



Organizational Learning and Knowledge Based Resources: Antecedents to New Entry

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Abstract

This study describes linkages between an organization's learning orientation, learning behaviors, the capabilities associated with those activities, and new entry. Using a multiple case based methodology the study reveals how firms seeking flexibility and regular entry into new markets pursue more active and more varied learning experiences than do firms seeking efficiency and targeting a stable segment of the market. The results of the study are consistent with the view of the firm as a collection of resources, finding that knowledge based resources provide the flexibility and adaptability that enables the firm to anticipate and meet the needs of a changing market.

Introduction

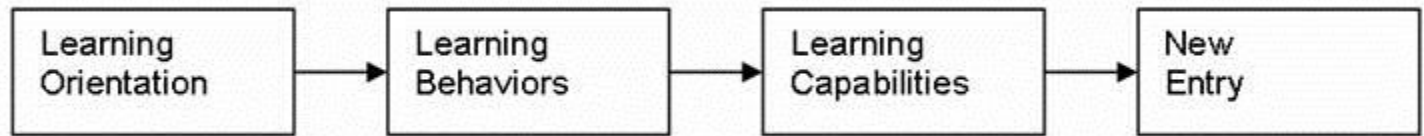
The idea that an organization's paradigm, the set of beliefs about the organization and the way it is or should be (Johnson, 1988) would influence how the organization perceives and engages the environment is not new (Daft & Weick, 1984, Dutton, 1993; Isen & Geva, 1987; Weick, 1988). An organization's paradigm, its orientation towards the world, frames perceptions and interpretation of events and conditions within and without the firm (Kruger, 2000), and influences decisions about actions and strategies it will pursue and the resources it will develop (Schwenk, 1988; Sinkula, Baker, & Noordewier, 1997).

One element of an organization's paradigm is its orientation towards learning (Kruger, 2000; Van den Bosch, Volberda, & de Boer, 1999). A learning orientation may result in an organization more skilled at "creating, acquiring, and transferring knowledge, and at modifying its behavior" (Garvin, 1993: 93). Such a skill can help gain and hold a competitive advantage (Grant, 1996). This research focuses on the assumptions implicit in Garvin's statement. Will a learning orientation result in behaviors that enhance an organization's ability to learn? Will such a capability better enable the organization to see and act on opportunities?

Sinkula et. al. (1997) structured these questions in a three-part framework linking conditions that stimulate a desire to learn, behaviors that facilitate learning, and actions that reflect learning. A substantial body of literature has examined these topics individually (Fiol & Lyles, 1985; Huber, 199; Levitt & March, 1988; Senge, 1990). Fewer attempts have been made to link them in a framework as described by Sinkula. This research will attempt to do so, showing how a learning orientation is reflected in behaviors that enhance the development of knowledge based capabilities that are manifested in the pursuit of new opportunities. The constructs and the relationships to be investigated in this paper are illustrated in Figure 1.



Figure 1
Learning Model



Review of Literature

Learning Orientation

An organizational orientation gives the firm an identity (Albert & Whetten, 1985), shapes beliefs about its market and strategy (Dutton, 1993), and “the glue that binds the diverse aspects of the firm” (Fiol, 1991: 208). It is an expression of what the firm values. Firms with a learning orientation see the value of learning as self-evident and axiomatic (Senge, 1990), creating a “culture amenable to learning” (Galer & van der Heijden, 1992: 11). “A learning orientation influences the degree to which an organization is satisfied with its theory in use and, hence, the degree to which proactive learning occurs” (Sinkula et. al., 1997: 6). Firms that value learning will more likely develop the cognitive infrastructure, the nutrient rich environment, that increases the sensitivity of perceptions, the likelihood that the organization will have the ability to act on such perceptions (Shapero, 1982), as well as its faith in its competence to do so (Krueger, 2000).

The ability to perceive, acquire, and utilize new knowledge is a valuable resource (Grant, 1996; Lant & Mezias, 1992; Miller, 1996; Volberda, 1996). Knowledge accounts for the greater part of value added in most economic activity and when distinctive to the firm is a barrier to replication that can result in the creation of a sustainable competitive advantage (Grant, 1996; Hall, 1993; Miller, 1996). This capability has a direct influence on how organizations frame their perceptions of what constitutes an opportunity. It is the framing that defines opportunity, framing shaped by the organization’s perceptions of its capabilities and its orientation towards action and the environment (Dutton, 1993; Lumpkin & Dess, 1996).

Proposition 1 Organizations with a learning orientation will be more likely to adopt proactive strategies and activities towards the environment.

