A Model for Boundary Spanning in Education: Insights from University and Community Partnerships

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Abstract

Boundary spanning in educational partnerships requires navigating complex boundaries across institutions, disciplines, and roles. This study explores the activities, roles, and competencies of boundary spanners, particularly liaisons, within university-community collaborations. Based on semi-structured interviews with liaisons, university faculty, and community partners, the findings highlight the centrality of relationship-building, communication, and systems thinking in managing dynamic boundaries. Liaisons are revealed as both linking pins and system managers, filling structural gaps while fostering long-term collaboration. Variations in how stakeholders perceive boundaries and competencies underscore the multifaceted nature of liaison roles. This research proposes a three-stage model for boundary spanners in educational partnerships, emphasizing adaptability and sustainable systems. These insights inform strategies for supporting liaisons and enhancing the effectiveness of boundary-spanning efforts in education.

Introduction to Boundaries and Boundary Spanning

Boundaries, where multiple disciplines or organizations meet, are dynamic spaces of both challenge and opportunity. Epstein (2019) describes these boundary zones as fertile ground for innovations and unique insights because they bring together diverse perspectives, experiences, and problem-solving approaches. Although boundaries promote creativity, working across them is often more complex than operating within a single field.

Collaboration across boundaries comes with several obstacles. Differences in knowledge bases and terminology can hinder communication, slowing progress or causing misunderstandings (Jesiek et al., 2018). Fragmented professional networks can make it difficult for boundary spanners to connect people and resources effectively. Additionally, distinct standard procedures and approaches across organizations may clash, requiring extra effort to align practices. Working across boundaries also introduces more "moving pieces" and greater uncertainty, as the interconnected nature of the work creates new variables and dependencies. For example, Prysor and Henley (2018) noted the substantial changes that higher education has undergone in recent decades; given the rapid societal changes occurring outside the university during the same time, the university boundary is in a state of continual change. These challenges mean that boundary-spanning work requires more intentional coordination and adaptability, but the potential for innovative outcomes makes it worth the effort.

Boundary Spanning in Education

In the field of education, boundary spanning is essential when universities collaborate with K–12 schools or community partners like museums. Despite a shared foundation in pedagogy, these groups often differ in methods, goals, and levels of instruction. University faculty often prioritize research and scientific output, whereas K–12 educators focus on immediate classroom strategies and pedagogical practices (Wang et al., 2024). Additionally, boundary spanners in education must navigate distinct bureaucracies, policies, and procedures, adding complexity to the collaboration. For example, research-practice partnerships often face challenges shaped by organizational and cultural factors (Wegemer & Renick, 2021), while university-industry partnerships may involve managing power dynamics (Vauterin et al., 2012). In environmental education partnerships, boundary spanners act as mediators and knowledge translators between research and policy (Goodrich et al., 2020). These examples highlight the complexity and dynamic nature of boundaries in education, where successful collaboration requires navigating a variety of interlocking systems and interests.

Liaisons in Educational Partnerships

Given this complexity, many partnerships rely on dedicated liaisons, rather than dividing boundary-spanning tasks among partners. These individuals play a crucial "in-between" role, serving as the connection that links universities with K–12 schools or community organizations. Whether part of a partnering institution or independent, liaisons are central to the partnership's success (Mull & Jordan, 2024). They ensure that communication flows smoothly, resources are shared, and mutual goals are met. As noted by Goodrich et al. (2020) in their study of university-policy partnerships, the specific boundaries may vary, but boundary spanners perform similar core functions across contexts: connecting partners, facilitating interactions, fostering mutual understanding, and producing and disseminating joint products. These functions highlight the critical role of liaisons as facilitators who actively manage relationships, align goals, and help navigate complex dynamics to sustain and strengthen partnerships.

Despite their importance, liaison roles often face significant challenges. Many positions are short term or project based, particularly in university and K–12 collaborations (Hoppey, 2016). These positions are frequently tied to grant funding or specific projects, making them less stable and potentially short lived. As a result, liaisons may struggle to develop long-term, sustainable systems, as they are often not in place long enough to see the full impact of their efforts. Additionally, many liaisons operate with constrained resources, which further limits their ability to sustain collaborative efforts over time (Goodrich et al., 2020).

Moreover, the role and responsibilities of liaisons are often underappreciated by partners. Boundary-spanning responsibilities are often not officially recognized as standalone professional roles; instead, they are frequently treated as peripheral or auxiliary duties added to existing positions (Fidan & Balcı, 2017). This lack of recognition can lead to role ambiguity and vulnerability to burnout, as liaisons are expected to manage complex relationships and facilitate collaboration without sufficient professional development or support (Goodrich et al., 2020). Liaisons must also navigate multiple bureaucracies, each with its own policies, goals, and procedures, making it challenging to align disparate systems and achieve common goals (Hoppey, 2016). Furthermore, resistance to change is a common issue; liaisons often need to engage stakeholders, address concerns, and foster buy-in for initiatives like inclusive education. These combined challenges highlight the need for more stable, well-supported liaison roles to ensure the sustainability and success of university-community partnerships (Farley & McNair, 2020).

