Adult Education Quarterly
1–19
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DOI: 10.1177/0741713616644778
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Conversational Moves That Matter: Bridging Learning Outcomes and Patterns of Speech in Informal Cross-Organizational Conversations Among Top-Level Leaders

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Abstract

Cross-organizational "learning conversations" are an important source of informal learning among professionals, though little is known about whether specific characteristics of conversational interaction contribute to different learning outcomes in such conversations. This mixed-methods study examined the relationship between *what* (learning outcomes) and *from what* (specific conversational contributions) 79 executives from 22 organizations reported they learned from informal, peer-led conversations. Findings suggest that (1) there are unique associations between different types of reported learning outcomes and specific types of conversational contributions that are controversial, narrative, and inquiry in nature and (2) higher and/or lower proportions of certain conversational moves may support particular types of learning outcomes. We conclude with a discussion of findings and how they can support developing more nuanced taxonomies of effective discourse for informal learning, and identify areas for future research.

Keywords

adult learning, continuing professional development, knowledge sharing, leaders, life-long learning, discourse

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Research has established the value of cross-organizational "learning conversations" as an important source of informal learning among professionals (Eraut, 2004; Marsick & Watkins, 2001). A learning conversation is a form of dialogue characterized by the exploration, examination, and reconsideration of individuals' reasoning, assumptions, and perspectives (Garmston & Wellman, 2009; Power, 2013; Senge, 1994). When done well, such conversations allow participants to construct meaning, transform knowledge, and create collective wisdom on the challenges they face (Allen, 2002; Baker et al., 2002, as cited in Ziegler, Paulus, & Woodside, 2014; Schieffer, Isaacs, & Gyllenpalm, 2004). Given the increasing presence of complex and adaptive challenges many organizations face (Heifetz, Grashow, & Linsky, 2009; Senge, 1990, 1994), the need to better understand the mechanisms and outcomes of cross-organizational learning conversations is an important area of emerging study.

Recent research suggests that leaders in cross-organizational learning conversations report five types of learning outcomes: *Informational, Conceptual, Operational, Reflective*, and *Social* (Wilson & Hartung, 2015). Informational outcomes are instances of learning discreet facts or data. Conceptual outcomes are multidimensional ideas, theories, and connections that are more complex than informational outcomes. Operational learnings are strategies, practices, or "know-how" that could be applied in the work–life context. Reflective outcomes are meta-cognitive in nature and include lingering questions about what participants continued to wrestle with about a topic. Last, social learning outcomes are less about the topic and more about colleagues in the conversation and the value of the discussion itself.

Given these suggestive types of outcomes, questions remain regarding how specific qualities of conversational interactions contribute to the types of learning outcomes reported by participants. That is, if a participant reported he or she learned "X," could evidence be found of moments in which "X" appears in the conversation? When so, what types of conversational interactions occurred in those moments that may have contributed to learning "X"?

Research on Learning Through Conversation

The literature on learning through conversation attends to varying aspects of conversation (i.e., structural, procedural, content) and spans a range of contexts such as workplace training, formal educational settings, and online environments. Of particular interest are studies that consider the relationship between conversations and outcomes. For instance, studies by Blumenfeld, Marx, Soloway, and Krajcik (1996) and Rahman, Sarkar, Gomes, and Mojumder (2010) propose that there are supports and factors related to achieving particular types of learning outcomes in collaborative interaction (e.g., group composition, roles, task structure, participation patterns, etc.). Still other research has examined conversational content and types of contributions, such as concept negotiation in science learning (Kittleson & Southerland, 2004), sociocognitive processes in online communities (Power, 2013), and sociocognitive conflict in collaborative problem solving (Cheng, 2014; Webb & Palincsar, 1996). However, because the methodologies and findings from these studies are context specific, we can only

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speculate about the relationship between conversational moves and learning outcomes in settings of cross-organizational learning conversations.

Studies on patterns of effective discourse have yielded numerous taxonomies of conversational moves—or "speech acts"—that could effectively support informal learning in conversations (Gunawardena, Lowe, & Anderson, 1997; Soller, 2001; Wiley & Waters, 2005; Ziegler et al., 2014). However, use of the term *speech act* is varied in the literature. Some research describes speech acts as broad categories of conversational contributions (i.e., requesting, informing, questioning, etc.), whereas other research describes the structural nature of the contributions (i.e., turn taking, listening, etc., Bloomer, Griffiths, Merrison, & Merrison, 2005; Mehan, 1979). Such taxonomies are helpful, though they do not consider whether *particular* types of contributions are related to *particular* types of learning. Instead, findings tend to relate conversational contributions to broadly characterized outcomes (e.g., meaning making, collaborative skill, knowledge, etc.) or cluster similar types of contributions across different outcome types.