Learning Behaviors

Experiential Learning. Sitkin (1992) suggests that learning takes one of two forms: that which leads to increasingly efficient routines or that which adds knowledge and flexibility. The steady refinement of organizational routine often leads to lower level, single loop learning rather than flexibility and double-loop, higher level learning (Argyris & Schon, 1978; Fiol & Lyles,



1985). One factor is reliance on familiar knowledge and skills that conform to proven routines and strategies which, while increasing efficiency with the familiar, inhibit the ability to perceive, acquire, and utilize new knowledge and skills (Hedburg, Nystrom & Starbuck, 1976). The pattern is self-reinforcing. As the organization focuses on the routine and familiar and avoids new experiences, its capacity to accept change and acquire new knowledge deteriorates, leading to what Levitt and March (1988) term a competency trap, while ironically the need for adaptability and change increases (Hedburg, Nystrom & Starbuck, 1976).

“The main impediments to second order learning and change are the redundancy and paucity of experience” (Lant & Mezias, 1992: 64). What is needed is regular opportunity for new experiences leading to new skills. Such experience can “enable the firm to learn, adapt, change, renew over time” (Collis, 1994: 145). This describes the tension between adaptation and adaptability (Boulding, 1978). New learning is acquired through the continuous expansion of existing knowledge into new areas, allowing high change potential firms to acquire new skills, not only in familiar domains, but from new domains that complement existing skills (Lant & Mezias, 1992). Such experiences leads to the continuous refinement of the existing knowledge and skill while stimulating continuous exploration of new knowledge and skill. Such a capability is not developed when experience is restricted to the repetition and refinement of routine activities. It requires regular experience with change and results in dynamic capabilities that renew, adapt, and add to core competencies over time (Teece & Pisano, 1997).

Proposition 2 A learning orientation focused on flexibility will be associated with experiential activities resulting in the expansion of existing knowledge and skill alongside the refinement of existing capabilities.

Proposition 3 A learning orientation focused on efficiency will be associated with experiential activities resulting in the refinement of existing capabilities.

Experimental Learning. Lant and Mezias describe organizations as “experimental learning systems” (1992: 50). While formal organizational experimentation is rare (Huber, 1991) it is reflected in the way some organizations “maintain themselves in a state of frequent, nearly continuous change in structures, processes, domains, and goals” (Huber, 1991: 93). It may be seen in what Wildavsky (1988) terms foolish behavior, the willingness to engage in activities that seemingly lack the criteria for more rational behavior. Organizational experiments need not necessarily follow rigorous experimental designs. They may take the form of post-hoc analysis of so-called natural experiments (Landau, 1973), and the systematic analysis of what are termed small doses of experimentation (Wildavsky, 1988).

The organizational learning literature (Hedberg, Nystrom, & Starbuck, 1976; Huber, 1991) suggests a number of benefits from regular organizational experimentation. Firms should be “less resistant to adopting unfamiliar features or engaging unfamiliar environments” (Huber 1991: 93), more open to new initiatives, and more adept at acquiring and exploiting the new information and knowledge needed to launch new strategies or enter new markets (Grant, 1996; Van den Bosch, Volberda, & de Boer, 1999). Sitkin (1992) terms one outcome unintentional



learning and stresses the need for careful planning. “Actions that are well planned and designed can provide a wealth of diagnostic information, regardless of whether they succeed or fail” (1992: 244). One technique is to break experimental projects into small units, increasing the likelihood of small wins (Weick, 1984) that increase the willingness to continue (Lant & Mezias, 1992). Such experimental initiatives are generally undertaken with a greater tolerance for failure, and are critical if managers are expected to step outside familiar routines (Sitkin, 1992).

The benefits of organizational experimentation extend to the individual employee. Experimentation in situations outside familiar tasks and responsibilities can stretch employee skills and their sense of efficacy if they provide the mastery experiences critical to the development of organizational and individual efficacy (Bandura, 1986; 1995). Experiments should stretch competencies, creating the resilience and flexibility needed in the acquisition of new knowledge and the modification of behaviors (Garvin, 1993; McCall, Lombardo, & Morrison, 1988). Such experimentation should be structured to ensure that new knowledge connects with and builds on existing skill and knowledge (Cohen & Levinthal, 1990).

Proposition 4 A learning orientation focused on flexibility will be associated with experimental learning activities resulting in the acquisition of new knowledge and skill along with the refinement of existing capabilities.

Proposition 5 A learning orientation focused on efficiency will be associated with experimental activities resulting in the refinement of existing capabilities.

Learning Capabilities

Absorptive Capacity. Absorptive capacity develops in the overlap between new and existing information. “Prior related knowledge confers an ability to recognize the value of new information, assimilate it, and apply it to commercial ends” (Cohen & Levinthal, 1990: 128). A growing body of research has shown that the assimilation and application of new knowledge requires the development of a capability to do so (Cohen & Levinthal, 1994; Grant, 1996; Lane & Lubatkin, 1998). The more learning that has taken place the more likely new information will resonate with existing knowledge, a mechanism based on associative learning, whereby new data is stored and organized through connections with existing information (Bower & Hilgard, 1981).