Research Gap

Despite extensive research on boundary spanning, there remains a gap in understanding how individuals at the university-community boundary perceive both the boundary itself and the role of liaisons. While much of the existing literature emphasizes functional aspects like roles and activities, little is known about how stakeholders navigate the complex dynamics of these boundaries. This study was initiated in response to recurring challenges we observed in prior university-community collaborations, where the roles, expectations, and contributions of boundary spanners—especially liaisons—were often unclear or unsupported. These patterns highlighted the need for deeper understanding of how such roles function across institutional boundaries and how they can be structured to foster more effective, equitable partnerships.

Study Objectives and Theoretical Framework

This study aims to address this gap by interviewing participants involved in boundary-spanning projects, including university faculty, liaisons, and K–12 community partners. These interviews focused on the types and characteristics of the boundaries they encounter, as well as the roles and competencies of effective liaisons. The analysis was framed by the theoretical model of boundary spanning developed by Jesiek et al. (2018). Their framework synthesized literature across multiple disciplines to identify common features of boundary-spanning work. Importantly, the model emphasizes that boundary spanning involves both relational and structural dimensions, requiring individuals to bridge differences in language, goals, and organizational systems while also creating new processes and structures that enable collaboration. This broad, integrative perspective offers a comprehensive lens through which to understand the complex work of boundary spanners. While Jesiek et al.'s (2018) boundary-spanning framework provided the primary lens for our initial analysis, additional theoretical perspectives, including systems thinking and social capital theory, emerged as useful interpretive tools as we explored the dynamics and implications of liaison work more deeply. In this study, we explored

four key areas of liaison work: (1) the types of boundaries they span, (2) their definitions and roles, (3) their activities, and (4) the competencies they require. By investigating these areas, we aim to refine the existing model for use in educational partnerships and better understand the benefits and challenges of the liaison program developed by our university's collaboration-focused center, the Center for Educational Networks and Impacts (CENI) at Virginia Tech.

The study addresses two main research questions:

1. How do university partners, liaisons, and community partners view the characteristics of the boundary between/among collaborators?
2. How do they perceive the role and necessary competencies of the liaison?

By exploring these questions, the study contributes to the literature on boundary spanning and offers practical implications for developing more effective and sustainable liaison programs that enhance collaboration, communication, and long-term outcomes. Based on our findings, we propose a new model of boundary spanning in education that integrates insights from multiple theoretical traditions.

Methodology

Study Design, Population, and Sampling

This qualitative study with quantitative comparisons explored the roles, activities, and competencies of boundary spanners, specifically liaisons between universities and community partners in educational settings. Participants were drawn from a region with longstanding educational and economic disparities, where university-community partnerships have historically been difficult to sustain due to logistical and cultural barriers. These partnerships focused on addressing issues such as educational access, instructional innovation, and equitable student outcomes.

Participants were part of the Center for Educational Networks and Impacts (CENI) at Virginia Tech, which evolved from the merger of two campus offices at Virginia Tech (VT-STEM and the Integrated Design + Education + Arts Studio) in 2015. Operating within the Institute for Creativity, Arts, and Technology, CENI has grown threefold since its establishment. It serves as a hub for connecting Virginia Tech with regional and statewide educational networks, hosting partnerships with organizations such as the Science Museum of Western Virginia and building connections with school districts across Montgomery County, Radford City, Floyd County and beyond.

CENI's mission is to inspire, connect, and impact educational communities, advancing high-quality teaching and learning opportunities in formal and informal pre-K–12 and higher education contexts, while fostering equitable access for historically marginalized and underserved populations. It serves as a leader in STEM workforce development through collaboration with educators, researchers, and community stakeholders. Key initiatives include organizing large-scale events, facilitating broader impacts for researchers, coordinating field trips, and building networks like the Educator Liaison Network, which links Virginia Tech to regional schools and museums. This network enables mutual collaboration, offering grant opportunities, facilitating outreach projects, and enhancing student engagement. As a dynamic community of practice, CENI continues to expand its reach and strengthen relationships that drive impactful education and innovation.

The primary data source for this study was qualitative, collected through semi-structured interviews and analyzed using a hybrid inductive-deductive coding process. This approach allowed for both flexibility and depth in understanding participants' experiences across different roles. The study received Institutional Review Board (IRB) approval (Approval #20-791), ensuring adherence to ethical standards.

Participants were recruited from four boundary-spanning projects within CENI that connect universities with community organizations like K–12 schools and museums. The liaisons from these projects provided names of individuals who were directly involved in their project work, ensuring a range of perspectives across institutional and community roles. Rather than aiming for a pre-defined sample size, we used a purposeful sampling strategy focused on capturing rich insights from all key collaborators connected to liaison-facilitated efforts. This resulted in a total of 15 participants, from three participant groups:

- Liaisons (N = 4): Selected from CENI, which fosters sustainable partnerships between the university and educational organizations. The liaisons generated short lists of university faculty, museum educators, and K–12 educators with whom they had worked in their liaison roles.
- Community Partners (N = 6): Drawn from

K–12 schools and museums involved in boundary-spanning activities. Individuals from the liaison-produced lists were invited to participate.
- University Partners (N = 5): Faculty members from a large R1 institution who were engaged in CENI-facilitated projects. Participants represented diverse disciplines and were selected from liaison-generated lists.

