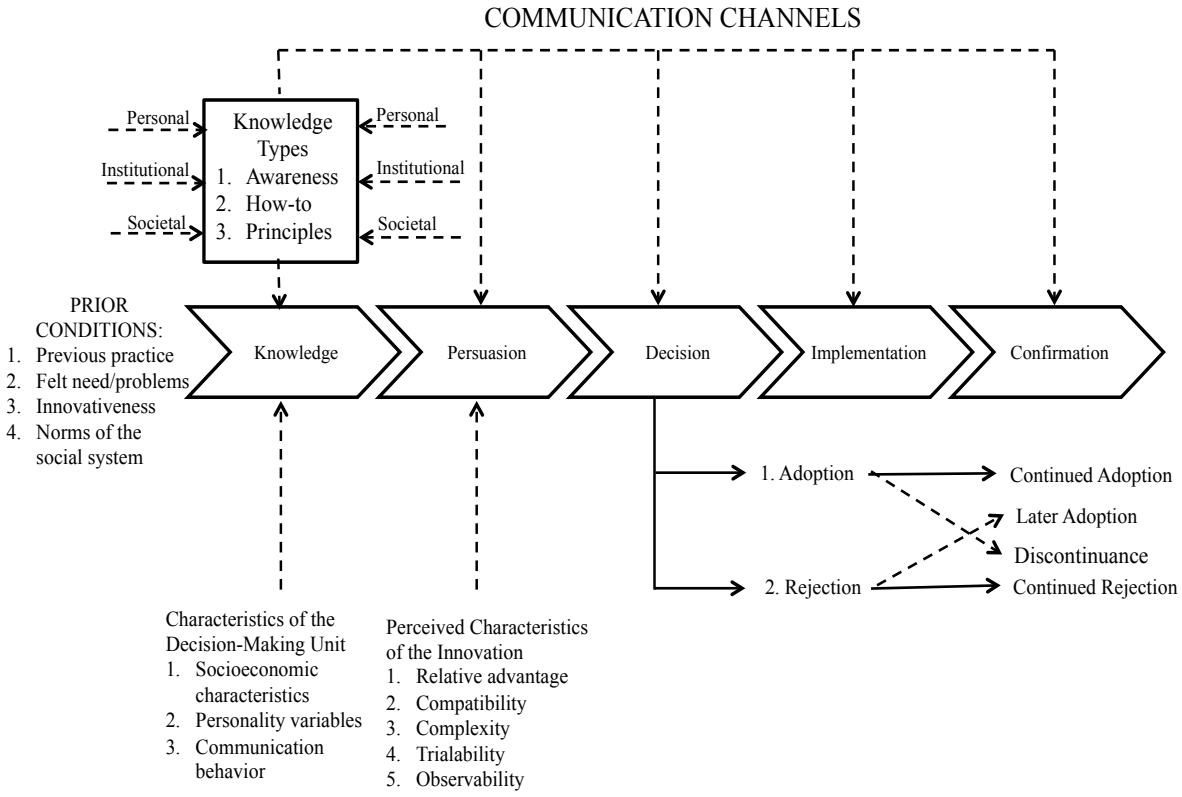

Figure 4. A proposed expansion of Rogers' (2003) Innovation-Decision Process, as contextualized to the adoption of SL as an instructional method by teacher educators of agricultural education.

Discussion, Implications, & Recommendations

Change continues to pervade, reform, and transform education; for example, increased emphasis has been placed on rigor, accountability, and aligning curriculum with state and national standards (Kirsch, Braun, Yamamoto, & Sum, 2007). As one consequence, many educators, at all levels of schooling, perceive their autonomy in regard to teaching and guiding the learning of students is increasingly constrained if not unduly limited (Cox, 2004; Cranton, 2011; Schumann et al., 2013). Such pressures also influence educators' decisions regarding choices of instructional methods to use in their classrooms, including whether to employ SL (Ball & Geleta, 2012; Lake & Jones, 2008). However, by rejecting SL, or other instructional methods, teacher educators may negate their potential to facilitate critical outcomes for teacher candidates such as improved empathy, ethics, and problem-solving abilities (Ball & Geleta, 2012; Barnes, 2016; Carrington & Saggers, 2008; Chambers & Lavery, 2012; Daniels, Patterson, & Dunston, 2010; Hildenbrand & Schultz, 2015; Meaney, Griffin, & Bohler, 2009;).