There are many ways an organization can go about building absorptive capacity. A study of service firms identified opportunity for staff to interact with clients and suppliers, involvement throughout the life of a project, and regular interaction across functions within the firm (Burpitt & Bigoness, 1997). Cohen and Levinthal (1990) propose a number of mechanisms including the transfer of knowledge among units of the firm; a broad, active network of internal and external relationships; communication across organizational boundaries; and a variety of cross-functional interactions within the firm. Van den Bosch et. al. (1999) propose that a firm’s ability to combine and coordinate new information enhances absorptive capacity.



Hamel and Prahalad (1994) and Volberda (1996) describe the role of absorptive capacity in the development of “industry foresight” that enables firms to recognize and act on emerging opportunities. Absorptive capacity influences expectations regarding what the organization believes it can do (Cohen & Levinthal, 1994). “The higher absorptive capacity, the more likely it will be that a firm’s aspiration level or expectation formation will be defined in terms of the opportunities present in its environment, independent of current performance criteria such as profitability” (Cohen & Levinthal, 1990: 137).

Proposition 6 An organizational learning orientation will be positively associated with activities that result in enhanced absorptive capacity.

Collective Efficacy. Efficacy expectations can influence the goals that are set, the strategies for reaching the goals, and the effort and the persistence expended in reaching them (Bandura, 1986, 1995). As Bandura notes, perceptions of capability and self-confidence are a central mediating mechanism in striving towards achievement. The importance of efficacy on the framing of opportunity perception suggests a mediating role for efficacy, helping to explain the link between knowledge acquisition and performance (Krueger, 2000). Performance affects efficacy as experience with a task increases the likelihood of successful performance and the confidence to persist (Bandura, 1995). When, for example, an entrepreneurial orientation is paired with higher levels of collective efficacy, it is more likely that events will be perceived as opportunities to be acted upon (Dutton, 1993).

“The most effective way of creating a strong sense of efficacy is through mastery experiences” (Bandura, 1995: 3) that are provided in practice and in actual experience. Thus firms engaged in learning experiences and new entry will develop the greater confidence in their ability to initiate and persist in such new entry efforts. Krueger (2000) notes that efficacy can also be enhanced through the acquisition of new knowledge and skills. The creation of efficacy beliefs through organizational learning arises from the development of cognitive infrastructure, the nutrient rich environment (Shapiro, 1982) that can stimulate the creation of the intellectual capital that enables organizations to maintain a proactive stance toward the environments (Lumpkin & Dess, 1996; Miller & Friesen, 1982).

Proposition 7 A wide range of organizational learning experiences will be positively associated with a sense of collective efficacy regarding new entry.

Research Design

Architectural and architectural/engineering (AE), representative of the knowledge intensive service sector, were selected for study. The single industry focus helps control for such elements as common factor markets and inter-industry variance (Barney, 1986; Gordon, 1991; Rouse & Daellenbach, 1999). The first step was to define the target constructs in the context of the selected industry. One technique in construct clarification and validation is consultation with industry experts and knowledgeable insiders (Reger & Huff, 1993; Zahra & Pearce, 1990). Interviews were conducted with the principals of five large AE firms. These principals agreed that two measures could capture an organizational emphasis on new entry. The



first was the number of attempts firms made to secure business outside their core domain, generally through a bid process. The second was the percentage of revenue derived from entry into new types of markets and products. These five firms did not participate in the subsequent study.

The firms studied were selected from an American Institute of Architects directory of member firms, a directory providing descriptions and addresses of firms. Firms in a large metropolitan area were selected. Selection required that firms be independent operations, as opposed to branches of larger firms, and that the firms employ a variety of professionals. Twenty-six firms were selected. They employed an average of 18 professional staff, including architects, engineers, interior designers, landscape architects, and other specialists. The total average staff size was approximately 30 and included CAD operators, clerical, and other support persons. The principals of each firm described the new entry activity of their firms in terms of the two measures describe above. In terms of revenue earned, Level 1 firms were those in which all revenue was derived from familiar products and a stable set of customer types that had not changed in the previous five years. Level 2 firms were those where ten percent or less of revenues came from entry in new types of markets with no growth or even a decline over the previous five years. Level 3 firms were those where ten percent or less of revenues came from entry into new types of markets but where that percentage had grown over the previous five years. Level 4 firms were those where ten percent or more of revenues came from entry into new types of markets, a percentage that had grown over the previous five years.

The same terminology and scale was used to measure efforts to secure new business. Level 1 firms were those where no efforts had been made to bid on and secure business in products and markets that were outside the firm's customary domain. Level 2 firms were those where less than ten percent of the projects sought were in areas outside the firm's existing domain and where that percentage had shown no growth or even a decline in the previous five years. In level 3 firms less than ten percent of the projects sought were in areas outside the firm's existing domain but had increased in frequency over the previous five years. Level 4 firms were those where ten percent or more of the firm's efforts to secure business had targeted new types of markets, a percentage that had grown over the previous five years.