Data Collection

Interviews were conducted between November and December 2020, remotely via Zoom or phone due to COVID-19 restrictions. Each session lasted 30–45 minutes, enabling in-depth discussion while maintaining manageable duration. The semi-structured format allowed participants to elaborate on experiences while ensuring consistent exploration of key themes across interviews. With participant consent, interviews were audio-recorded and later transcribed using a third-party service, ensuring accurate capture of discussions for analysis. The interview protocol focused on aspects of the liaison role, boundary-spanning activities, and long-term partnership dynamics, with sample questions including:

- How do you view the role of the liaison? What are the major responsibilities?
- What competencies are needed to be successful in this role?
- What advantages are offered by the long-term partnership structure? Disadvantages?
- What introductions has the liaison made that have most benefited the partnership?

Coding

Transcriptions were anonymized to protect participant privacy. Coding was conducted using Dedoose, a qualitative analysis software. A hybrid coding approach was used, following Fereday and Muir-Cochrane (2006), combining inductive, data-driven coding (Boyatzis, 1998) with deductive, a priori coding (Crabtree & Miller, 2022). This approach allowed for both the emergence of new themes and the application of existing theoretical frameworks. Jesiek et al.'s boundary-spanning framework guided initial coding and analysis, and additional theoretical perspectives—including systems thinking and social capital theory—emerged as helpful lenses for interpreting the data and refining the resulting model.

The initial round of coding was conducted independently by three members of the research team: the principal investigator, a graduate research assistant, and a university colleague familiar with community-engaged scholarship. All three had prior experience working on or studying university-community partnerships. In the second round, the full research team participated in reviewing and refining the codes to resolve discrepancies and develop consensus on theme definitions. This iterative and collaborative approach helped reduce individual bias and strengthen the trustworthiness of the findings. While one member of the team had professional familiarity with the participants' organizational context, none of the coders had supervisory roles or ongoing collaborative projects with the interviewees at the time of data collection. Coding focused on four areas (Table 1).

Analysis Methods

A descriptive analysis explored patterns and differences among the three participant groups, identifying common themes and differences in perceptions of boundary-spanning activities, roles, competencies, and boundary types. Chi-square tests assessed whether significant differences existed among groups across these four focus

Table 1. Overview of Coding Areas

Coding Area	Number of Codes	Description
Boundary-spanning activities	6	Categorized liaison activities connecting partners
Types of boundaries	6	Identified boundaries, such as organizational and temporal
Definitions and roles of liaisons	4	Clarified liaison roles and responsibilities
Boundary-spanner competencies	21	Key competencies necessary for liaisons, such as relational skills and communication

areas. Quantitative results were supplemented with qualitative data, integrating direct quotes to provide context and deepen understanding of the findings.

Limitations

Several limitations may affect the interpretation of findings. Participants were all affiliated with partnerships involving a single university in Virginia, potentially limiting generalizability to other regions. All liaisons were part of CENI and their experiences may differ from those in other settings, particularly regarding resources and support. To mitigate these limitations, we included a diverse range of community and university partners to capture a variety of perspectives and experiences. This diversity helps provide a broader understanding of boundary-spanning roles, even within a geographically constrained context.

Additionally, the non-random selection of participants may introduce selection bias, as it relies on existing relationships. To minimize selection bias, we used purposeful sampling guided by liaisons who had firsthand knowledge of collaborative efforts. This approach ensured that participants were directly involved in boundary-spanning activities, enhancing the relevance and depth of the data collected.

Data collection also presented certain constraints. Interviews were conducted via Zoom or phone, so the dynamics of in-person interactions—such as body language and rapport—were not captured, which could influence the depth and detail of responses. Additionally, potential coding bias exists despite efforts to use both inductive and deductive methods. By grounding our coding in Jesiek et al.'s (2018) Boundary Spanning framework, we anchored the analysis in established theory while allowing for the emergence of novel themes. This hybrid methodology balanced theoretical rigor with openness to unexpected insights.

Results

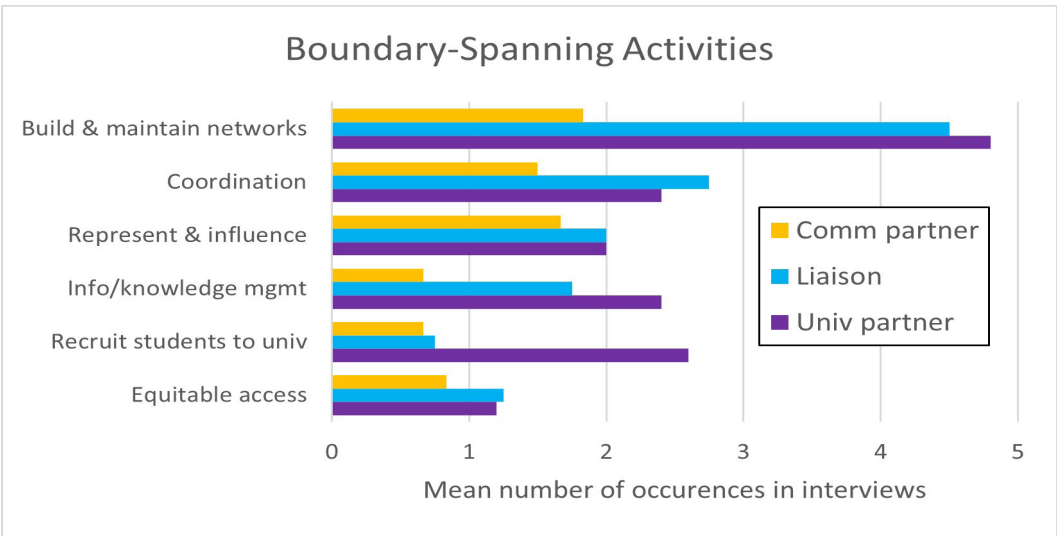
This section summarizes findings from interviews on four key areas related to boundaries and liaisons: boundary-spanning activities, types of boundaries, liaison definitions and roles, and competencies for boundary spanners. We present the quantitative results and include relevant participant quotations for context and richness.

