Learning dynamics in the alliance development process

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Abstract
Purpose – The paper seeks to propose a framework for examining the dynamics of learning in the various stages of alliance development.
Design/methodology/approach – The three kinds of learning in alliances are described – namely, content, partner-specific, and alliance management – and the saliences and implications of particular types of learning in different alliance stages are discussed.
Findings – The framework makes clear that alliance learning varies according to the stages of the alliance developmental process (formation, operation, outcome), and that different types of learning have different strategic implications.
Practical implications – Briefly, content learning augments the collective strengths of the alliance, partner-specific learning (i.e. learning about a partner as opposed to learning from a partner) is crucial in determining whether or not an alliance gets formed, and alliance management learning helps build the confidence of the alliance partners in managing alliances.
Originality/value – The article responds to the need of managers with alliance responsibilities for a framework to help identify and exploit the most effective types of learning opportunities, vis-à-vis partners and the alliance as a whole, during the specific alliance development stages of formation, operation, and outcome.

Keywords Strategic alliances, Learning methods, Partners

Paper type Conceptual paper

Introduction
Interfirm alliances have become increasingly common due to globalization, deregulation, and the accelerating pace of technological change. These cooperative arrangements take many forms, ranging from joint marketing to equity-based joint ventures. Alliances allow the firms to share the costs of R&D development, expedite the introduction of new products in the global marketplace, minimize costs, gain access to resources, and provide a means for accessing new technologies of partner firms. In particular, the idea that alliances are an important vehicle for learning has considerable intuitive appeal and perhaps, for this reason, continues to dominate the academic as well as the practitioner literature on alliances (e.g. Anand and Khanna, 2000; Hamel, 1991; Kumar and Nti, 1998). However, the focus of much of the existing research is on how alliances may be useful for learning purposes in the competitive business arena, and not sufficiently on the internal learning dynamics of alliances. While the topic of learning by and through alliances is no doubt of relevance, the need for an adequate
understanding of the learning dynamics within alliances is also clearly an important subject for examination for the effective management of alliances.

Furthermore, although there is by now a considerable amount of literature detailing the potential benefits and costs associated with learning in alliances, much remains to be investigated about the dynamics of learning in the alliance development process. As Das and Teng (2002) argue, the processual dynamics underlying the evolution of alliances are still a relatively unexplored phenomenon. In this paper we develop a framework for analyzing the learning dynamics in the various stages of strategic alliance development.

We divide the article into four parts. First, we discuss the different types of learning that are likely to occur when firms enter into alliances. Second, we review the literature for linkages between alliance process models and learning. We then elaborate on our framework for understanding the nature and dynamics of alliance learning in the different alliance stages. We conclude by noting the implications of this framework for studying and managing alliance learning.

Three types of learning in alliances
We will attempt to identify here the basic themes in the vast literature on organizational learning that may have a bearing on our discussion of learning in alliances. Although learning is implicit in all social systems, the current emphasis on learning in the organizational literature has its roots in the intensification of global competition in the late 1970s. Scholars have focused their attention on three central issues in the literature. The first issue is a definitional one, namely the nature of organizational learning. The second focuses on the processes of learning, namely how does learning occur? The third deals with the fundamental question of learning to learn effectively, i.e. the factors that impede the reliability and validity of the learning.

Definitions of organizational learning abound in the literature. An influential one is that by Huber (1991), who notes: “An entity learns if, through its processing of information, the range of its potential behaviors is changed” (p. 89; emphasis in original). Levitt and March (1996) view organizational learning as reflecting a change in organizational routines. Changes in routine are products of experiential learning and get embedded in the organization’s memory. Crossan et al. (1999) take a somewhat broader perspective on organizational learning, viewing it as a mechanism that is critical for an organization’s strategic renewal. Although the specific foci of the different definitions vary, the underlying commonality is the recognition that organizational learning entails a change in the knowledge structures of the organization. These knowledge structures are embodied in an organization’s routines and are stored in an organization’s memory. When firms enter into alliances the changes in knowledge structures may occur at different levels, and in varying degrees. First, by gaining knowledge from the alliance, the partners may reshape their strategy and the means of implementation. Alternatively, they may create a new knowledge structure in the alliance that they may help their performance. Finally, they may also develop skills for managing alliances effectively.

How does learning occur? It is important to note, first, that organizational learning is both intra-organizational as well as inter-organizational, and that an adequate framework of learning dynamics would need to encompass the interrelationships between these different levels (Argote et al., 2003; Holmqvist, 2003).
Intra-organizational learning, by itself, is a multilevel process that simultaneously and collectively involves the individual, the group, and the organization. Interorganizational learning is dependent on the learning strategies pursued by the different organizations. Integrative learning strategies will lead to collective knowledge development whereas distributive learning strategies may prevent that from occurring. Second, learning intent does not imply that valid learning will occur. Third, learning is a costly process because, in order to be effective, it involves a degree of institutionalization – a multilevel process necessitating the integration of individual, group, and organizational level perspectives. While the managerial school seems to suggest that this learning process can be managed (Bell et al., 2002), it would still be one that is unlikely to bear fruit overnight.

When learning is the primary motive for alliance formation it is easier to gauge the strategic intentions of one’s partner and to put in place safeguards to minimize the potential risks of opportunistic behavior of the partner (Das, 2005). However, it is important to remember that even when learning is not the primary objective, it is possible that learning-related goals may subsequently displace the original intentions as the alliance evolves over time.

It is also important to note that even in those alliances where learning is the primary motive, there may well be very different kinds of learning that are involved. Lubatkin et al. (2001) draw a distinction between interfirm collaborations that involve vicarious learning, knowledge absorption learning, knowledge grafting learning, and reciprocal learning. Vicarious learning alliances are alliances in which the knowledge to be transferred is easily accessible. Knowledge absorption alliances pose a slightly higher degree of difficulty, in that the ability to gain knowledge from one’s partner is critically dependent on the focal firm’s absorptive capacity. Knowledge grafting alliances are in the nature of mergers and acquisitions, whereas reciprocal learning alliances bring together partners working in different knowledge domains who are non-competitors in the core businesses. The key implication of these distinctions is that the focal firm has to discern and counter the strategic intentions of its partner according as these intentions vary across different forms of learning alliances.

Generally speaking, scholars have identified three different kinds of learning that occur in strategic alliances:

(1) content learning;
(2) partner-specific learning; and
(3) alliance management learning (Kale et al., 2000; Parise and Henderson, 2001).

We list in Table I some illustrative observations from the literature on these three kinds of learning in alliances. The purpose of Table I is to provide the reader with an overview of the way in which scholars have looked at learning in alliances.