The selection ended when two groups of firms was identified, six firms from Levels 1 and 2, termed low entry, and six from levels 3 and 4, termed active entry, for a total of twelve firms, a satisfactory number for the qualitative, multi-case design employed (Eisenhardt, 1989a, 1989b). The aim of this selection was to provide a theoretical sample that might aid in identifying differences that could distinguish firms with more active, successful new entry experiences (Rouse & Daellenbach, 1999). An average of five individual interviews were conducted with members of the senior design and management team in each firm, for a total of fifty-eight interviews. Sixty-seven staff members, representing various professional and support staff, participated in group interviews in each firm.

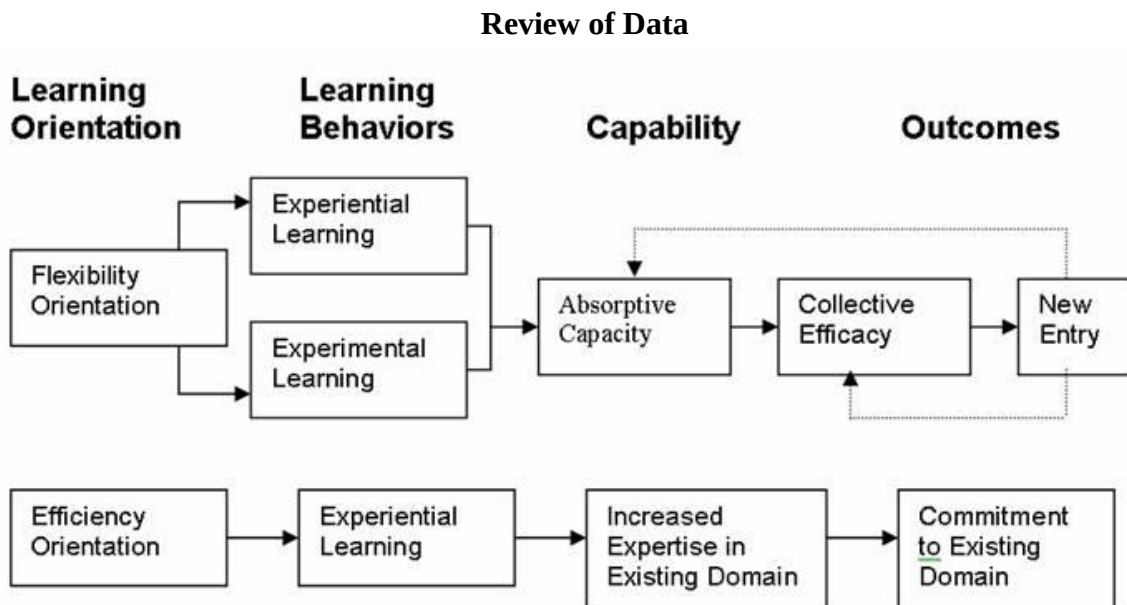
All interviews were semi-structured. Interviewees were asked to describe firm history, their markets, products, new market entry, perceptions regarding the success of the operations in



general and new ventures in particular, and the criteria used to evaluate new entry success. Interviewees were also asked to describe firm culture and practices regarding organizational learning and any policies that facilitated learning. Interviewees were also asked to describe skills or capabilities their firms had developed in response to changes or opportunities in their markets and how those capabilities had developed.

The interview data was analyzed using a multiple case design outlined by Eisenhardt (1989a, 1989b), undertaken to reveal patterns in how constructs are defined and the relationships between them. The first step is the development of individual firm profiles. Items mentioned in the interviews are grouped in categories, for example orientation towards learning, and ranked according to frequency of mention. The second step combines individual firm categories and rankings grouped and ranked according to frequency of mention across all firms. This is an iterative process that involves comparing data in pairs of firms in an effort to produce a list of similar, related constructs and relationships. This approach avoids imposing categories of constructs based solely on existing literature, going to the data for natural groupings of constructs as defined and understood within the firms (Ancona & Caldwell, 1992). The author conducted the initial classification and categorization process. Research assistants, with no knowledge of the author's findings, repeated the process with a resulting categorization and grouping indistinguishable from the initial sort. The categorization is illustrated in Figure 2.

Figure 2
Organizational Learning Model



The interview data revealed a significant degree of agreement between the two measures of new entry experience with no overlap between groups. Firms categorized as low entry selected levels 1 or 2 on both measures and those categorized as active entry selected levels 3 or



4 on both measures. The overlap was not perfect between levels 1 and 2 and between levels 3 and 4. Three of the firms that were classified as level 1 using one measure were classified as level 2 using the second measure. Two of the firms classified as level 3 using one measure were classified as level 4 using the second measure.