Boundary-Spanning Activities

The three participant groups—community partners, liaisons, and university partners—did not differ significantly in their views of boundary-spanning activities (chi-squared = 7.96, df = 10, p = 0.63). All groups emphasized the importance of *building and maintaining networks* as the central activity (Figure 1).

University partners highlighted the role of boundary spanners who "reach out to new people, make connections, talk to people" and excel at "keeping the road clear and the lines of communication open and in a really, really positive, friendly, cordial, professional way." Community partners expanded this view, emphasizing the importance of connecting both people and resources to facilitate collaboration. One K–12 partner offered the following example:

Figure 1. Mean Number of Times Different Boundary-Spanning Activities Were Mentioned in Interviews with Community Partners, Liaisons, and University Partners



> Somehow this idea got born that we can have a [music] studio here and a [music] club here at [the school]. And so the liaison immediately contacted a group at the university, and we took a group of our students to the university to meet with these people and see their studio.

Liaisons agreed that relationship cultivation is fundamental, with one liaison explaining her activities as:

> I am a matchmaker between two different entities. One of those being the university and the other one being the school district. And so if someone has an opportunity at the university and they are looking for an audience for that opportunity, I try to match them with a successful partnership in a K–12 environment. And that's just kind of the first step. And then it can also go the opposite direction of someone in our K–12 realm is looking for a resource, for an enrichment. Then I'm able to kind of dive a little bit deeper at the university and see if there's a good match on that side. And it is important to have that middle person, because I'm able to answer some questions and get some things clarified before a commitment is made, because usually the details are reasons why either side is sometimes afraid to commit to something.

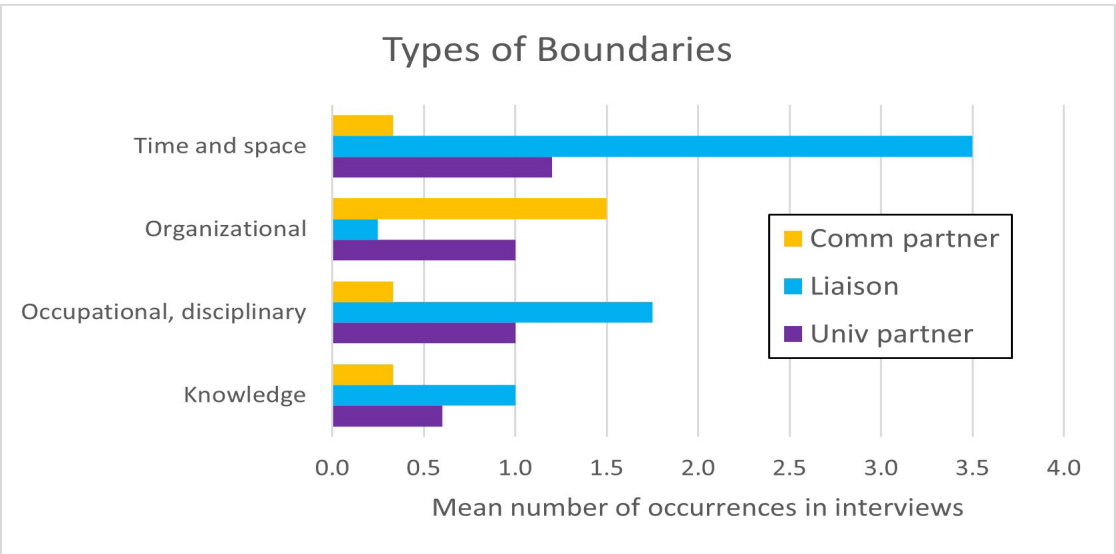
Types of Boundaries

Participants differed significantly in their views on boundary characteristics (chi-squared = 21.66, df = 10, p = 0.017). Liaisons were more likely to mention *temporal and spatial boundaries*, which affect daily logistics (Figure 2). One liaison indirectly identified the spatial separation among stakeholders, when noting that "I really enjoy coming on campus and getting to know that group of people." A temporal boundary can emerge when partners have different time scales, as a liaison notes here:

> In academia, especially for broader impact when you're writing a proposal and you're including a museum exhibit or a museum event, the time from the time that you write the proposal till the time you actually do the event or the exhibit can be as much as six or seven years depending on the kind of grant. And that timeline isn't that helpful to the museum. When they establish a need for a new exhibit, they need to fill that space or make that exhibit happen in a few months, not in seven years.

Liaisons also described *disciplinary and occupational boundaries*, which require them to act as translators across fields (Figure 2). As one liaison noted, "I definitely have grown in my knowledge of how higher education systems work and the vocabulary that they use and how very different it is from the K–12 setting, especially coming from the

Figure 2. Mean Number of Times Different Types and Characteristics of Boundaries Were Mentioned in Interviews with Community Partners, Liaisons, and University Partners



classroom. . . . They are two very different entities usually with the same kind of goals, but because of a different background, sometimes there are some elements, like a language barrier."