Ultimately, little is known about the effect specific speech acts may have on what individuals learn from conversations. In considering the types of contributions that occur during moments in which participants may be learning in conversation, there are several themes in the literature suggestive of broad classifications of conversational contributions—narrative, inquiring, and controversy—that may be important.

Narrative Contributions

The role of narrative is highlighted in several studies that suggest it is an effective means to structure different types of learning experiences or further different types of outcomes. Examples include how storytelling supports meaning making (Ziegler et al., 2014), action planning in organizational learning (Abma, 2003), and creating learning conversations in the context of negotiation (Stone, Patton, & Heen, 2010). Other literature discusses the role of narrative as it relates to pushing individuals from tacit to explicit knowledge representation in communities of practice (J. S. Brown & Duguid, 1991), describing everyday conversation in professional contexts (Haigh, 2005), and facilitating knowledge transfer in the workplace (Leonard & Swap, 2005; Swarp, Leonard, Shields, & Abrams, 2001).

Inquiring Contributions

Another theme found in the literature points to the role of questions in conversation. For example, J. Brown, Isaacs, Vogt, and Margulies (2002) discuss their importance in drawing out the wisdom and creativity of others to solve complex challenges in organizations. Others suggest that the use of questions is an effective approach to get "inside" others' stories (Stone et al., 2010), create meaningful dialogue (Bouton & Garth, 1983; J. Brown & Bennett, 1995; Schieffer et al., 2004), facilitate group understanding (Gunawardena et al., 1997), and promote active learning (Soller, 2001). The use of questions in conversation is also evident in the "roles" participants play, as

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suggested by Kantor and Lehr (1975), such as the "bystander" (i.e., stepping back and asking questions) and the "follower" (i.e., supporting through asking follow-up questions; see also Ancona & Isaacs, 2007).

Controversy Contributions

A third theme has to do with conversational contributions that provoke, stimulate, or challenge one's own, or others', reasoning. Interventional frameworks such as Toulmin's (1958) model for argumentation or Berkowitz and Gibbs's (1979, 1983) transactive discussions are illustrative examples. Other cases include research on provocative participant roles, such as the "opposer" (i.e., critiquing ideas or topics) or "mover" (i.e., initiating conversational direction; Kantor & Lehr, 1975). Finally, there are types of participatory exchanges found to stimulate conflict and controversy in ways that influence learning outcomes (Bouton & Garth, 1983; Soller, 2001; Webb & Palincsar, 1996) and that support knowledge generation and meaning-making in groups (Gunawardena et al., 1997; Ziegler et al., 2014).

Although these broad categories of contributions are suggestive of what types of conversational moves may support learning, to our knowledge, no empirical studies have examined whether specific conversational moves influence learning in informal, group conversations, in general, or in the unique context of cross-organizational conversations among top-level leaders.

Research Questions

The goals of this study are to extend previous findings on the types of learning reported by executives by tying together *what* (the learning outcomes) and *from what* (specific conversational moves) professionals learn from one another in informal conversations. The study aims to ascertain whether certain contributions in group interactions are associated with particular types of learning outcomes and is guided by the following questions:

> **Research Question 1:** What are the types and distributions of conversational moves that occur in the conversational moments in which reported learning outcomes can be found?
> **Research Question 2:** What, if any, conversational moves are significantly associated with different types of reported learning outcomes?

Context and Method

Data were collected in a natural and preexisting setting. Seventy-nine upper-level executives (Chief Learning/Innovation Officers, Directors of Innovation) from 22 noncompeting global organizations convened over the course of 2 years to learn about and explore topics related to challenges they face in their organizations. Each year the community explored a broad theme related to organizational learning (e.g.,

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Weaving Wisdom in Organizations), broken up into three 2-day gatherings. On each day of the gatherings there were two opportunities for participants to nominate and host informal learning conversations with their peers related to the theme and topic of the gathering. Participants self-organized into breakout spaces to engage in discussion based on their interests. Each participant was fluent in English, and all conversation occurred in English. After each conversation, participants completed a survey that asked them to write down two things they learned from the discussion. All participants agreed to be included in the study, so no participant or organization was excluded.

We followed all 44 of these "conversation cafés" that included from three to nine participants and spanned 22 to 74 minutes. Each conversation was video- and audio-recorded and transcribed using standard conventions of conversational analysis (Sacks, Schegloff, & Jefferson, 1974; Schiffrin, 1989). Differences in the distribution of the types of learning gathered in Year 1 and Year 2 were not statistically significant (Wilson & Hartung, 2015). Therefore, this study examined survey and transcript data only from Year 1.

Using the survey and transcription data, a research team of eight graduate students, led by a doctoral researcher and a faculty member, engaged a mixed-method approach of sequential qualitative, then quantitative, analysis (Creswell, Plano Clark, Gutmann, & Hanson, 2003). First, qualitative methods were used to emergently code moments in the conversation and, within each, specific conversational moves. These analyses were followed by quantitative analysis that explored significant relationships between the distribution of conversational moves across different types of learning moments. Students were trained by the faculty member and doctoral researcher in the qualitative methods used, while the quantitative analyses were conducted by the faculty member and researcher.