Analysis of the interview data supports the study's propositions, illustrated below in Figure 1. However, rather than a single, global learning orientation, the interview data reveals two orientations towards organizational learning. Among the low entry firms the learning orientation focused on efficiency. Among the active entry firms the learning orientation focused on the addition of new knowledge and skills with an emphasis on flexibility. The interview data also found both learning behaviors, experiential learning and experimental learning, among the active export firms (Huber, 1991) while only experiential learning described in the less active entry firms. The capability associated with the learning behaviors in the active entry firms was enhanced absorptive capacity (Cohen & Levinthal, 1990). The capability associated with experiential learning in the low entry was increasing efficiency in an existing domain. Two outcomes are associated with absorptive capacity in the active entry firms: enhanced collective efficacy (Bandura, 1995) and active new entry. Experience with new entry was shown to reinforce both collective efficacy and absorptive capacity.

Learning Orientation

Interviews in the active new entry firms revealed proactive information search behaviors corresponding to Daft and Weick's (1984) test maker type organization. Staff in these firms described regular search and inquiry into new technologies, techniques, and trends, with formal or informal organizational structures responsible for the search, identification, and management of information. Interviews in the low entry firms suggested Daft and Weick's (1984) test avoiders: a more passive approach towards information collection, more reliance information that chanced to "float by," and little evidence of any structures charged with regular scanning or management of new information. Interviews revealed clear differences between firm types in the kinds of information and learning valued and sought. The active entry firms revealed a much greater emphasis on higher level, double-loop learning focusing on the acquisition of new information and the mastery of new skills. The learning most commonly described and most valued in the low entry firms was lower level or single-loop type learning that stressed the refinement of existing knowledge and the increasing efficiency of existing routines and skills.

It was among the active entry firms that the highest value was placed on organizational learning as an outcome in and of itself. The staff in these firms more frequently and more explicitly endorsed the value of activities and initiatives, at the organizational and individual level, whose outcome was an increase in the level and quality of knowledge, skills, and capabilities. Moreover, managers in these firms saw learning as a way to develop the capabilities that could enable the firm to achieve traditional performance outcomes, particularly in the long term. An example is a remark by one firm principal describing the development of a product to serve a market that was new to the firm, "We didn't get the economic payoff we would like but we learned a lot and did better the next time around. We think it pays off in the



long run.” Illustrating the value that was assigned to learning one architect stated, “We are just a curious bunch of folks. We like to do things from time to time just to learn something new.”

Interviews in the low entry firms suggested a learning orientation focused on efficiency and the refinement of existing skills. One firm principal remarked, “We don’t stray too far from home. Stick with something you know and get good at it.” The manager of another firm remarked that computer aided design (CAD) software provided an incentive to “stick with the familiar,” as she termed it. “Once you have loaded a design (in your computer system) it is so easy to replicate the same basic package over and over, almost assembly line production.” A manager in another low entry firm remarked, “We do K through 12 (schools), use the same plan over and over. Add a wing. Flip the plan. Do the job quicker and much more efficiently than we could doing different things.” Table one presents a summary of the main types of comments suggested in the interviews and the frequency in which these types of comments were made in both firm types.

Table 1
Learning Orientation

Comments by Type	Level	Level
	1 & 2	3 & 4
The chance to learn new is an important criteria as we evaluate entry into new markets.	9	39
The acquisition of new skills and new knowledge is an important criteria in how we evaluate the success of a venture.	12	47
Learning is a valuable activity and outcome in and of itself.	21	48
Learning and mastering new knowledge and new skills is critical to our competitiveness now and in the future.	19	61
We regularly seek information on new products, processes, and markets.	48	47

Learning Behaviors

Experiential Learning. While evidence of experiential learning was described in both the high and low entry firms, the interviews suggested differences in the two groups of firms. Within the low entry firms the focus of experiential learning was on the continuous refinement of existing skills, routine, and knowledge, while interviews in the high entry firms described experiential learning extending beyond the familiar to activities and domains new to the organization. A characteristic of experiential learning among the active entry firms was the systematic approach to processing learning from a project. Interviews in these firms described regular discussion and review of work-in-progress, lunch meetings, for instance, where people involved in a project met with others to discuss and evaluate their experiences and what might be learned from them.



A comment by one engineer is typical: “The point of the discussions is to process what everybody is doing. Nothing fancy, just see what people are up to and milk it for what we can.” Common to the active entry firms was the use of structures, often informal, to process information acquired in operations. One manager described how everyone working in a new area documented information about products, techniques, and customer needs that was then reviewed in sessions with the entire staff. “We don’t make a living selling boxes of stuff,” one principal remarked, “we sell our know-how. Pay attention to what you do and build on it.”