Content learning refers to the ability of an alliance firm to acquire and internalize knowledge from its partner. This type of learning may alter the bargaining power among the member firms if one of the partners outlearns the other (e.g. Hamel, 1991; Inkpen and Beamish, 1997; Reich and Mankin, 1986). The firm that outlearns its partner may apply the knowledge it has gained to other product domains, leading to superior economic performance. This will also afford the opportunity to either abandon its alliance partner or renegotiate for more favorable terms of collaboration. All this
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<tr>
<td>Alvarez Gil and Gonzalez de la Fe (1999)</td>
<td>Content</td>
<td>“Thus, while poor performance can lead to myopia that acts as a barrier to knowledge creation, the student partner may feel that the alliance does not yield satisfactory organisational performance because learning opportunities have been unexploited.” (p. 403)</td>
<td>Content learning is limited both by the desire of the teacher to prevent the student from undertaking it and by the performance of the alliance. Learning from a partner is very constraining inasmuch as opportunities for learning are constrained by the strategic motivations of the partner. Very much in contrast with the work of Dussauge et al. (2000)</td>
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<td>Arand and Khanna (2000)</td>
<td>Alliance management</td>
<td>“[V]aluation of alliances cannot afford to ignore the dynamic, cross-alliance benefits of entering into a particular relationship” (p. 313)</td>
<td>Study suggests that firms differ in their “alliance capabilities” with the implication that some firms are better than others in learning from alliances. As the authors themselves note, it is unclear if the enhanced learning capability reflects greater capability in either learning about a partner or learning from a partner. The ability to pick the right partner may avoid negative outcomes but it does not guarantee positive outcomes.</td>
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<td>Arñño (2001)</td>
<td>Partner-specific</td>
<td>“Non cooperative behavior by omission has a lesser effect than cooperative behavior by commission on the firm’s own non-cooperative behavior.” (p. 18)</td>
<td>Paper focuses on learning about a partner as opposed to learning from a partner. The fundamental idea is that learning about a partner entails attributions about intentionality with these attributions shaping subsequent behavior. Although attributions about intentionality shape behavior, partners may differ in their assessment as to what constitutes cooperative behavior by commission and what constitutes non-cooperative behavior by omission.</td>
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<td>Arñño and de la Torre (1998)</td>
<td>Content</td>
<td>“[T]he existence of procedural solutions for conflict resolution may be an important aspect of initial conditions” (p. 323)</td>
<td>An empirical study of a joint venture suggests that partner-specific learning is fostered by how partners deal with perceptions of equity/inequity in the relationship. A case study very consistent with Kale et al. (2000), in that it highlights the importance of relational capital in determining how partners deal with perceptions of equity/inequity in relationships. Partner-specific learning is based on the ability to develop cooperation at the onset of the relationship. This work is consistent with other work suggesting that partners seek to maintain control over their core competencies to prevent giving away the store. The implication of this is that collaboration processes are critically dependent on the emergence of relational capital among the partners.</td>
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<td>Doz (1996)</td>
<td>Content</td>
<td>Content learning is more likely to occur in projects that are of moderate importance to alliance partners. “Early small events in an alliance have a disproportionate importance in establishing, or not, a self-reinforcing cycle of heightened efficacy expectations, greater institutional trust and personal trust and commitment, joint sense making and learning, and greater flexibility and adaptability” (p. 77)</td>
<td>Learning is more likely to occur in link as opposed to scale alliances. The authors note that content learning is a function of complementary skills among partners. If partners are aware of this complementarity and recognize that they might lose out in the alliance then why do they enter these alliances?</td>
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<td>Dussauge et al. (2000)</td>
<td>Content</td>
<td>“Because firms set up link alliances in order to take advantage of the complementary skills of the partner firms, the fact that the firms reorganize many link alliances by changing the allocation of activities among the partners suggests that the complementarity between the allies tends to shift over time” (p. 120)</td>
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<td>Dyer and Singh (1998)</td>
<td>Content</td>
<td>“[A]lliances generate competitive advantage only as they move the relationship away from the attributes of market relationships” (p. 662)</td>
<td>Alliance partners can maximize learning by investing in relationship specific assets, knowledge-sharing routines, complementary resource endowments, and “effective governance.” The theoretical argument in this study seems to go against the empirical evidence that suggests that joint value creation is problematical</td>
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<td>Edmondson and Moingeon (1996)</td>
<td>Content, Partner-specific</td>
<td>Content learning is fundamentally a question of learning “how” “Learning how is required for the many situations in which speed and quality matter; learning why is required for diagnosis and relationship building” (p. 34)</td>
<td>Partner-specific learning is based on learning “why” The only piece that seeks to draw an explicit distinction between different forms of content learning, namely, learning why and learning how. Learning how may foster a more competitive mode of interaction whereas learning why may induce a different dynamic</td>
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<td>Hamel (1991)</td>
<td>Content</td>
<td>“[O]utlearning a partner simply means “winning” a series of micro bargains” (p. 101)</td>
<td>Content learning is dependent on learning intent, transparency, and receptivity One of the first empirical papers that explicitly takes a strategic view of the learning process, arguing that the learning processes and outcomes are critically influenced by the learning orientation of the partners</td>
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<td>Kale et al. (2000)</td>
<td>Content</td>
<td>“[R]elational capital is linked not only to alliance success in general, but also to very specific and important objectives such as learning and limiting partner opportunism” (p. 232)</td>
<td>Content learning is dependent on the relational capital among the partners as well as their ability to manage conflicts integratively The paper does not explicitly address the issue as to how relational capital gets established in the first place with partners that may be competitors</td>
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<td>Khanna et al. (1998)</td>
<td>Content</td>
<td>“Our models suggest that, if firms view their relationship with others in the alliance as either strictly competitive or strictly cooperative, this may give rise to suboptimal outcomes for one or more firms in the alliance” (p. 235)</td>
<td>Content learning is predicated on the ratio of private to common benefits in an alliance. The greater the ratio of private to common benefits, the more competitive the interaction and the less likely that one partner may learn from another</td>
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<td>Kumar and Nti (1998)</td>
<td>Partner-specific</td>
<td>“Unfavorable discrepancies may affect the partners’ feelings of psychological attachment to the relationship as well as the pattern of interaction” (p. 365)</td>
<td>A conceptual paper suggesting that partner-specific learning is crucially shaped by how partners deal with unfavorable process and outcome discrepancies The idea that the attributions about the discrepancies made by the partners determines the strategy pursued by alliance partners is very similar to the arguments advanced by Arino and de la Torre (1998) and Kale et al. (2000)</td>
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<td>Lane and Lubatkin (1998)</td>
<td>Partner-specific</td>
<td>&quot;Simply put, while imitating one's peers may not always be an effective course of action, the high level of relative absorptive capacity a firm will tend to have with its peers may make them the most easily understood teachers&quot; (p. 474). Content learning is based on the kind of knowledge sought by each partner. Dissimilar learning needs lead to unequal learning rates, which affect the bargaining power among partners. Consistent with other works in highlighting the dynamic instability of alliances due to the possibility of differential learning. The paper has more of an economic as opposed to a sociological focus inasmuch as it does not explicitly deal with the relationship among partners and how such a relationship may moderate the dynamics of the relationship.</td>
<td>The ability of one partner to learn from another is dependent on: (a) similarity of firms’ knowledge bases; (b) organization structure and compensation policies; and (c) dominant logics.</td>
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<td>Makhija and Ganesh (1997)</td>
<td>Content</td>
<td>&quot;The model indicates that only when the bargaining power is perceived to be more or less balanced will the chances for a successful relationship improve. A balance in bargaining power will enable both partners to institute controls appropriate for their own objectives in the learning related joint venture&quot; (p. 524). Content learning is dependent on similarities among partners’ absorptive capacities. Content learning is based on similarities among partners’ absorptive capacities. What impact does the instability of the alliance have on the reputation of the partners? In other words, is there any detrimental impact of alliances?</td>
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<td>Mowery et al. (1996)</td>
<td>Content</td>
<td>&quot;The presence of some alliances in our sample in which the firms display ‘divergent development, i.e. declining technological overlap, suggests that some alliances are vehicles accessing rather than ‘acquiring capabilities’” (p. 89). Content learning is dependent on similarities among partners’ absorptive capacities. An empirical piece suggesting that content-based learning may not be as prominent as has traditionally been suggested. The evidence offered here is in contrast to the work by Dussauge et al. (2000), suggesting that such learning does occur.</td>
<td>An empirical paper highlighting the potential limitations of “capabilities acquisitions” view of strategic alliances. An empirical piece suggesting that content-based learning may not be as prominent as has traditionally been suggested. The evidence offered here is in contrast to the work by Dussauge et al. (2000), suggesting that such learning does occur.</td>
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<td>Nti and Kumar (2000)</td>
<td>Content</td>
<td>&quot;Firms with extremely high or low absorptive capacities may have difficulty in finding compatible alliance partners and they may actually end up in unstable learning alliances because they are likely to link up with firms whose absorptive capacities are very different” (p. 130). Content learning is dependent on similarities among partners’ absorptive capacities. What impact does the instability of the alliance have on the reputation of the partners? In other words, is there any detrimental impact of alliances?</td>
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<td>Parkhe (1991)</td>
<td>Content</td>
<td>&quot;Content learning is impeded by interfirm diversity. When Type I diversity (mutual interdependency) is larger than Type II diversity [interfirm differences] ceteris paribus, longevity will be high ... But when Type II diversity is larger than Type I diversity, ceteris paribus, longevity will be low” (p. 596). The paper highlights the interplay of differences at the strategic and the organizational levels and their consequences for learning. A broad framework is developed and outlined here.</td>
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<td>Stuart (2000)</td>
<td>Partner-specific</td>
<td>“Particularly when one of the firms in an alliance is a young or a small organization, or more generally an organization of ambiguous quality, I believe that alliances convey endorsements” (p. 818). An alliance with a reputable partner enhances the reputation of the focal firm. The effect is particularly strong when the focal firm is not that well known. It is a little unclear if the impact on the reputation of a younger partner is temporary or long-lasting when the alliance is a failure.</td>
<td>An alliance with a reputable partner enhances the reputation of the focal firm. The effect is particularly strong when the focal firm is not that well known. It is a little unclear if the impact on the reputation of a younger partner is temporary or long-lasting when the alliance is a failure.</td>
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<td>Zajac and Olsen (1993)</td>
<td>Partner-specific</td>
<td>&quot;[A] focus on inter-organizational exchange processes suggests that exchanges in inter-organizational strategies are influenced by dynamic developmental processes with the processes themselves often subject to change” (p. 142). Partner-specific learning is dependent on how interorganizational strategies evolve over time. Very similar to other process models reviewed earlier in stressing the fact that the learning processes are dynamically shaped by the strategies enacted by the different actors.</td>
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will have major strategic implications for the member firms as well as alliance evolution.