Identifying "Learning Moments"

Using each of the learnings reported (n = 155) by participants, researchers independently analyzed the conversation transcripts (n = 21) to identify "learning moments" (i.e., the speaking turn(s) in which the learning could be found). Then, in small teams, these researchers convened to reconcile learning moments using a consensus model of decision making to determine (1) whether a portion of the conversation was a learning moment for a particular stated learning and (2) when in the conversation the learning moment began and ended.

A number of guidelines were followed when coding for learning moments. First, a single reported *learning* could have multiple, unique learning *moments* in the conversation. Second, because some learning moments were easier to identify than others, the levels of inference used in decision making were noted (i.e., literal—exact/near exact phrase; close cousin—synonymous/keywords; dimensional—aspects/components). Post hoc analysis found that removing nonliteral learning moments did not significantly alter the distribution of moments associated with reported learnings and were therefore retained in our analysis.

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We found that 19% ($n = 30$ of 155) of the learnings reported were vague and seemed to apply to the entire conversation, or were about the people or process (e.g., "The people at [*x*] organization are smart"; "[This] is a great opportunity to learn with others"). If no parts of the conversation addressed such statements, the learning was designated "uncodable" and excluded from the analysis. The final reconciliation of learning moment coding across the 21 conversational cafés yielded 307 learning moments associated with 125 reported learning outcomes.

Coding Conversational Moves

The researchers next considered *from what* were participants learning in the conversation by identifying "conversational moves." Beginning with the themes found in the literature, we implemented a coding scheme to identify conversational moves. The development of this scheme followed the grounded and deductive methodology commonly used by discourse analysts to examine larger units of spoken language and the way language is organized in the social context of informal learning conversations and participant interaction (Sacks et al., 1974; Slembrouck, 2003; Tannen, 1990). Conversational moves were established iteratively, and the final version of the coding scheme (see Table 1) emerged through a process of team-level revision based on iterative data reviews. Whenever the scheme was modified all previously coded data were revisited to test and apply the refined criteria.

Finding Relationships Between Conversational Moves and Learning Outcomes

To understand how different types of conversational moves may "matter" relative to different types of learning moments, the conversational move and learning moment analysis were coupled with learning outcome data reported in a previous study (Wilson & Hartung, 2015). This new data set associated each learning moment with the type of learning reported by participants (i.e., Informational, Conceptual, etc.). Using this integrated data set, chi-square analysis was conducted to determine whether the relationship between the distribution of each conversational move within each type of learning moment was significant (α level, $p < .05$).

Findings

We identified 1,137 conversational moves in the codable sample of learning moments ($n = 307$). The description and distribution of conversational categories and moves are presented in Table 1. Overall, five broad categories of conversational moves were found. Provocations were turns in which participants triggered others to think about the topic differently. Storytelling moves were turns when participants shared an illustrative anecdote. Eliciting moves were turns when participants used questions in the conversation. Resource moves provided more details, nuance, and explanation about ideas being discussed. Finally, Threading moves were turns that served a structural

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Table 1. Categories, Descriptions, and Distributions of Conversational Moves (n = 1,137) in Learning Moments (n = 307).

Category	Move	Definition/criteria	Frequency (%)
Provocation (48%)	Point of view	Sharing a point of view, belief, or strong perspective	28
	Puzzle	Posing a question about what to do next, what one wonders about or point of confusion (e.g., "Help me figure this out . . .")	8
	Reframe	Forwarding a different way to think about the topic or reflecting on how to connect ideas in a new way (e.g., "Another way to talk about this is . . .")	5
	Propose	Offering "what ifs" or suggestions about how one might go about doing something about the topic at hand	5
	Challenge	Disagreeing with, or challenging, an idea being discussed	2
Storytelling (20%)	Self-story	Sharing a practice or anecdote from one's own experience (e.g., "Here's how we do it in my organization")	18
	Other-story	Sharing a practice or approach from another context/domain (e.g., "This reminds me of how these people go about it")	2
Eliciting (14%)	Probe	Asking questions that invite responses about the topic at hand; maintains directionality of the interaction (e.g., "Tell me more about X")	9
	Pose	Posing a question that draws out the perspectives/practices of others (e.g., "What do you, Y, do in your org?")	4
	Prompt	Prompting others to reflect on what they are learning (e.g., "What are we taking from this conversation?")	1
Resource (10%)	Reference	Drawing connections between the topic and other established/known concepts, practices, or research that reside outside the community (e.g., "This reminds me of this research done by . . .")	5
	Rationale	A declaration of why one does things or thinks a particular way; Sharing a logic for why/how one does something (e.g., "We do this this way because we believe *x*")	3
	Model/described	Verbally describing a model to think about the concept at hand	1
	Model/drawn	Rendering a visual model of concepts that defines and/or explains relationships	1
Threading (5%)	Backstitch/in	Referring back to an idea/model from a previous sequence in the conversation	3
	Backstitch/out	Referring to an idea or content that occurred outside of the conversation, but during the event (e.g., "This connects to what *X* shared in his talk this morning . . . . .")	2
	Synthesis	Stepping back to take stock of and/or integrate themes from the discussion	2
	Maintain	Reclaiming the thread of the discussion after a "micro out"	1