Organizational policies and practices within the active entry firms underscored their commitment to enhancing knowledge, skills, and flexibility at the firm and employee level, through such practices as job rotation across varied tasks and assignments, participation and involvement throughout the life of projects, opportunity for regular interaction with clients, and the allocation of resources for off-the-job continuing education. A number of comments are suggestive. “We are very careful who we hire and then we put a lot of effort into ensuring that we keep people fresh as long as they are with us, which we hope will be a long time.” In another firm one engineer remarked, “We don’t leave someone on one job forever. We move them around, give them a broader set of skills.” Explaining the emphasis her firm placed on training and development, one manager stated, “In this business you are no better than your staff. If it takes time and money for people to keep their skills up, that’s a cost we pay.”

Interviews in the low entry firms revealed less support for such activities. “Give them (staff) time and money to go off and train and the next thing you know they’ve taken a new job.” One principal outlined how his firm viewed providing opportunities for off-the-job training and education: “We don’t see the need for extensive staff training. If we need skills we don’t have we can hire them.” The jobs within these firms were more likely specialized in a narrower range of functions and responsibilities. One architect remarked, “This (specing jobs) is all I have done since I got here. I’m good at it but it’s all I do. Otherwise I’m getting rusty.” Phrases such as “more efficient way to staff,” “get a quicker payback on our cost of hiring,” “less time wasted gearing up,” “get people up to speed on a job and leave them there,” are typical.

The emphasis on greater depth and efficiency was also in evidence in the business strategies of the low entry firms. One principal, in a remark that characterizes the position of these firms, observed, “We try to stay in the same groove as much as we can. Practice makes perfect and it certainly gives us an edge on cost and efficiency.” These firms did take on a variety of work, but generally less often by choice as the availability of work dictated. “We do what we need to do to keep the lights on,” said one architect, “but we prefer to specialize in things we are good at. It takes too long to learn the ropes when you branch out.” Table 2 summarizes the types of comments made with respect to experiential learning behaviors.



Table 2
Experiential Learning

Comments by Type	Level 1 & 2	Level 3 & 4
This firm has policies and procedures in place to ensure the sharing and discussion of new information with all members.	35	35
This firm “takes apart” things we encounter in our work in order to better understand how we might work more effectively.	21	35
This firm encourages everyone involved in a project to maintain close relationships with the customers and clients.	41	40
We ensure our employees have an opportunity to work on a wide variety of projects and tasks.	17	47
We ensure that our employees have regular opportunity for off-the-job training and continuing education.	33	51
The firm encourages its staff to maintain close relationships across all levels and functional areas.	35	41

Experimental Learning. Interviews in the active entry firms described a more frequent and wider variety of experimental learning activities than found in the low entry firms. Comments in the low entry firms expressed a reluctance to “tinker with success.” The limited experimental learning behavior that did occur in these firms was less likely intentional, consisting of analysis of unexpected events and focusing on how such irregularities might be avoided. An engineer in one low entry firm described an “out of left field little job. It wasn’t the type work we ordinarily take on, interesting, but I’m not sure we would want to repeat it.”

Experimental learning within the active new entry firms was more often intentional, more frequent, and subject to systematic analysis to capture the maximum amount of learning. The utilization of small, trial projects involving the firms in new products or markets was described in several. One manager described how her firm took on “small projects, below the threshold of what we would ordinarily bid on. First we get a nibble, see if it compliments what we are already doing.” Another outlined how his firm had completed a small hospital project “to determine if that was a direction we wanted to go in and get an understanding of what we would need to be successful.” One theme in the active entry firms was a willingness to take on projects that appeared to offer little likelihood of immediate financial payoff. “If we can cover cost that may be enough if the experience pays off down the road.” The criteria used in the decision to launch such initiatives were expressed both in terms of traditional financial measures and as an



opportunity to experiment with new techniques and product markets. “Some (projects) don’t always make dollar sense but we learn from them.”

Comments in the active entry firms stressed the importance of being “willing to eat a certain amount of failure or else no one will be willing to stick their neck out.” “We have made a few blunders but you have to be willing to take those in stride,” another remarked. Comments in group interviews described this tolerance. “I have never been apprehensive about trying something for fear of failure. I’d be more worried about never trying.” “It’s not that we celebrate failure. But we all recognize that failing comes with the territory.” “We are committed to pushing the envelope. That means we make mistakes.” Table 3 summarizes the types of comments made regarding experimental learning.

Table 3
Experimental Learning

Comments by Type	Level	Level
	1 & 2	3 & 4
Given a choice our firm will experiment with procedures to find new and better ways to do our work.	31	59
As a rule the practice in this firm is to question the way we do things even when they work.	33	48
We like to experiment with work that is new to us if it can provide a way to learn new things.	19	46
As a rule the practice in the firm is to focus on identifying and mastering new skills.	17	48
This organization continuously experiments with new procedures and products in order to extend and expand our skills and knowledge.	20	51
This organization regularly initiates small scale or trial projects to investigate, study, and explore new markets and new technologies.	7	22

Learning Related Capabilities

Absorptive Capacity. Absorptive capacity is the ability of an organization to perceive, acquire, and employ new information (Cohen & Levinthal, 1990). Interviews in the active entry firms revealed consistent support for a positive relationship between their learning behaviors and the capability to acquire and employ new information. There was agreement across the active entry firms that regular exposure to new knowledge enhanced the capacity to acquire even more. Staff



in the low entry firms felt that their experiences served primarily to reinforce existing capabilities. While learning did lead to a refinement of existing routines in active entry firms, it was in these firms where staff saw a connection between learning and the addition of new skills to the firms' repertory of resources.