Partner-specific learning has two components:

1. learning from a partner; and
2. learning about a partner.

While learning from a partner is undoubtedly a significant issue in alliances, learning about a partner is no less important. Learning about one’s partner is crucial because the motivation and ability of a member firm to act in ways that will maximize joint value creation are clearly of some importance in sustaining and deepening commitment in the alliance. Partner-specific learning entails the use of the alliance as a mechanism for learning about the motivation and capability of the partner to maximize value creation. This type of learning is especially valuable as a prelude to acquiring or merging with another firm (e.g. Balakrishnan and Koza, 1993; Mody, 1993). In the short to medium term, this may well be the most important component of learning in alliances for several reasons. First, if a firm is learning from its partner, and second, if what it learns about its partner is positive, its motivation to continue with the alliance will be enhanced. Ahuja (2000) points out that if a partner firm has a high level of technical or commercial capital, its attractiveness as a potential partner increases. The same conditions will also reflect positively on the firm’s capability to access and internalize knowledge from its partner (Grant and Baden-Fuller, 2004) and, in so doing, may enhance social capital. This has longer-term implications, in that it may add to the propensity for partner collaboration. It will also give the alliancing firms a potential opportunity to establish routines that may facilitate their collaboration.

Finally, alliance management learning relates to a firm’s ability to manage alliances effectively. Following Zollo and Winter (2002), one can conceive of alliance management learning as “a dynamic capability […] through which the organization systematically generates and modifies its operating routines in pursuit of improved effectiveness” (p. 340). The authors suggest that the development of dynamic capability is dependent on the amount of learning investment that the member firms are willing to make.

Alliance management learning is significant because it is an essential ingredient for enhancing an organization’s competitive ability over the long haul (Ireland et al., 2002). It also forms the basis for the concept of alliance capability that is gaining increasing research attention. The concept has two major components:

1. alliance experience; and
2. organizational processes that may allow the firms to profit from such experience (De Man, 2005).