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Table 2. Distribution (*n*) of Learning Moments and Conversational Moves by Each Type of Reported Learning Outcome.

Learning outcome type	Reported learning	Learning moments	Conversational moves
Social	5	9	33
Informational	14	26	83
Reflective	13	34	107
Conceptual	41	107	370
Operational	52	131	544
Total	125	307	1,137

function in the conversation. At the category level, Provocation and Storytelling moves accounted for 68% of all coded moves, and Provocations alone represented almost half (48%). At the conversational move level, *POV* (point of view) and *Self-Story* accounted for almost half (46%) of all conversational moves in the sample.

Table 2 presents the distribution of reported learning outcomes from the 21 cafés, as well as the respective number of learning moments and conversational moves associated with each outcome.

Given the distribution of moves reported in Table 1, we tested whether this same distribution could be found in learning moments when disaggregated by type of learning outcome. Results from chi-square analysis (summarized in Table 3) indicated significant relationships between some conversational moves and particular types of learning moments.

Several interesting patterns of relationships were identified. First, 9 of the 10 conversational moves with significantly higher than expected distributions were found in only one type of learning moment: *Prompt, Model/Described*, and *Maintain* in Informational learning moments; *POV, Challenge*, and *Pose* in Conceptual learning moments; *Self-Story* and *Probe* in Operational learning moments; and *Propose* in Social learning moments. Only *Puzzle* moves were found to be higher than expected in two types of learning moments—Conceptual and Reflective. Similarly, five of the six conversational moves with lower than expected distributions were also found in only one type of learning moment. Only *Self-Story* appeared lower than expected in two learning moment types—Conceptual and Social.

We also identified an inverse pattern of findings when comparing the distribution of moves in Operational and Conceptual learning moments (Figure 1). In particular, the distribution of these moves was higher than would be expected in one type of learning moment and lower, in the same or similar proportions, in the other.

For instance, Provocation moves (*POV, Puzzle*, and *Challenge*) were significantly higher in Conceptual learning moments and lower than expected in Operational learning moments. For example, although the number of *Puzzle* moves found in the sample of Conceptual and Operational learning moments were similar ($n = 39$ and $n = 32$,

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Table 3. Summary of Results From Chi-Square Analysis Testing the Relationships Between Conversational Moves and Learning Moment Types (+ = Above Expected;− = Below Expected).

Conversational move	Type of learning moment				
	Informational	Conceptual	Operational	Reflective	Social
Provocation					
POV		+*	−†		
Puzzle		+*	−**	+**	
Reframe					
Propose		−**			+***
Challenge		+*	−*		
Storytelling					
Self-story		−**	+***		−*
Other-story					
Eliciting					
Probe		−*	+**		
Pose		+**			
Prompt	+*				
Resource					
Reference					
Rationale					
Model/described	+**		−*		
Model/drawn					
Threading					
Backstitch/in					
Backstitch/out					
Synthesis					
Maintain	+*				

Note. Although the significance-level of this test was >.05, we still consider it noteworthy for comparative purposes because the finding merely suggests that there is not *strong* evidence that the distribution is lower than expected.
***$p < .001$. **$p < .01$. *$p < .05$. †$p = .56$.

respectively), their distribution in Conceptual learning moments (11%) was almost twice that found in Operational learning moments (6%).

Additionally, while Operational learning moments contained more *POV* moves than did Conceptual learning moments ($n = 140$ vs. $n = 120$, respectively), *POV* moves made up 32% of all moves found in Conceptual learning moments compared to 26% of moves in Operational learning moments. Moreover, there was a significantly higher than expected distribution of *Self-Story* ($n = 123$, 23%) and *Probe* ($n = 62$, 11%) moves in Operational learning moments. In contrast, there was a lower distribution of *Self-Story* ($n = 50$, 14%) and *Probe* ($n = 22$, 6%) moves in Conceptual learning moments.