A number of comments suggest the linkage between learning behaviors and absorptive capacity. One employee felt that their efforts to add new products and enter new markets had grown more effective. "We stumbled around early on but we're getting better at it. We don't make as many mistakes and we figure things out faster." A designer remarked that her firm had "gotten better at knowing if it's a good fit for us and much better at putting it on the ground." Comments in group interviews such as "we are more adept at picking up new information," "don't waste as much time barking up trees," and "much better at jumping on a new project" characterize the link. One principal stated that "While not every effort has paid off in the traditional sense of 'paid off,' I am confident we have gotten better at knowing how it's done."

Comments in the low entry firms illustrate how these firms saw learning experiences leading to the refinement of existing capabilities. "Practice may not make perfect but it does focus us." "Do the same type jobs over and over and you are faster and much more efficient." Remarked an engineer, "Sticking with this kind of work has given us a big advantage in speed and cost. We get a little more efficient each time out." Describing an unsuccessful effort to bid on a new type of project another concluded, "What did we learn? We learned not to try it again anytime soon. I think it showed us the value of keeping our focus on what we know how to do."

Table 4
Absorptive Capacity

Comments by Type	Level	Level
	1 & 2	3 & 4
This firm is very adept at identifying and acquiring new knowledge and applying such knowledge in the operation of our business.	27	41
This firm has been very successful in acquiring, mastering, and applying new skills and capabilities.	27	51
The firm has been very adept at transferring our know-how to projects and markets that are new to the firm.	15	53
We have been successful at expanding our pool of skills and knowledge through the continuous addition of new skills and knowledge.	34	40



This firm has been successful at applying existing skills and knowledge to develop new products that can attract and serve new markets.	21	42
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Collective Efficacy. The most direct outcome of the learning behaviors associated with a learning orientation was not new entry itself but rather an increase in collective efficacy, the belief that one can successfully perform a desired behavior (Bandura, 1995). The active entry firms described a linkage leading from learning experiences to collective efficacy, which in turn led to more frequent new entry efforts. One principal described a decline in the “chronic reluctance and reservation” as they began efforts to broaden their base. One architect remarked, “A lot of us were very comfortable doing what we had always done.” This orientation began to change, she noted, as the firm “gradually took on more and bigger bites of new kinds of work.” Comments in other active entry firms illustrate the change. “It (confidence) comes straight out of (new projects).” “It’s like anything else. You get better and more confident the more you do something.” “We always had good skills. Now I feel like we have developed entrepreneurial skill that makes us a lot less resistant to trying new things than before.”

Table 5
Collective Efficacy

	Level	Level
Comments by Type	1 & 2	3 & 4
We have grown more confident in our ability to launch a new product over the past several years.	11	38
We believe that entering a market that is new to the firm has become easier to do over the past several years.	15	44
We believe that our efforts at entry into new markets and new products will be successful.	22	48
We have grown increasingly confident of our ability to enter and serve new types of customers in markets that are new to the firm.	21	51
We feel our staff would be very enthusiastic about such a project (launching a new product and/or entering a new market).	31	59

An engineer described how what he termed “the drill,” the organization’s emphasis on continuously experimenting with new methods, procedures, and approaches to problems had shown the value of persistence in the pursuit of new projects. An architect in another firm stated: “The payoffs didn’t come until we worked through all the stuff we already knew and start trying things we didn’t. You have to stick with it to get there.” The link between the value placed on



learning, persistence, and collective efficacy was described in group interviews. One designer related it to piano lessons taken as a child. “I would never have had the confidence to play in a recital if not for the practice. It’s the same thing here. We try new things. That’s practice. And when we tackle a new project we know we can hit it.”

Discussion

By focusing on homogenous group of competitors this study provides a strong test of the variance in the approaches to the management of small organizations and provides evidence of the benefits of policies that contribute to organizational performance. As illustrated in Figure 2, the study reveals a positive association between learning orientation, learning behaviors, absorptive capacity, collective efficacy, and the launch of new ventures. The study reveals how firms seeking flexibility and regular entry into new markets benefit from active and varied learning experiences and describes examples of learning behaviors and the capabilities associated with them.