Although it is intuitively clear that prior experience may enhance a firm’s alliance capability, some recent work has proposed boundary conditions on the transferability of this experience. For example, according to Hoang and Rothaermel (2005, p. 342), “It appears that to reap benefits from prior alliance experience, a firm needs to possess absorptive capacity, the potential capacity to acquire and assimilate new knowledge and the realized capacity to transform and exploit the new knowledge (Zahra and George, 2002)” . We would surmise that firms with higher levels of alliance capability may be more effective in managing the learning process. They are also likely to have
structured their alliance in a manner that mitigates any potential problems and are likely to have well-developed institutionalized mechanisms for managing conflict with their alliance partner. De Man (2005) points out that American companies have made greater efforts to develop their alliance capability in contrast to their European partners. Alliance management learning may also make a member firm more accepting of an exploratory intent in fashioning an alliance with a partner. Furthermore, the firm may become more adept at screening potential partners and in making certain that the alliance develops as intended.

Learning and alliance process models
When firms enter into alliances, they do so on the basis of certain native attributes that make it easier for them to engage in the process of value creation. Theorists have emphasized the importance of a firm’s preexisting competitive position and the nature of its resource profile (Das and Teng, 2000a, 2003) in explaining the success of partner firms in value creation. Also, adopting a process perspective, a number of researchers have sought to explain how an alliance develops over time (e.g., Das and Teng, 2002; Doz, 1996; Kumar and Nti, 1998; Ring and Van de Ven, 1994).

While the notion of learning processes shaping alliance processes and outcomes is implicitly embedded in processual frameworks, only Doz (1996) and Kumar and Nti (1998) explicitly deal with the impact of learning on alliance evolution. In Doz’s (1996) framework, a set of alliance conditions – task definition, partner routines, interface structure, and expectations of performance, behavior and motives – determine how the learning process evolves in the alliance, prompting changes in conditions that in turn shape subsequent behavior. Kumar and Nti (1998) argue that learning-related discrepancies may pose a major problem for one or all of the partners because these cannot be evaluated objectively. As they note, “there is an ever-present hazard that a learning related discrepancy may be emerging locally, threatening to set in motion forces that can destroy commitment and trust in the relationship” (1998, p. 363). Both these frameworks stress content learning, noting that the differential ability of the partner firms in content learning may generate forces that may be detrimental to the relationship.

Alliance development stages
Although the frameworks noted above stress the importance of learning-related discrepancies in shaping alliance processes and outcomes, none of these are explicitly dynamic – that is, they do not explicate how the learning processes unfold through the different stages of alliance development (Das and Teng, 2002). A dynamic perspective is useful for not only understanding how the learning processes change over time, but also how the different types of learning (content, partner-specific, alliance management) may be differentially salient in these different developmental stages.

Das and Teng (2002) argue, for example, that all alliances proceed through a formation stage, an operation stage, and an outcome stage. During the formation stage the alliance partners seek to negotiate the alliance and begin implementing the agreement that they have entered into. The formation stage is marked by the calculated expectation that the alliance partners will not experience inordinate degrees of relational risk and performance risk (Das and Teng, 1996) as well as inefficiency and inequity (Ring and Van de Ven, 1994). At the operation stage, the alliance partners
implement the contractually binding commitments they have made. Implementing the agreements may be either a smooth or a conflict-prone affair. This stage enables member firms to solidify their perceptions (either positive or negative) about their partner. It also may lead one or both of the member firms to engage in content learning, while simultaneously promoting alliance management learning. The success or failure of an alliance is determined at the outcome stage, where it can either be stabilized, reformed, enter a state of progressive decline, or eventually be terminated (Das and Teng, 2002). The particular outcome would depend, first, on whether the alliance has experienced a learning related discrepancy and, second, on the ability of the members to effectively cope with that discrepancy.

While these stages are sequential, there are also interdependencies among them. In other words, what transpires at the formation stage may affect what happens at the operation stage. Similarly, what happens at the outcome stage may induce the alliance partners to reinterpret their earlier experiences at the formation and operation stages. It may also initiate a process of renegotiation, should one or the other partner consider it desirable at that juncture. Moreover, the time duration of these stages may also exhibit considerable variability. It may be the case, for example, that the formation stage takes a long time, but if a good and solid understanding has been achieved here, the operation stage may unfold rather smoothly. One might surmise, for example, that at the formation stage partner-specific learning may be crucial, whereas at the operation stage the relative importance of content learning increases, and at the outcome stage alliance management learning may acquire decided salience.

We may also note that the unit of analysis in most of the existing work on explaining learning processes has been the individual member firms rather than the relationship between these firms and the strategic alliance. That current focus in the literature, once again, neglects the dynamic aspects of alliance evolution without which it would be difficult to understand how the alliancing firms deal with the inherent tensions in alliances (Das and Teng, 2000b).

Alliance conditions
In our attempt to understand alliance learning, we need also to recognize that the different stages of alliance evolution (formation, operation, outcome) describe unique sets of alliance conditions (e.g. Doz, 1996; Das and Teng, 2002). These alliance conditions are well captured by three categories:

1. collective strengths of the alliance;
2. interpartner conflicts; and
3. the pattern of interdependencies among the alliance partners (Das and Teng, 2000a).

Collective strengths define the extent of value creation by the alliance partners as they work together. This requires the willingness and the ability to learn from one’s partner while also assisting the partner to learn. The alliancing firms may be able to maximize value creation through their interactions. The greater the difference in the absorptive capacities of the member firms, the lower would be the collective strengths of the alliance. However, if a focal firm with a higher absorptive capacity can provide the right incentives to the partner with a lower absorptive capacity, the collective strengths of the alliance may well be augmented (Nti and Kumar, 2000). Interpartner conflicts
stem from differences in strategic objectives among partner firms (e.g. Khanna et al., 1998), incompatibility in national and corporate cultures of the parent organizations (e.g. Ariño and de la Torre, 1998; Kumar and Nti, 2004; Parkhe, 1991), differing alliance horizons (Das, 2004, 2006), political activity among the alliance management team members (e.g. Pearce, 1997), and their experience in managing alliances. These conflicts generate process as well as outcome discrepancies (e.g. Kumar and Nti, 1998). Unfavorable process discrepancies reflect the fact that the member firms are dissatisfied with their pattern of interaction, whereas unfavorable outcome discrepancies reflect the inability of the alliance partners to achieve their learning-related objectives. Unfavorable process discrepancies reduce the psychological commitment of the partners to the alliance. While conflict resolution may well be the way to rebuild and re-establish trust among the members, it also increases the coordination costs in making an alliance function effectively.

Interdependencies define the extent to which the alliance members can benefit from their cooperation. The interdependencies may be either symmetric or asymmetric. When symmetric, there are benefits for both members in continuing with the alliance. In the symmetrical condition, the alliance members learn from each other in ways that are both equitable and efficient and, hence, conducive to mutual value creation. However, over time, relationships among the members may become either symmetrical or less so and, in the process, may either enhance or lessen the stability of the alliance.