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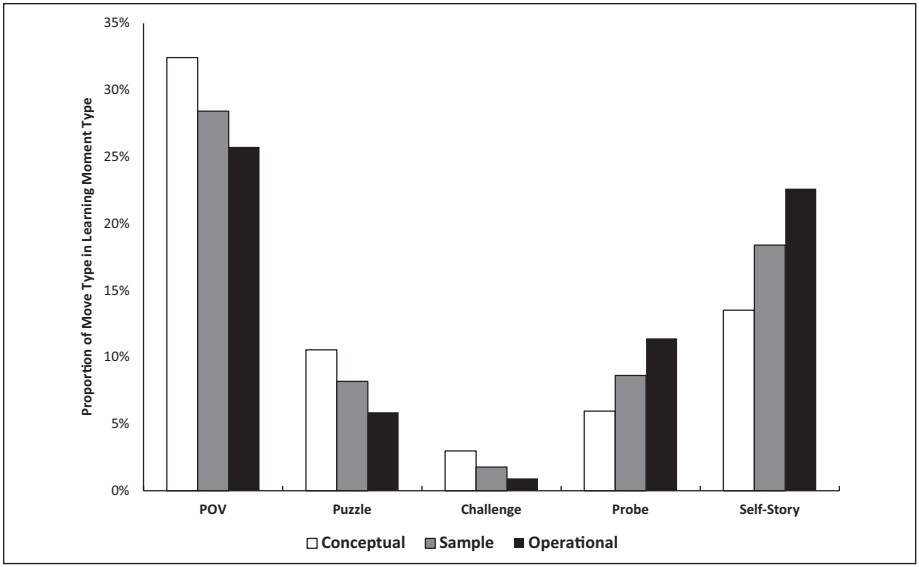

Figure 1. Comparisons of move distributions found in Operational and Conceptual learning moments.

Discussion

Types and Distributions of Conversational Moves in Moments of Learning

Findings from this study revealed five broad categories of conversational moves found in moments of learning in informal, cross-organizational learning conversations. These emergently coded categories provide empirical evidence about a distribution of conversational moves in learning conversations among global executives and reflect aspects of the broad types of conversational contributions found in the extant literature on learning conversations.

Provocations, representing the highest proportion of conversational moves in our sample (48%), correspond to the role controversial contributions play in supporting learning via stimulating conflict and controversy, supporting knowledge generation, and facilitating meaning making (Gunawardena et al., 1997; Soller, 2001; Ziegler et al., 2014). In the literature, these types of contributions are often broadly characterized (i.e., "statement," "agree/disagree," etc.) and say more about their functional role in conversation, rather than something about the nature of the contribution itself. Our findings, however, suggest that there may be a greater variety and subtlety in the range of contributions that may be "controversial" in conversation, and include *POV, Puzzle, Reframe, Propose*, and *Challenge* moves.

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The second highest proportion of moves found was Storytelling moves (20%). These moves correspond with evidence in the literature that discusses the importance of narrative contributions in learning conversations to support meaning making, action planning, and developing explicit knowledge (Abma, 2003; J. S. Brown & Duguid, 1991; Ziegler et al., 2014). Given the context of where, why, and among whom the conversations in the sample occurred, it may not be surprising to see such a high proportion of Provocation and Storytelling moves. Participants in this learning community elected to attend these sessions with the intent to learn from and with one another as a means of extending their knowledge. As such, participants may have felt comfortable provoking the thinking of others in conversation and sharing stories as a means to share best practices among their peers.

The Eliciting moves (14%) found in this study lend support to the function that inquiring contributions hold in learning conversations, such as providing perspective, creating meaningful dialogue, and drawing out others' ideas and stories (Bouton & Garth, 1983; J. Brown & Bennett, 1995; J. Brown et al., 2002; Kantor & Lehr, 1975; Schieffer et al., 2004; Stone et al., 2010). Perhaps it is unsurprising that participants asked questions of one another in the course of self-directed conversation. While these findings reflect the multifaceted nature of inquiring contributions, they also extend prior work by suggesting that three particular types of inquiry moves—*Probe, Pose, Prompt*—serve different functions in the conversations studied, as will be discussed in the following section.

Threading and Resource moves (10% and 5%, respectively) accounted for the remaining distribution of conversational contributions found in the sample. Threading moves appeared to serve a practical role in the conversations by keeping discussants on topic. Thus, researchers were not surprised by the frequencies at which these moves appeared. On the other hand, it was surprising that Resource moves were not more plentiful. One possible explanation for this is that they may have preceded or followed the coded moments in conversation and spurred contributions that are more narrative, controversial, or inquiring. Because researchers did not analyze conversational moves found in nonlearning moments, it is possible that future analysis would reveal a much higher presence of these moves.

Although evidence of the broad types of conversational contributions suggested by the literature was found, our findings also suggest a more nuanced view about the range and qualities of particular conversational moves that may have supported participants' learning. For example, Gunawardena et al. (1997, as cited in Wiley & Waters, 2005) present a taxonomy of conversational moves, such as statements (i.e., opinions, agreements), question posing, restating, and proposals, interspersed across a "five-phase pattern" for the generation of new knowledge and understanding in groups. Similarly, Soller (2001) suggests that certain types of contributions in discourse (i.e., requesting, informing, arguing) promote successful collaborative activity, generate creative conflict (i.e., agreements/disagreements, offering alternatives, proposals), promote active learning (i.e., statements, elaborations, requests), and employ conversational skills (i.e., summarizing, process prompts, etc.). However, the limitation of

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taxonomies such as these is that they focus solely on conversational contributions and do not relate them to types of learning outcomes.