Recent literature in agricultural education (Roberts et al., 2019a, 2019b, 2019c) primarily depicts this problem as a chasm between teacher educators' beliefs and practices. However, we offer a counter-narrative to such a notion, i.e., to only view the problem in this way is too narrow. Instead, the resistance to SL should be

conceptualized as a multifaceted learning problem. To that end, we provided an amplified view into the complex intersection of how knowledge or the lack of, context, beliefs, and uncertanties may conflate to uniquely presage a teacher educator's resistance to SL as a method of instruction (see Figure 3). It is also critical to recognize that teacher educators frequently experience little support regarding the implementation of SL as a method of instruction for preservice teachers of agricultural education. Of note, lack of support is one of the primary reasons why innovations fail to reach a critical mass of adopters in higher education (Byrck, Gomez, Grunow, & LeMahieu, 2015). To move forward, therefore, it is essential that teacher educators be afforded the tools necessary to navigate these multilevel forces (see Figure 3) while also acquiring the knowledge (Rogers, 2003) needed to overcome resistance to using SL in the preparation of agricultural education teachers. Although our expansion of Rogers' (2003) innovation-decision process (see Figure 4) is meaningful, investigatory efforts are needed to empirically test its value. As such, we recommend that research be undertaken to validate the expansion as proposed. Future theory-building efforts should examine how personal, institutional, and societal forces may also affect the way in which individuals perceive the attributes of SL as an innovation worthy of adoption. This information may be vital to addressing issues related to communication with and the professional development of teacher educators. Future quantitative studies should investigate how Rogers' (2003) types of knowledge and Lewin's (1947) conceptualization of resistance may uniquely influence the attitudes of potential adopters. Such an interaction could be explored by using structural equation modeling to examine the direct and indirect effects of variables on the attitude formation of teacher educators.

After issues related to teacher educators' knowledge of SL are addressed, additional work will be needed to guide them through the remaining elements of Rogers' (2003) innovation-decision process, i.e., the persuasion, decision, implementation, and confirmation stages. To help facilitate this process, it is critical to identify opinion leaders (Rogers, 2003) who most profoundly influence the use of instructional methods and other learning techniques to prepare teachers of agricultural education. We further recommend that social network analysis be used to more precisely define and measure teacher educators' communication channels and to identify actors connected at the node, dyad, and network levels (Borgatti, Everett, & Johnson, 2018).

Rogers (2003) noted that opinion leaders are essential to the diffusion process, so obtaining a better understanding of these individuals regarding teacher educators' social networks is critical. After such individuals are identified, qualitative research methods could help distill the beliefs and values communicated by these opinion leaders that allow them to exhibit influence over their followers regarding instructional practices and adoption of innovations such as SL. If analyzing the later stages of the innovation-decision process for SL, we also recommend that investigations extend beyond self-reported measures to also examine latent perceptions and reactions of teacher educators during their decision-making processes, e.g., by applying biometric analyses (Dunstone & Yager, 2008).

In development of the Reframing Resistance to Service-Learning Model (see Figure 3), we intended to create a matrix that could be used to detect potential challenges that teacher educators may

experience regarding the adoption of SL. Perhaps professional development could be created for teacher educators of agricultural education and this model serve as the guiding framework to organize such programming. We caution, however, that additional work is needed to validate the model's utility. We also recommend that researchers and practitioners explore whether this framework could be modified to help mitigate knowledge-related diffusion issues for other educational innovations. Before engaging in such efforts, we further suggest that researchers explore the driving and restraining forces (Lewin, 1947) specific to such innovations and the related contexts to ensure they appropriately apply the model or a variation of it. By conceptualizing their diffusion challenges in this way, agents of change could better identity gaps or deficiencies and modify related efforts as needed.

By reframing teacher educators' adoption behaviors regarding SL as a method of instruction, we demonstrated how such a reconceptualization could broaden opportunities for research, theory-building, and practice. Moving forward, we recommend that when diffusing educational innovations in higher education, more attention should be focused on the role of knowledge, including its various types, as well as the contextual forces likely to impact rate of adoption, continuance, discontinuance, or rejection (Rogers, 2003). By exploring how these forces amplify, coalesce, or even clash within social systems, we posit that other fortuitous possibilities as well as ambiguous limits will be revealed.

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