The dynamics of alliance learning
In this section we discuss the role and implications of the different types of learning as the alliance goes through its developmental stages, basing our discussion on the significant changes in the alliance conditions.

Formation stage
In the formation stage the prospective partners sound each other out about the possibility of entering into an alliance. If negotiations are successful the partners proceed with the task of implementing the agreed-upon commitments. The formation stage is critical because the partners are usually unfamiliar with each other and for that reason are likely to scrutinize each other’s behavior particularly carefully.

This stage of the alliance provides some opportunity for partner-specific learning. Partner-specific learning affects the judgments made by a firm about the relational risk and the performance risk inherent in entering into an alliance with the prospective partner. Relational risk focuses on the opportunistic behavior of one’s partner whereas performance risk focuses on the alliance’s ability to achieve its objectives (Das and Teng, 1996, 1999). Although these judgments may not be made very explicitly at this stage, they are likely to subtly influence the subsequent pattern of interactions among the partners. A good example of this is in the sensemaking process that occurred in the alliance between Renault and Nissan. The partners acted in ways that strengthened the relationship between them. No attempt was made by either partner to act opportunistically or to withhold commitment. Both by acts of commission, as well as by acts of omission, the partners facilitated judgments that lowered the perception, both of performance and relational risk (Korine et al., 2002).
*P1.* The greater the ability of the partner firms to learn about each other at the formation stage of the alliance, the more confident they will be about the relational risk and performance risk inherent in the venture. Whether or not the partners form a positive or a negative assessment of these two kinds of risk at this stage is dependent on the negotiation strategies pursued by the partner firms. Integrative negotiation strategies (win-win) may promote information sharing and trust, while distributive negotiation strategies (win-lose) may prevent information from being shared and may heighten distrust among the parties.

**Operation stage**

During the operation stage the alliance partners begin to translate their contractual commitments into concrete reality. The alliance takes on the task of achieving its negotiated objectives. The operation stage of the alliance offers the opportunity to the partner firms to learn from each other as well as to mutually influence each other’s perceptions about their desirability as a partner. Content learning will affect the competitive positioning of both firms while partner-specific learning will affect their reputations.

A number of scholars have noted that content learning among alliance partners may significantly alter the competitive positions of the partner firms (e.g. Hamel, 1991; Nti and Kumar, 2000). Learning allows a partner firm to access critical technologies that can then be deployed effectively *vis-à-vis* competitors. Although learning undoubtedly has the potential for altering the competitive position of the firms, whether or not this potential is realized in practice depends on a number of factors. Lane and Lubatkin (1998) note, for example, that a focal firm’s ability to learn from its partner is dependent on the similarity between the firms’ knowledge bases, organizational structures, compensation policies, and dominant logics. The greater the similarity of the partners on these dimensions, the greater would be the likelihood of learning to occur. For Lane and Lubatkin (1998), it is, therefore, the relative absorptive capacity, and not the absolute absorptive capacity *à la* Cohen and Levinthal (1990), that is the key determinant of learning. Anand and Khanna (2000) note that alliance capabilities are an important determinant of whether or not learning occurs. Alliance capability presupposes the existence of organizational mechanisms that systematize the learning from every alliance and allow for the dissemination of such knowledge within the organization.

*P2.* The greater the content learning among the partner firms at the operation stage of the alliance, the more significantly will their competitive position shift *vis-à-vis* external competitors.

When firms form an alliance they do so on the basis of “resource alignment” among the partners (Das and Teng, 2000a, 2003), in order clearly to collectively utilize the resources that they contribute to the alliance. Das and Teng (2000a) note that there are four kinds of interpartner resource alignment:

1. supplementary;
2. surplus;
3. complementary; and
4. wasteful.
Supplementary alignment implies that the firms are contributing similar resources that are being utilized effectively, whereas surplus alignment means that these similar resources are not fully utilized. Complementary alignment implies that the resources contributed by the partners are dissimilar, and utilized well, while wasteful alignment occurs when the dissimilar resources of the partner firms cannot be effectively utilized.

The operation of the alliance may result in the resource profiles of the partners becoming progressively divergent. This may occur for a number of reasons. First, the partner firms may differ in their orientation towards the alliance. Partner firms that have an exploratory intent, as opposed to an exploitative intent, may be more motivated and capable of harnessing knowledge to enhance their own organizational capabilities. Hamel’s (1991) study demonstrated that the alliance partners often differed in their strategic intent. Second, partner firms may differ in their ability to manage alliances, with the partner having the higher capability being more effective in utilizing the alliance for its own advantage. The partner firms may also differ in their organizational cultures and routines, some of which may be more conducive in acquiring and utilizing knowledge effectively. The divergence in the resource profiles of the partner firms may heighten alliance instability either due to a shift in the bargaining power of the partners, or due to opportunistic behavior, as the weaker firm tries to acquire its partner’s valuable resources, or due to the perception of inequity that may emerge when it becomes apparent that contributions are not commensurate with outcomes. At the very least, divergence in the resource profiles will lead the partner firms to renegotiate the terms of their cooperative agreement.

The operation stage is also marked by the emergence of interpartner conflicts. Interpartner conflicts may stem from factionalism and heightened political activity among members of the alliance management team, differences in cultures (corporate and national) among alliance partners, and the relative inexperience of the partner firms in managing alliances. Interpartner conflicts may also arise when the strategic directions of the partner firms are incongruent. Both Ariño and de la Torre (1998) and Doz (1996) provide illustrative cases of alliances that broke down when the strategic direction of the partner firms began to exhibit incongruencies. Disagreement over the allocation of benefits is yet another reason for conflicts among partner firms (Ring and Van de Ven, 1994).

Finally, Ariño (2001) notes that interpartner conflicts are likely to be exacerbated when a partner firm engages in non-cooperative behavior by commission rather than by omission. A non-cooperative behavior enacted through commission invites attributions of intentionality that shape the evolving relationship among the partner firms. Although our discussion suggests that interpartner conflicts are inevitable when partners engage in the process of joint value creation, the extent of dysfunctionality of the conflicts depends on how well the partners manage the conflict. For example, in the process of resolving interpartner conflicts, the partner firms may be able to use their latent knowledge to construct novel alternatives that may heighten the interdependencies among the partner firms and be beneficial for the alliance. As Hargadon and Fanelli (2002, p. 299) observe, “plurality provides members of knowledge-brokering firms with latent knowledge that may be more flexible in its abilities to interpret problematic situations and recognize useful combinations of past ideas”. This is most likely to occur if the partner firms construe the conflict in positive rather than negative terms. Kale et al. (2000) note, for example, that integrative
management of conflicts (a win-win approach) enhances the relational capital among
the partners while at the same time it lessens the motivation for the partners to behave
opportunistically. An illustration of divergent resource profiles can be found in the
alliance between Borden and Meiji Milk (Cauley de la Sierra, 1995). At the onset of the
alliance the resource profiles of the partner firms were complementary, in that the
Japanese firm, Meiji Milk, was providing local market knowledge, while Borden was
contributing critical competencies. Over time, as Meiji internalized these competencies,
and Borden’s learning declined or stagnated, the resource profiles of the partners began
to diverge and an intensification of conflict ensued.