The results of the study are consistent with the view of the firm as a collection of resources (Barney, 1991; Isenhardt & Martin, 2000 ;). The study also demonstrates the context specificity of resources (Miller, 1996). The knowledge based resources described in this study are most relevant within a strategy focused on new entry. The focus on enhanced efficiency in the less active entry firms also offers advantage, but only so long as the firm operates in stable, unchanging markets. Few markets remain so stable however. Knowledge based resources “give firms the skills to adapt their products to market needs and to deal with competitive challenges” (Miller, 1996: 523).

The learning described in the active entry firms enables them to apply their knowledge in a wider variety of applications and conditions and continuously upgrade and adapt skills and offerings to changing environmental conditions (Wernerfelt & Karnani, 1987).

The capabilities described in these firms are of two kinds. At the individual level they are specific, embracing particular technical and creative knowledge and skill. At the firm level are the collaborative and integrative skills that enable the firm to acquire and apply new knowledge and capabilities (Hall, 1993). At either level such skills “require nurturing from a history of challenging product development projects” (Miller, 1996: 526), a path leading to the creation of the cognitive infrastructure, the nutrient rich environment (Shapero, 1982) that stimulates new intellectual capital. Knowledge based resources, tacit and accumulated over time, built up rather than bought, are embedded in dynamic routines that govern the ability of an organization to learn, adapt, change and renew (Teece & Pisano, 1997). These are enabling factors (Hunt, 1997), allowing the firm not merely to seize and profit from opportunities but engendering a greater confidence in the ability and hence the desire to do so.

Flexibility, adaptability, and the ability to seize new opportunities are not enough to ensure long term survival and prosperity, however. Firms face the “dilemma of maintaining the capabilities of both efficiency and flexibility” (Lant & Mezias, 1992: 47). They must be not simply flexible and not merely efficient. Long term survival and success requires that firms



strive for efficiency, yet not so narrowly that the search for greater efficiency leads to the increasing refinement of out-of-date skills (Levitt & March, 1988). Nor is flexibility enough, lest the organization lose its footing and its way in a continuous pursuit of the new. It is in the balance of flexibility and efficiency that the learning activities of the active new entry firms endows them with advantage. As the firm adds new routines it continuously modifies and refines its existing routines (Bower & Hilgard, 1981).

A central story in the data is the path, illustrated in Figure 2, leading from learning orientation to learning behaviors to capabilities to new entry. Successful new entry is made more likely when processes, systems, routines and the careful analysis of prior actions have developed and prepared within the firm the capabilities and attitudes that enable it to anticipate and seize opportunities. Successful new entry is not a chance outcome but, as shown in Figure 2, is built on organizational values, behaviors, and the steady development of capability.

This is a path a firm can choose, through the implementation of strategies and policies at the firm and staff level. Rotating staff across a variety of tasks and positions rather than confining them to a narrow range of activities results in their being better able to adapt to changing demands and more confident in their ability to do so. Similar benefits result from regular training and development, forums that facilitate the regular discussion of work-in-progress, communication across divisions, and providing opportunity for interaction with clients. This research reaffirms the importance of the freedom to fail. The foundation of the willingness of staff to experiment and to step outside the security of familiar routines is the belief that greater reward and security came from trying and even failing than from error free risk aversion.

The active entry firms put great care into the selection of staff – or “hiring for the long haul” as one principal expressed -- and then regarded that staff as a valuable resource demanding investment and continued development. The contrast with the less active new entry firms is striking. “We hire them when we need them and run them like horses,” the principal of one of these firms remarked, “and when the work drops off we let them go.” The benefits to investment in staff are clear. The greater ability of the active entry firms to identify and seize opportunity is built on the ability of their staff to acquire and integrate new knowledge and find new applications for existing skills.

Strategies and policies at the firm level are equally important and are inseparable from the on-going development of staff. The experimentation and risk taking on the part of the staff reflect similar behaviors at the firm level. These are firms that sought opportunities to enter and explore new markets and that question current routines and methodologies. And, like their staffs, it was the active new entry firms that continuously extended their pool of knowledge and capabilities through the addition of new skills and through the application of existing skills in new settings. While asking managers to adopt a particular orientation, in this case a learning orientation, into an existing culture may be unrealistic, managers seeking to stimulate a greater willingness and greater ability to pursue new entry can mimic the behaviors displayed by the active entry firms in this study at both staff and firm level.



Such a prescription suggests extensions to this research. Must a culture of learning be a necessary initial condition leading to learning behaviors and new entry or might the adoption of learning behaviors result over time in such an orientation? One step would be to test the model developed in this cross sectional, descriptive design in a longitudinal study that explores the sequencing of the constructs shown in Figure 2. It would be useful to tease out if the source of enhanced collective efficacy resides primarily in the experience of actual new entry or might it be built up through preparation and participation in targeted learning behaviors? Would the findings outlined here apply to other types of firms and might they result in other desirable outcomes, such as innovation? What specific policies and programs lead to the development of absorptive capacity? Importantly, is there a relationship between the constructs described here and traditional, financial measures of performance?



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