Moves That Matter in Moments of Learning

Although the types of conversational moves identified in this study generally reflect those reported in the literature, findings from this study suggest unique relationships between specific types of conversational moves and specific types of reported learning outcomes. There were a number of conversational moves that did not have significantly higher or lower than expected distributions within types of learning moments (see Table 3), suggesting that these may be moves that simply occur in the general flow of learning conversations. However, there were specific moves that did appear in higher or lower than expected distributions in certain types of learning moments. In what follows, we first discuss the findings as they relate to each type of learning outcome. We then discuss the contrasting findings as they relate to Operational and Conceptual learning moments.

Social learning. Social learning moments, which represent only 3% ($n = 9$) of all learning moments in the sample, are associated with learnings reported by participants about the nature of the group experience, the value or process of the conversation, or participants' similarities or differences. Researchers were surprised to find a significantly higher than expected distribution of *Proposal* moves in these types of learning moments. On one hand, the presence of presenting "what if" scenarios in Social learning moments may represent the "social presence" of participants and may support participants' building cohesion and commitment (Power, 2013). On the other hand, we note that this finding was largely driven by data from one conversation—overall, *Proposal* moves appeared in just five learning moments and were associated with only three learnings, reported by two participants.

In contrast, the lower than expected distribution of *Self-Story* moves in Social learning moments suggests that participants less frequently than would be expected (on only once in 33 learning moments) shared their personal approaches to problems or anecdotes from their own experiences. Given the nature, and high presence, of *Self-Story* moves in the sample (18%), the general lack of these moves in Social learning moments was somewhat surprising.

Informational learning. Informational learning moments ($n = 26$) were associated with learnings that identified specific concepts, resources, and/or definitions (i.e., "I learned about x"). In these moments, participants, more often than would be expected, described models to think about the topic at hand in the conversation (*Model/Describe*), prompted others to reflect on what they were learning (*Prompt*), and worked to continue the thread of the conversation after a digression (*Maintain*). These findings suggest that the directedness of the *Prompt* move may support Informational learning because it reveals what people are learning about, whether to one's self or to others. Furthermore, this finding highlights a particular *kind* of inquiring contribution

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(*Prompt*) that prior research associates with the promotion of active learning (Soller, 2001), emphasizes the importance of the "bystander" role in conversation as someone who can provide perspective (Kantor & Lehr, 1975), and is aligned with the early phase of knowledge building when information sharing occurs (Gunawardena et al., 1997, as cited in Wiley & Waters, 2005).

The unexpected frequency of *Model/Describe* moves in Informational learning moments suggests that this Resource move may support this type of learning through leveraging a visual representation of an idea to better understand the specifics of a concept, resource, and so on. In effect, this move "labels" ideas in a way that prior research suggests supports understanding (Ziegler et al., 2014) and early knowledge building (Gunawardena et al., 1997). Of further interest is the greater than expected presence of the Threading move, *Maintain*, which as a proportion of moves is 3 times that found in Conceptual and 6 times that found in Operational learning moments. This finding suggests that the *Maintain* move may play a unique functional role that supports Informational learning through maintaining focus on the particulars of an idea or concept being explored in the conversation and is more in line with the commonly described role of a "speech act" (Bloomer et al., 2005; Mehan, 1979; Tannen, 1990, 1994).

Reflective learning. Reflective learnings reported by participants stated lingering questions, described how assumptions had been challenged, and/or noted new awareness about one's own thinking or practice. The higher than expected distribution of *Puzzle* moves in Reflective learning moments (n = 34) therefore makes theoretical sense because participants wondered about next steps or raised points of confusion for the group to address. This suggests that this type of public wondering may lead participants to explore introspective thinking and generate internal conflict (Power, 2013; Soller, 2001). However, while over half of conversation cafes (11 of 21) include Reflective learning moments, post hoc analysis revealed that almost 50% (7 of 16) of *Puzzle* moves were associated with learning moments found in only one conversation. This casts doubt on the meaningfulness of the relationship between the presence of *Puzzle* moves in conversation and moments of Reflective learning.

Conceptual learning. Reports of Conceptual learning described a theory, identified connections among ideas, and/or noted their potential relevance. These learnings, reported in almost all of the cafes (18 of 21), reflect the "know-that" aspect of knowledge and tend to be multidimensional (i.e., about more than one thing). Learning moments (n = 107) associated with Conceptual learning outcomes in our sample had significantly higher than expected distributions of Provocation (*POV*, C*hallenge, Puzzle*) and *Pose* moves.