P3. The greater the divergence of the resource profiles among the partner firms
during the operation stage of the alliance, the greater will be the potential for
conflict and instability in the alliance.

The operation stage of the alliance provides a basis for it to develop its collective
strengths. As outlined earlier, the collective strength of an alliance describes its overall
strategic capability. The strategic capability may manifest itself, for example, in a
dominant market share, rapid pace of new product development, or entry into new
markets. The collective strength of an alliance is very dependent on the partners’
ability to jointly generate relational rents. Relational rent is defined by Dyer and Singh
(1998) as “supernormal profit jointly generated in an exchange relationship that cannot
be generated by either firm in isolation and can only be created through the joint
idiosyncratic contributions of the specific alliance partners” (p. 662). The authors argue
that the ability to maximize relational rents is dependent on the alliance partners’
investment in relation-specific assets, their ability to develop interorganizational
processes that would facilitate the access and transfer of knowledge among partner
firms, the possession of complementary resources and capabilities, and effective
governance. The development of interorganizational processes and governance
mechanisms that enhance the collective strengths of an alliance are facilitated at
moderate levels of cultural disparity and hindered when the disparity crosses a critical
threshold (Phan and Peridis, 2000).

P4. The greater the content and alliance management learning during the
operation of the strategic alliance, the greater will be its collective strength.

As a consequence of alliance operation, the competitive positioning of one or all of the
partner firms may either strengthen or weaken their position relative to their
competitors. Whether a positive or a negative outcome occurs depends first on the
collective strength of the alliance, and second on the ability of the partner firms to
access that collective strength for their strategic positioning. The financial
interdependencies between the partner firms refer to the degree to which the alliance
enables the firms to strengthen their resource accumulation via the alliance. It may also
be that the alliance provides little or no financial benefit, or even becomes a drain on
the partner firms’ resources.

Finally, technological interdependencies indicate the degree to which the alliance’s
technological capability becomes crucial for the partner firms in strengthening their
own technological capability. Again, one can envisage two contrasting situations. In
the first situation, the partner firms are not dependent on the technological strength of
the alliance, whereas in the second there is a high level of dependence. A good example
of a negative strategic interdependency between the partner firm and the alliance is the alliance between Borden and Meiji Milk that we mentioned earlier (Cauley de la Sierra, 1995). The partners in this case had entered into an alliance in Japan, with the Japanese partner marketing Borden’s products in Japan. For a couple of decades the alliance performed reasonably well. However, over a period of time Meiji was able to internalize critical competencies from the alliance, and once this internalization had occurred the Japanese partner started introducing its own products that competed with those of Borden. Clearly, the Japanese partner was now no longer as dependent on the alliance, and for that reason could undertake strategic initiatives of its own. Borden, by contrast, was still very dependent on the alliance, and reacted very negatively to Meiji’s actions. Eventually, the 20-year old relationship between the partners broke down amidst considerable acrimony.

An example of a lack of positive financial interdependency between the alliance and the partner firm is the alliance between Rover and Honda (Alvarez Gil and Gonzalez de la Fe, 1999). Rover had entered into an alliance with Honda with the goal of learning Honda’s manufacturing techniques. Honda, by contrast, wanted to use the alliance to expand its geographical coverage, gain economies of scale, and strengthen links with local suppliers. Alvarez Gil and Gonzalez de la Fe (1999) suggest that in this alliance Rover failed to realize its objective of learning about Honda’s manufacturing techniques. It only succeeded in “Roverising Honda models”, and while this had some learning effect it failed to translate into adequate financial returns. One consequence of this was that Honda gained little positive financial synergy from the alliance, thereby lessening its commitment to the alliance.

P5. During the operation stage of the alliance, the greater the degree of content learning among the partner firms, the greater will be the interdependency between the partner firms and the overall learning within the strategic alliance.

Outcome stage
In the outcome stage, the performance of an alliance can be evaluated with some clarity. We already noted that there are four possible outcomes at this stage:

1. stability;
2. reformation;
3. decline; or
4. termination (Das and Teng, 2002).

If the alliance has met the expectations of its partners it will be stable and may even expand. An alliance may need to be restructured or reformed if the expectations of the alliance partners are not met. Decline may well call for similar actions although it may be a prelude to termination.

The outcome stage may affect both the partners’ reputations and their competitive positions vis-à-vis external competitors. If the alliance generates positive outcomes for both partners it would tend to reaffirm their trust and commitment to each other. However, as Selnes and Sallis (2003) note, this may not always happen, as trust has hidden costs that may impede the functioning of a partnership. These hidden costs take the form of relaxing of partner controls, loss of creativity due to groupthink, and
the reluctance of the partners to convey negative information to each other. If the alliance does not produce positive outcomes for one or both of the partners, but the partners can handle their complaints in an amicable manner, no harm will be done to their reputation. Stuart (2000), in a study of alliances in the semiconductor industry, notes that a small or a relatively young partner benefited from an alliance with a partner that had a higher stature even though the alliance did not meet its objectives. The reputation of a smaller partner usually gets enhanced when it enters into an alliance with a more reputed partner. The troublesome scenario is where the outcomes are negative and the partners are not able to cope with such results effectively.

Competitive positions can be strengthened when one or both of the partners are able to gain access to new technologies and deploy them effectively. Perhaps the optimal situation is where there is reciprocal learning because such a situation tends to reinforce the relationship among the partners. Since both the partners are learning from each other and maximizing value creation, there is the natural propensity to continue with the relationship. Relationships can become unstable when a partner outlearns its counterpart or where neither learns from the other. An alliance that was characterized by positive learning outcomes was the Renault-Nissan alliance mentioned earlier. At the time of the alliance formation, Nissan was on the verge of bankruptcy while Renault was looking to strengthen its global position. Nissan’s strengths lay in engineering while Renault’s strengths were in styling and design. This useful complementarity and the ability to translate it into positive synergies were unique aspects of the alliance (Yoshino and Fagan, 2003).