In contrast, community partners emphasized *organizational boundaries*, driven by differing structures and objectives between universities and K–12 and museums (Figure 2). One K–12 community partner expressed this difference as:

> Obviously, the university is a Research-1 institution, so frequently much of what they're after are some good research opportunities or outreach opportunities, which is connected to research and grants. And obviously what we're interested in is high-quality instruction for our students. So we want to make sure that the kinds of activities that the university engages in with our students is beneficial to them and not just beneficial to the research side of things and actually stealing time away from the kind of instruction that students need.

Liaison Definition and Roles

There were also significant differences in perceptions of liaison roles (chi-squared = 13.11, df = 6, p = 0.041). University and community partners generally viewed liaisons as *linking pins* who connect stakeholders (Figure 3). One university partner expressed this role as "just being able to put the right people in connection with each other" and "making connections between the university and the school districts." A community partner agreed, noting that the liaison "has been the go-between to me and to the school division."

Liaisons acknowledged this role but also saw themselves as filling a *structural hole* at the intersection of systems, responsible for more than just connecting partners (Figure 3). Liaisons viewed the collaboration as a system, not just a linear connection. As one liaison noted,

> One of the most useful parts for both the school and the university has been the realization that having this position helps to organize the big picture of what the outreach looks like across the district, where outreach is and where it is not, and where the needs are. And then they actually have someone—me—who can work to make those changes and communicate them.

Competencies for Boundary Spanners

All groups identified *relational skills* and *communication* as critical competencies for boundary spanners, aligning with the need to build and maintain networks (chi-squared = 53.66, df = 40, p = 0.073; Figure 4). Boundary spanners must know "how to communicate with all stakeholders to help them understand why things are valuable," often serving as "the person who represents the relationship."

Differences emerged regarding other desired liaison competencies (Table 2). Community and university partners valued *grant writing* and *project management*, reflecting the importance of external

Figure 3. Mean Number of Times Different Roles of Liaisons Were Mentioned in Interviews with Community Partners, Liaisons, and University Partners

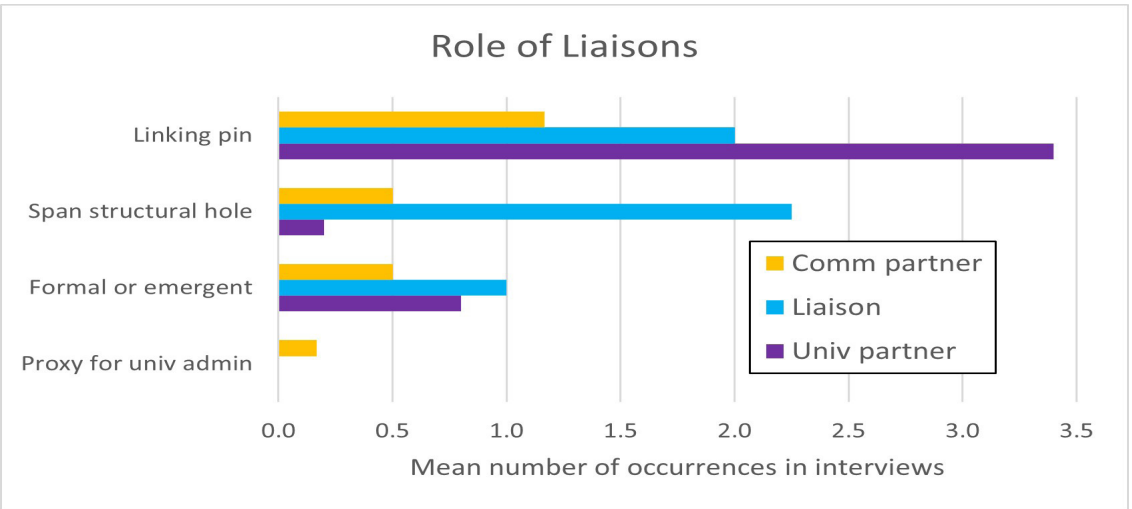
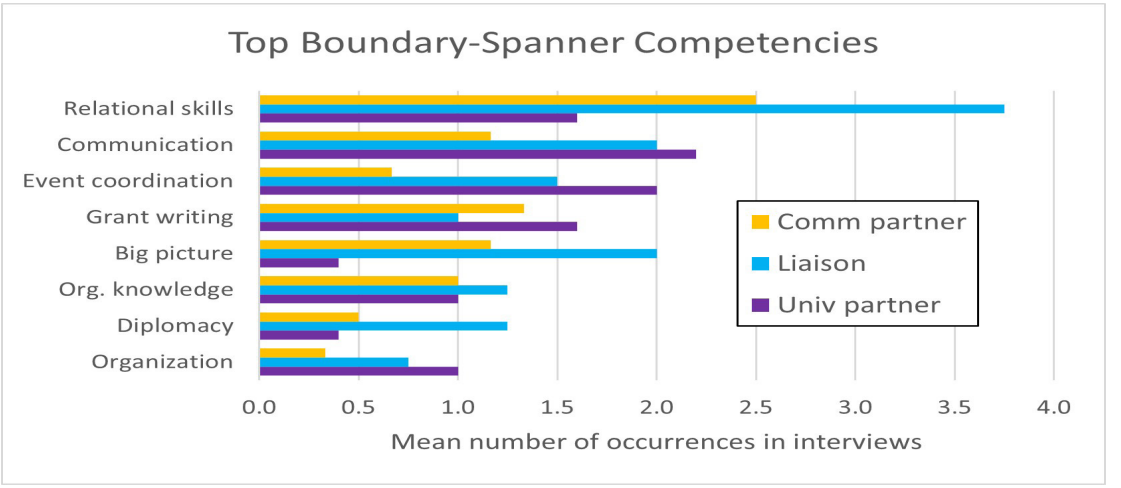