First, the constellation of Provocation moves suggests a relationship between the presence of these moves and moments of Conceptual learning in conversation. In these moments, participants, more frequently than would be expected, expressed their points of view and shared strong perspectives about the topic at hand, challenged the ideas of others, and/or wondered about next steps or raised points of confusion for the group to

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address. This finding reflects prior claims in the literature about the important role of controversial contributions in the process of conversation, yet also extends them by suggesting their relationship to learning outcomes. For example, the high frequency of *POV* moves in Conceptual learning moments (32%, $n = 120$) suggests that participants' exposure to a variety of other's ideas about what they think or know may yield conceptual insights because it stimulates controversy and/or conflict in conversation (Bouton & Garth, 1983; Kantor & Lehr, 1975; Soller, 2001; Webb & Palincsar, 1996).

Additionally, the prevalence of *Challenge* moves in these learning moments suggests that inserting dissonance in conversation may support building conceptual knowledge and understanding through participants' wrestling with multiple, and potentially competing, perspectives (Gunawardena et al., 1997; Kantor & Lehr, 1975; Ziegler et al., 2014). Similarly, participants' public wonderings (i.e., *Puzzle*) may create opportunity for further examination of ideas in ways that generate creative conflict as participants process information (Power, 2013; Soller, 2001).

Second, there was a higher than expected presence of *Pose* moves related to Conceptual learning moments. These moments of learning had unexpected, elevated instances of participants posing questions that brought new voices and perspectives into their conversations. This finding relates to an indicator of sociocognitive processing in the exploratory phase of meaning making (Power, 2013) and suggests that it may support participants' sense making of problems or situations. This finding also suggests that the *Pose* move is another specific type of "inquiring" move, distinct from a *Prompt* or *Probe*, that may uniquely support Conceptual learning outcomes.

A final noteworthy finding is the lower than expected distributions of some conversational moves in Conceptual learning moments. The significantly less frequent *Self-Story* move seems counterintuitive—why wouldn't personal stories about approaches to problems be more present as participants build conceptual knowledge? One possible explanation is that because *Self-Story* moves are more concrete in substance, they may be too specific to support the types of connections between and among ideas that characterize Conceptual learning. Additionally, because *Self-Story* moves are rooted in specific practices, learning about *how* someone has enacted an idea or concept may have less of an impact on building participants' understanding *about* the concept itself. Similarly, the lesser frequency of *Probe* moves suggests that there may be less purchase for Conceptual learning to arise in moments when participants delve more deeply into the thinking or ideas *of a singular participant* because it may not draw in a more diverse body of insights to push people toward new conceptual understandings, as does the *Pose* move.

Operational learning. Participants who reported Operational learnings named strategies, approaches, or practices about how to apply knowledge in the work–life context—these learnings reflect the "know how" aspect of knowledge and are procedurally oriented. The prevalence of *Self-Story* and *Probe* moves in Operational learning moments ($n = 131$) mirrors a number of findings in the literature about the role of narrative and inquiry in learning conversations and in the process of meaning making (Ziegler et al., 2014). For instance, the positive association between Operational

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learning moments and the frequency of *Self-Story* moves suggests that narrative can move individuals toward concrete, action-oriented learning and its value in professional practice (Abma, 2003; J. S. Brown & Duguid, 1991; Swarp et al., 2001). In these learning moments, participants more frequently than would be expected described their personal approaches to problems or anecdotes from their own experiences.

Likewise, participants used *Probing* questions more frequently than expected in Operational learning moments to draw out further clarity from a single participant about the topic at hand. This aligns with other work that discusses how inquiring contributions facilitate the kinds of follow-up and elaborations that are hallmark features of active engagement in learning with others (J. Brown et al., 2002; Kantor & Lehr, 197; Soller, 2001; Stone et al., 2010). Additionally, this finding highlights the unique role of a particular type of "inquiring" contribution—a *Probing* question—and suggests that the type of question a participant asks in a learning conversation may matter more than previously thought.

It seems unsurprising to find infrequent occurrences of Provocation moves (*Challenge, Puzzle*) as well as the *Model/Describe* Resource move, in Operational learning moments. In these moments, participants less frequently than would be expected disagreed or challenged the ideas of others, wondered about next steps or raised points of confusion for the group to address, or used descriptive models to think about the topic at hand in the conversation. Because moments of Operational learning are oriented toward bringing ideas, concepts, and/or practices together in an actionable manner, Provocations—moves that tend to pull apart and explore ideas in order to build know knowledge or meaning making—would be seen infrequently.

Conceptual and Operational Learning Moments: Two Sides of the Same Coin?