In sum, the learning dynamics of the partner firms is a process characterized by considerable ambiguity. This would be particularly true of firms with little prior experience in managing alliances, so that they would be essentially working with their expectations about the alliance. The challenges of drawing reliable and valid conclusions about learning are likely to be particularly acute if the expectations of the alliance partners are not met.

\textbf{P6.} At the outcome stage of the alliance, the more positive the partner-specific learning, the greater will be the collective strength of the alliance.

Also, during this outcome stage, the alliance partners evaluate how successful or unsuccessful the alliance has been. Conflicting perceptions at this stage may intensify interpartner conflicts. Indeed, at this stage, one or all of the partners may either decide to re-evaluate the wisdom of continuing with the alliance or call for readjustments in the strategic direction and the governance mechanisms. The inclination to re-evaluate and renegotiate the alliance is likely to be further intensified if there is “divergent development” among the alliance partners, i.e. a situation where the technological overlap among the partner firms declines during the course of the alliance (Nakamura et al., 1996). A study of alliances by Mowery et al. (1996) found that increased diversity in the partner firms’ resource profiles characterized a substantial subset of alliances that they studied. The attempted renegotiation may not always be successful and for this reason may lead to termination of the alliance. This dynamic is evident, for example, in the alliance between Alpha motorized systems, a US-based motorcycle and moped equipment manufacturer, and Kai Li Machine, a Chinese manufacturer of gearing systems (Everatt, 1999). Owing to a substantial gap in the strategic, organizational, and cultural contexts of the partners, the partners not only failed to
learn from each other, but more to the point, their relationship deteriorated substantially with the American company becoming increasingly skeptical of their Chinese counterpart’s intentions. The relationship was eventually dissolved.

The learning evolution in the relationship between the partner firms may make the partners more cognizant of their abilities to jointly create value in an efficient manner, and the extent to which their capabilities are complementary. This learning is crucial because the relationship among the partner firms is likely to determine their commitment to the alliance. While this is not the only determinant of alliance evolution, the learning that occurs here may play an important role in that evolution.

P7. At the outcome stage, the level of confidence among the member firms about the ability of the alliance to create value will be dependent on the content, partner-specific, and alliance management learning.

Also, at the outcome stage, the collective strength of an alliance manifests itself in the ability of the alliance to compete effectively, accumulate financial resources in order to undertake new ventures, and enhance its managerial and technological capabilities. An alliance that possesses high collective strength will likely continue to prosper, whereas one whose collective strength is low may need to be restructured, or may simply be terminated.

The critical question to be addressed here is whether an alliance has developed the collective strength that is essential for the alliance to survive and prosper. While the answer to this question has an important bearing on the strategies of the partner firms, it is also important for assessing the viability of the strategic alliance as an independent entity. And, as the collective strength of the alliance grows, it is more likely than not that the alliance will prosper.

It is during the outcome stage that the alliance partners may begin to rethink and re-evaluate their alliance strategy, depending upon the pattern of interdependencies that come to characterize the relationship between the partner firms and the alliance. Positive strategic, financial, and technological interdependencies will enhance the commitment of the partner firms to the alliance whereas negative interdependencies may lower their commitment. The critical issue here is whether there is a positive or a negative interdependence between the strategic alliance and the partner firms. This issue has the most fundamental bearing on whether the alliance partners will enhance their commitment to the alliance or will seek to exit from it.

P8. During the outcome stage of the alliance, the greater the degree of interdependence between the partner firms, the greater will be the degree of commitment of the partners to the alliance.

Discussion
We have highlighted the nature and the consequences of the three types of learning that gets accomplished during the formation, operation, and outcome stages of an alliance. The formation stage marks the emergence of a possible relationship between potential partner firms. This is a phase marked by extensive sensemaking in which the intent is to enter into a contractual agreement, should that be feasible. An important decision variable in this context is the reputation of the potential partner. Learning about a partner is critical at this juncture. Given that a relationship is just being initiated at this stage, the other learning components are not relevant here.
The operation stage is where the alliance partners, having successfully completed negotiations, start translating the agreed-upon commitments into concrete reality. We have argued that at this stage content learning initially becomes salient, both for the individual partner firms and the strategic alliance as a whole. When the alliance becomes operational, content learning may also become an important issue in shaping the interdependencies between the partner firms and the alliance.

The evolution of the relationship between the partner firms during the operation stage leads to further partner-specific learning that may encompass both learning from a partner and learning about a partner. We would argue that whether or not content learning occurs, and the degree to which it does occur, depends most critically on the pre-existing reputations of the partner firms. If the partner firms enter into an alliance with positive reputations, they are likely to pursue integrative learning strategies, i.e. strategies providing for “maximum transparency, receptivity, and thus interorganizational learning” (Larsson et al., 1998, p. 292). Integrative learning strategies will maximize the collective strengths of the alliance while also allowing the individual partner firms to benefit in the process. The pre-existing reputations with which the partner firms entered into the alliance may be further strengthened in the process. As the operations unfold over time, the first signs of positive interdependencies between the partner firms and the strategic alliance may begin to emerge if the partners have pursued integrative learning strategies. The initiation of positive interdependencies may also enhance the confidence of the partner firms in managing the alliance, with the consequence that the firms may be more willing to subsequently form additional alliances with the same or other partners. If, by contrast, the partners initiate the operation stage with somewhat negative perceptions of each other, they are likely to pursue competitive learning strategies that may, in turn, engender a self-destructive relationship.

In the outcome stage, the performance of the alliance and its implications for the partner firms become clear. The outcome stage is also likely to be influenced by the mode of interaction that transpired during the operation stage. If integrative learning strategies have been pursued in the operation stage, the competitive positions of the partner firms are likely to be strengthened vis-à-vis their external competitors. The impact of content learning on the partner firms may be most directly visible at this stage. Although integrative learning strategies may change the competitive positions of the partner firms, it is conceivable that not all of the partner firms may benefit equally, and this may sow some seeds of distrust in the relationship between the partner firms. However, this potential negative outcome may not occur if the partners have a positive reputation and a long-term orientation, and are cognizant of the vantage point from which they entered the relationship.

Content learning is salient for the strategic alliance, and there is no denying that the collective strength of the alliance may increase, which in turn may accentuate the positive interdependencies between the partner firms and the alliance. Partner-specific learning is likely to be prominent in the interactions between the partner firms, as the partners are likely to learn much more about each other as they seek to develop shared routines to maximize relational rents. Integrative learning strategies will undoubtedly facilitate this process considerably. The emergence of positive interdependencies between the strategic alliance and the partner firms may further reinforce alliance management learning whose roots probably lie in the earlier stage. The
interrelationships between the different coevolving components underscore the complexity of the learning dynamics in strategic alliances. Initial conditions matter, but the interplay between them is no less crucial. Thus, in summary, the formation stage of the alliance will be marked by the saliency of learning about a partner, the operation stage by the saliency of content learning, and the outcome stage by the saliency of the cumulative product of all three types of learning.