Figure 4. Mean Number of Times Different Important Competencies of Liaisons Were Mentioned in Interviews with Community Partners, Liaisons, and University Partners



funding. Community and university partners derive significant benefits from external grants and value that skill accordingly, with one noting that their liaison:

> . . . basically coordinated the entire portion of the school's participation in the [technology] grants. . . . She coordinated getting the right people at the school district to sign off, including the people who are the only ones who can sign off on a grant and commit the school system to help with things like that.

The liaisons viewed grant writing as less important to their role, which they viewed as heavily reliant on *diplomacy* "because it's really important, as you work through things that are going well or things that are not going well, it's important to be able to support both sides of the relationship." This was particularly true when the inevitable challenges arose during a project; "the crisis moments are the ones that it's important to have a liaison." Liaisons were also more likely to identify the importance of *prioritization*, as they had multiple projects, tasks, and stakeholders competing for their time. One liaison explained the need for prioritization skills as follows:

> There's a lot of activities that are going on (almost 170 when we last measured them) between the two entities. Keeping track of those, trying to interact with all of them to some extent at varying levels, means that there's a lot of things to balance. A lot of people to keep in touch with, and a lot of different priorities that are happening.

Many of the competencies identified by participants supported the idea that boundary spanners fill a structural hole rather than simply acting as linking pins. Skills like big-picture thinking, organizational knowledge, and the ability to create structures reflect the complexities of navigating educational systems. One participant described the overall system-focused competencies of a boundary spanner as follows:

> It's always looking at this big picture of where we would like to go and what we need to have in place for others to be able to go down that path. Sometimes long-term projects can get away from people if they don't have that sort of big-picture thinking skill, if they're used to having step-by-step things that you follow. . . . Much of this is uncharted territory, and there is no clear-cut 'here's how you do this kind of thing.'

Discussion

Summary and Interpretation of Results

This study explored the boundary-spanning activities, boundary types, roles, and competencies of liaisons, university partners, and community partners in university-community collaborations. Although participants agreed that building and maintaining networks and effective communication

Table 2. Ranks of Boundary-Spanner Competencies Based on the Mean Frequency of Mention in Interviews with Community Partners, Liaisons, and University Partners

Competency	Community Partner	Liaison	University Partner
Relational skills	1	1	3
Communication	3	2	1
Grant writing	2	8	3
Big picture	3	2	9
Event coordination	9	4	2
Organizational knowledge	5	6	5
Project management	7	–	7
Agility	7	9	–
Diplomacy	11	6	9
Balance	9	9	–
Organization	13	9	5
Prioritization	16	4	–
Assessment and evaluation	11	9	–
Create structures	5	15	–
Ability to tolerate ambiguity	13	13	12
Interest in community	16	13	9
Training and education	16	15	7
Resource brokering	13	15	12
Positive attitude	–	15	12
Ability to inspire	16	–	12
Ability to adapt	16	–	–

Note. A dash (–) indicates that the competency was not mentioned by any participants within that group.

are critical for successful boundary spanning, they had different perspectives on other aspects of the liaison role.