The contrasting frequencies of conversational moves found in moments of Operational and Conceptual learning was unexpected and suggests that there may be a unique and important relationship between particular types of conversational moves and the two most prevalent types of learning outcomes identified in this study of learning conversations. In particular, this comparative finding suggests that the conversational moves related to each type of learning moment may play unique roles that have gone undistinguished in extant taxonomies that cluster together moves into broad phases or categories, rather than identifying how particular moves may relate to particular types of learning.

For instance, moves similar in description to *POV* and *Self-Story* can both be found in the "exploration" category of sociocognitive processing (Power, 2013). Our findings, however, suggest that these types of contributions may serve more specific and related roles as they relate to learning outcomes. While they both have "exploratory functions" in terms of process, it is possible that "where" the exploration leads may be different in terms of what people learn. The preponderance of the Storytelling and Eliciting moves in Operational learning moments suggests how *Probe* contributions

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may draw out more *Self-Story* moves in conversation. Similarly, the prevalence of Provocation moves in the Conceptual learning moments suggests how *Pose* questions may draw out perspectives (*POV*) and *Puzzles*. These contrasting relationships between conversational moves and learning moment types makes sense given the characteristics of these types of learning outcomes, as previously discussed.

Conclusions and Implications

This study proposed to fill the aforementioned gaps in the literature on the value of informal, cross-organizational learning conversations. It aimed to empirically test the relationship between what and how leaders learn from and with one another in peer-led conversations. Significant and unique relationships were found between particular types of conversational moves and types of reported learning outcomes. More specifically, the findings suggest that higher and/or lower proportions of specific conversational moves in learning conversations may support (or possibly impede) particular types of learning outcomes.

As suggested by Haigh (2005), a better understanding of the relationships between types of conversational contributions and types of learning outcomes can (1) support individuals who engage in or facilitate learning conversations to be more effective leaders of and/or participants in such conversations and (2) improve the efficacy of learning conversations through knowledge about how different types of contributions in conversation may influence the types of learning that result from participation. It is possible that these findings, applied proactively, could lead to more thoughtful and intentional engagement in learning conversations at the individual, team, and even organizational levels through the use of conversational protocols, for example.

Although empirical evidence about the relationships between conversational moves and moments of learning outcomes was found, generalizing these findings should be done with caution. The data were drawn from a unique sample of high-level executives who self-selected to participate in an existing cross-organizational learning community. Some researchers (cf. Eraut, 2004) suggest that claims of participant learning based on self-reports can be unreliable because respondents may lack awareness of their own learning. Although we identified learning moments for each reported learning, the findings in this study cannot make claims about whether participants actually learned in those moments, or if what they said they learned truly occurred. As such, the data represent the subjective interpretation—albeit subjected to rigorous calibration—of the research team. Additionally, we did not analyze conversational moves found in "non"learning moments or investigate whether the observed distribution patterns occurred naturally in the sample. Finally, this study does not make claims about whether these conversational moves may interact with one another in their significance to particular types of learning outcomes. To do so, an analysis of the co-occurrences of different conversational moves found to be above/below expected distribution in particular learning moment types is warranted.

With these limitations in mind, our findings raise a number of additional questions and lines of investigation that future research should explore. First, given the participant profile, it is possible that factors not included in this study's design may have influenced our

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findings (i.e., gender dynamics, experience/training, homogeneity of positional status, etc.). Therefore, future studies should examine whether such factors affect the types and/or frequencies of different conversational moves in learning conversations. Additional research should also consider whether similar patterns of associations would be found in learning conversations conducted in different contexts (e.g., formal learning environments, within-organizational contexts, etc.), with different populations (e.g., mid-level managers, mixed-status groups, etc.), and/or when particular types of conversational learning outcomes are desired (e.g., strategy meetings, plenary sessions, after action reviews, etc.). Last, future empirical studies could also design protocol-based interventions to test how intentional encouragement/emphasis or discouragement/de-emphasis of particular moves actually furthers (or impedes) particular types of learning outcomes.

Acknowledgments

The authors would like to acknowledge the contributions of the graduate students at the Harvard Graduate School of Education whose time and efforts made this study possible: Sue Borchardt, Amy Cheung, Michelle Chung, Christina Congleton, Serhiy Dutchak, Tracy Elizabeth, Na Hyun Kim, Aaron King, Shauna Leung, Meghan Lockwood, Tomoko Matsukawa, Katiusca Moreno, Jen O'Flynn, Nick Petrie, Michele Rigolizzo, Harvey Shaw, Lingyi Shen, Stuti Shukla, Sarah Smith, Jennifer Stocklin, Tai Sunnanon, Nupur Todi, Emily Watson, Kristin Wright, Karen Yeyinmen, and Meghan Young. We would also like to thank David Perkins and Michelle Rigolizzo for their helpful and critical feedback on early drafts of this article.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: This study was funded as part of ongoing research at Project Zero's Learning Innovations Laboratory, Harvard Graduate School of Education.

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