In this paper we have attempted to outline the dynamics of learning in the alliance development process. First, we have suggested that the different alliance conditions that impact upon the learning evolution are collective strengths, interpartner conflicts, and interdependencies. While collective strengths and interdependencies are associated with the strategic alliance and the relationship between the partner firms, interpartner conflicts are associated with the partner firms and the relationship between them.

Second, we have made a distinction between different types of learning and their associated strategic significance for the development of the alliance. In particular, we have underscored the fact that different types of learning are either more or less relevant for the different co-evolving components in the alliance learning system. For purposes of our analysis here, we have adopted three different types of learning that occur in strategic alliances:

1. content learning;
2. partner-specific learning; and
3. alliance management learning.

Third, we have noted that the different types of learning have different strategic implications. We have discussed how the strategic significance of the different types of learning may shift as the alliance progresses from the formation to the operation and the outcome stages. Briefly, partner-specific learning (learning about a partner) is crucial in determining whether or not an alliance gets formed, content learning determines the collective strengths of the alliance, and alliance management learning helps build the confidence of the partners to manage alliances.

Fourth, our framework draws attention to the fact that learning dynamics in alliances encompass both the level of the individual partner firms as well as the relationships with each other and the alliance. One implication is that the nature of the learning dynamics may not be consistent across all these different levels. For example, at the operation stage, an enhancement of the competitive position of a partner firm may be associated with heightened interpartner conflicts, and lowered collective strengths of the alliance. Similarly, at the outcome stage, an increase in the divergence of the resource profiles of the partner firms may accentuate interpartner conflicts while simultaneously enhancing the potential for the collective strengths of the alliance to increase, if the conflicts can be reasonably contained.

And lastly, we have noted that learning process occurs within a highly interdependent system. The existing work on alliances has focused primarily on the unique characteristics of the alliances in explaining how an alliance as an entity evolves over time (e.g. Das and Teng, 2002; Doz, 1996; Ring and Van de Ven, 1994). A crucial implication of the interactive system perspective discussed here is that whether an alliance prospers or falters depends significantly on what happens among the different learning components within the confines of that alliance. The specific
outcome depends, importantly, on the evolution of the interdependencies between the partner firms and the strategic alliance. Thus, for instance, even though an alliance may be functioning smoothly for a time, it may not survive if the interdependencies wither between one or more of the partner firms and the alliance.

In sum, we have made the argument that appreciating the dynamics of learning in alliances, in terms of three types of learning, advances our understanding of the alliance developmental processes. This dynamic perspective brings to the fore the importance not just of the quality of managerial intervention, but also its timing in determining whether a troubled alliance can be rescued. In particular, our framework reveals that while learning is always elusive, drawing valid inferences about learning is quite complicated when there are multiple processes at play. Nevertheless, such learning is required for alliance management to be effective, even as one appreciates that drawing appropriate lessons from the proposed learning framework is likely to be at once a complicated and worthwhile endeavor.

Process-based frameworks for understanding alliance development are rare, and rarer still are frameworks that jointly incorporate dynamic interactive learning processes and alliance development processes. Thus, having both these kinds of processes in a framework offers distinct theoretical advantages, while also yielding practical insights for managers that may not be available otherwise.

Managerial implications

The dynamic learning framework outlined here has important managerial implications. It has been noted that “very little research has been devoted to how interorganizational relationships are managed” (Barringer and Harrison, 2000, p. 396). While this is indeed a pertinent issue, our framework suggests that the management of alliance-based relationships is likely to be determined by how effectively the alliance partners manage the three types of learning:

1. content;
2. partner-specific; and
3. alliance management learning.

It is the ability to productively manage all the three types of learning that would impact on how the partners interact and determine how the alliance will evolve over time.

For instance, our framework suggests that the collective strengths of an alliance depend on the learning strategies (e.g. integrative versus distributive, as in Larsson et al., 1998) pursued by partner firms and their ability to maximize relational rents (Dyer and Singh, 1998). We would also argue that integrative learning strategies and the maximization of relational rents are, in turn, dependent on learning about a partner. As we mentioned earlier, the literature has under-emphasized learning about a partner as against learning from a partner. If the alliance partner is perceived as having a positive reputation, it is likely that the focal firm will pursue integrative learning strategies that should enhance the collective strengths of the alliance. Too, a positive reputation will promote mutual responsiveness and adaptability among the member firms, and also a greater willingness to tolerate adverse performance during the operation of the alliance. The development of shared routines, critical to the maximization of relational rents, is a more likely outcome under these circumstances.
Second, the framework suggests that managers need to recognize the relative saliencies of the learning types in the different developmental stages. There are thus contingencies that managers must appreciate and incorporate in their thinking. Third, given the fluidity of the learning dynamics in a multi-actor system setting, managers involved in alliances must constantly monitor the ever-changing environment and be prepared to rapidly reorient their strategy and its implementation. This requires creative judgment, and while this judgment may not be pre-programmed in any deterministic fashion, it is vital for ensuring optimal adaptation in a changeful environment. There is also the simultaneous need to strengthen the capabilities of the partner firms, independent of the alliance. Thus, alliance managers need to optimally balance cooperation and competition, rigidity and flexibility, and short-term and long-term orientation (Das and Teng, 2000b).

The ability to manage the organizational learning process is becoming an important strategic asset, and this ability assumes an added level of complexity in the arena of alliances by virtue of the unique problems arising from having multiple organizations working together cooperatively for both individual and joint value creation. We have attempted to sketch the complex dynamics of learning in alliances against the backdrop of an increasingly competitive environment.

**Future research**

Future research would obviously need to empirically assess the learning dynamics in strategic alliances. The propositions developed in this article should be of help in this endeavor. Research is also needed to study the intricacies of the co-evolving learning components within an alliance, namely the partner firms considered individually and the strategic alliance entity itself. That is, even as each component itself evolves in terms of learning, all of them also evolve simultaneously in the alliance, constituting the alliance learning system. As we noted earlier, the literature thus far has paid insufficient attention to the interactive character of the alliance learning process. One might also want to study the learning dynamics in alliances across industries and across different institutional environments. There are undoubtedly methodological issues that need to be addressed along the way, given the multidirectional causalities to contend with in this type of research. As a modest contribution toward that end, our attempt here has been to propose an initial framework for understanding the nature of the dynamics of learning in the alliance development process.

**References**


**Further reading**


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