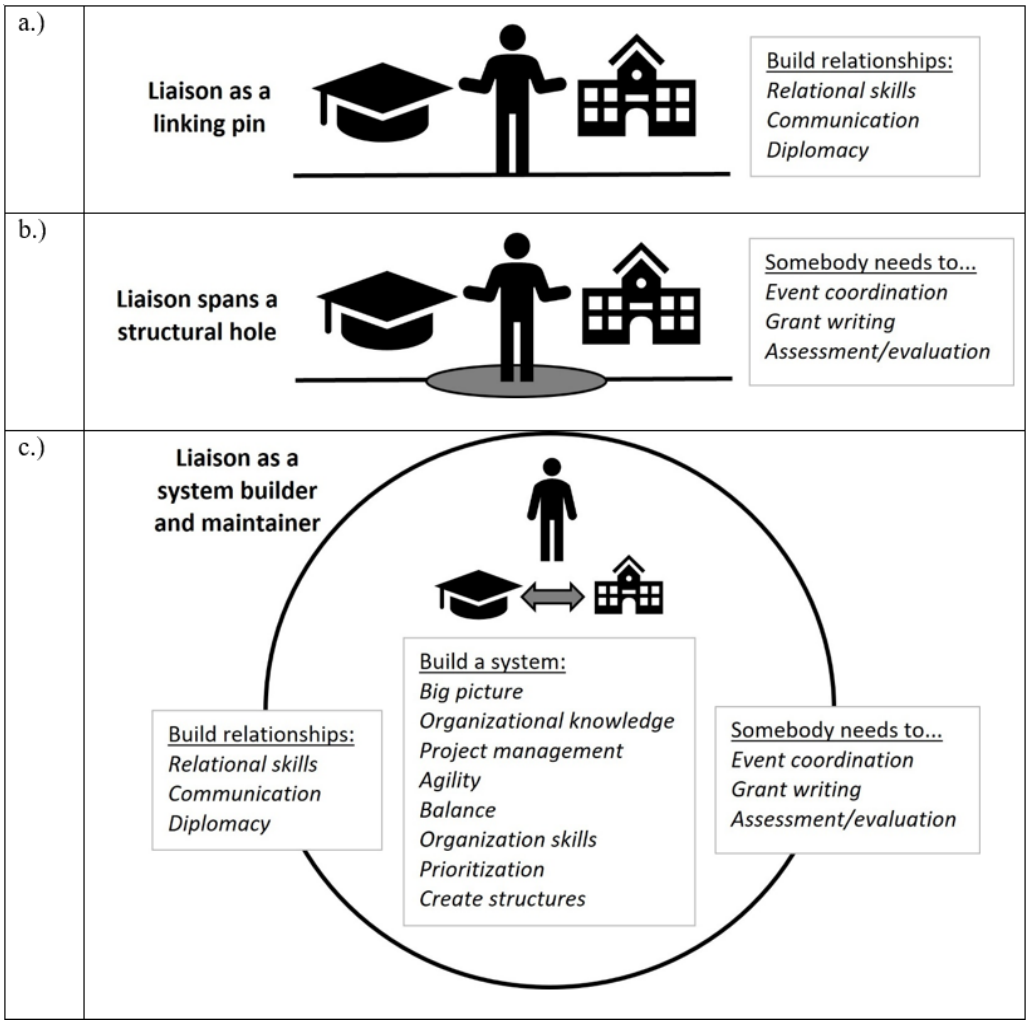
Boundary types were perceived differently among groups, with liaisons focusing more on temporal and spatial boundaries that affect daily logistics, such as scheduling and physical distance. In contrast, community partners emphasized organizational boundaries, shaped by differing structures and goals between universities and K–12 schools and museums. Definitions of the liaison role also varied: university and community partners generally saw liaisons as linking pins, facilitating connections among stakeholders, while liaisons described their work as also filling a structural hole, managing the collaboration as a cohesive system rather than just enabling individual connections. This distinction was further evident in competencies, where all groups identified relational skills and communication as essential, but liaisons also highlighted the importance of big-picture thinking and prioritization to manage complex, ongoing interactions. These differences reflect how each group's needs and organizational context shape their view of the liaison's role.

Theoretical Models

To understand these results more fully, we analyzed them through three theoretical lenses: Boundary spanning theory, structural hole theory, and complex adaptive systems (CAS) theory.

1. Boundary spanning theory (Williams, 2002) emphasizes the roles of connecting disparate groups and facilitating communication across boundaries. This theory aligns well with our findings that relationship-building

Figure 5. Proposed Model for Boundary Spanners in Educational Partnerships



Note. This model illustrates the three-stage progression of the liaison's role in educational partnerships. In Stage 1 (Fig. 5a), the liaison focuses on building and managing relationships among partners, establishing trust and communication channels. In Stage 2 (Fig. 5b), the liaison fills a structural hole by taking on additional roles, while continuing to maintain relationships. In Stage 3 (Fig. 5c), the liaison works to create sustainable systems that can adapt to changes in personnel, projects, and educational environments.

and communication form the core of a liaison's responsibilities, supporting the notion of liaisons as linking pins. However, our findings suggest that liaisons view their role as broader, involving system-level management to address gaps and challenges that go beyond simple connection. This indicates that while Boundary spanning theory accurately captures the core tasks of liaisons, it may not fully explain the adaptive problem-solving and system creation that are also central to their work.

2. Structural hole theory (Burt, 2014) suggests that individuals positioned at gaps in social structures act as brokers, controlling the flow of information and resources between disconnected groups. This theory aligns with liaisons' descriptions of their roles as filling a structural hole, bridging gaps where communication and collaboration would otherwise falter. While partners recognized the importance of specific tasks like grant writing (community partners) and event coordination (university partners), liaisons emphasized their role in facilitating the transfer of resources and knowledge rather than controlling them. This suggests that liaisons operate as enablers, not as power

brokers, highlighting a divergence from the traditional interpretation of structural hole theory (Farley & McNair, 2020).

3. Complex adaptive systems (CAS) theory (Holland, 1992) offers a broader framework, viewing organizations as dynamic systems composed of independent agents whose interactions lead to emergent behaviors. This theory aligns with our findings that liaisons contribute to both system adaptation and stabilization, managing interactions that shape both short-term and long-term outcomes. Liaisons' focus on systems thinking, emergent solutions, and adaptability demonstrates their role as agents of change who build sustainable structures that can respond to evolving educational needs. This aligns well with CAS principles, which emphasize adaptability, flexibility, and the emergence of new solutions in response to change. This theory is particularly relevant to educational partnerships, which are often novel, exploratory, and subject to changing conditions and personnel (Fidan & Balcı, 2017; Siemens et al., 2018).

Proposed Model for Boundary Spanners in Educational Partnerships

Building on the three theories above, we propose a three-stage model that captures the progression of a liaison's role in educational partnerships. While each existing theory offers valuable insights, none fully encapsulates the complexity of boundary spanning across different stages of partnership development. Our model emphasizes the temporal progression of the liaison's role as the partnership evolves, starting with relationship-building and advancing toward the creation of sustainable systems that outlast specific projects.

In the first stage (Figure 5a), the liaison focuses primarily on building and managing relationships among partners, aligning with Boundary Spanning Theory's emphasis on connecting groups and facilitating communication. During this phase, liaisons work to establish trust, create communication channels, and align goals among all partners.

In the second stage (Figure 5b), the liaison takes on additional roles that involve filling a structural hole in the partnership. This stage includes tasks such as grant writing, event coordination, and other operational responsibilities that are essential but do not fall clearly within any single partner's role. At the same time, liaisons must continue managing relationships to maintain trust and cooperation. In many partnerships, a liaison's role ends here, tied to the completion of specific projects or short-term goals.

To achieve a longer-term, adaptable partnership, the team of boundary spanners must progress to a third stage (Figure 5c), where they focus on building adaptable systems that sustain the partnership beyond individual projects and changes in personnel. This phase requires systems thinking, emphasizing the creation of structures that allow for multiple connections, emergent solutions, and flexibility. The liaison must prioritize tasks, balance competing demands, and maintain focus on the big-picture goals of all partners. This final stage emphasizes the need for the liaison role to be a dedicated, long-term position, as the tasks and responsibilities of managing and adapting the partnership cannot be effectively shared among partners. The ultimate goal is to create an adaptable, sustainable system that reduces dependency on specific individuals and ensures long-term success.

Implications for Practice

The findings of this study provide several practical implications for how universities, community partners, and liaisons can enhance boundary-spanning partnerships and encourage mutual learning through long-term collaborations.

Engage in big-picture discussions:

- Regularly align short-term actions with long-term goals for all partners, ensuring that early efforts contribute to larger objectives.
- Foster systems thinking by focusing on building adaptable structures that sustain partnerships over time, while also addressing immediate tasks.
- Adapt policies and procedures to be flexible and accommodate the dynamic nature of boundary-spanning work and changing conditions.
- Identify and address gaps in resources and tasks that fall outside traditional roles, ensuring essential responsibilities are covered; boundary objects (McNair et al., 2015) can help collaborators bridge those gaps.

Support dedicated liaison positions:

- Create and invest in long-term or permanent liaison roles to provide stability and sustain the partnership beyond individual projects. This study extends Mull and Jordan's

(2024) insights by suggesting that robust institutional policies are needed to support boundary spanners in higher education, ensuring sustainable partnerships that bridge academic and community goals.

- Develop clear, evolving job descriptions for liaisons that define roles throughout the project timeline, with regular reviews to maintain alignment.
- Offer role-specific training for liaisons, focusing on skills such as relational skills, communication, systems thinking, and problem-solving, which are all crucial for managing complex, dynamic partnerships (Harden & Loving, 2022). DiEnno et al. (2024) recommends structured professional development, indicating the value of aligning organizational support systems with the unique challenges of boundary-spanning practitioners.

Prioritize relationships and communication in the partnership:

- Foster mutual trust and communication through joint planning sessions, collaborative events, and open communication channels (Hatala et al., 2022). Community-centered approaches and identity alignment are critical for fostering trust and achieving meaningful outcomes in boundary-spanning partnerships (Blodgett et al., 2024).
- Promote collaborative problem-solving with regular sessions that allow the team to develop emergent solutions to evolving challenges.
- Celebrate successes and recognize the contributions of liaisons and partners to maintain morale, engagement, and commitment.

Conclusions

This study provides valuable insights into the roles, activities, and competencies of boundary spanners in university–community partnerships, revealing both commonalities and differences among liaisons, university partners, and community partners. Drawing on Jesiek et al.'s (2018) boundary-spanning framework, we examined key dimensions of liaison work, including the types of boundaries they span and the skills they bring to the role. We also incorporated concepts from systems thinking to highlight how liaisons function within and across organizational structures, and from social capital theory to understand how they build and sustain relationships across institutional lines. Together, these theoretical foundations informed the development of a new three-stage model of boundary spanning in education, which explains the evolving role of liaisons and provides practical guidance for designing and supporting effective partnerships. The model emphasizes the importance of establishing dedicated liaison roles, fostering systems-level coordination, and building adaptable, sustainable structures that support long-term collaboration.

Future research should explore how this model applies to broader geographic regions and a wider range of partnerships. Longitudinal studies could examine whether the three-stage progression proposed here aligns with the evolution of partnerships over time. For universities and K–12 institutions, the findings suggest that creating stable liaison positions, clarifying roles, and prioritizing communication and relationship-building can enhance the effectiveness and sustainability of collaborative efforts. Overall, this study contributes both theoretical and practical insights that can guide future research and the ongoing development of successful educational partnerships.

In the five years since these interviews were conducted, CENI has applied our findings to enhance its structure and function, resulting in significant growth and improved collaboration. The network has expanded to include more liaisons and community partners, enabling broader and deeper partnerships. Regular meetings among boundary-spanning partners now focus on both assessing and adapting goals and roles, fostering a culture of continuous improvement. Notably, the design of liaison roles has been intentionally adaptive and flexible, allowing liaisons to respond effectively to evolving partnership needs. This approach has not only addressed many of the challenges inherent in boundary-spanning work but has also led to long-term positive impacts, including stronger relationships, greater alignment of goals, and more sustainable collaborations.

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