

ORGANIZATIONAL FACILITATORS OF
CUSTOMER-ORIENTED
ORGANIZATIONAL
LEARNING

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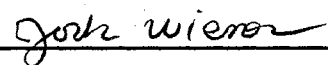
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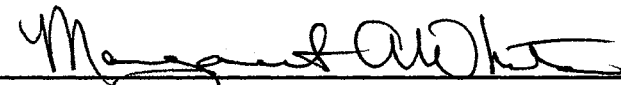
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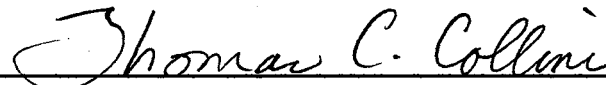


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CHAPTER I

INTRODUCTION

A sustainable competitive advantage in the marketplace is the mark of a successful company. In today's environment of global competition, research shows that successful companies possess certain characteristics. One such characteristic is a philosophy of strategic quality management. Quality management has been defined as:

Managing with an organization-wide commitment to continuous work improvement and totally meeting customer needs (Schermerhorn 1993, p. G13).

A management principle aimed at instilling the idea of customer-driven quality throughout the organization and managing all employees so that there will be continuous improvement (Zikmund and d'Amico 1993, p. G-19).

... a total, company-wide effort that includes all employees, suppliers, and customers, and that seeks to improve the quality of products and processes to meet the needs and expectations of customers. TQM has become the basic business strategy for firms that aspire to meet the needs of their customers (Dean and Evans 1994, p. 12).

Quality management is based on the principles of customer focus, long-term continuous improvement, and teamwork among all functions and all levels (Dean and Evans 1994).

During the 1980s, quality management became the mantra of American managers. Many companies that were successful in the 1980s continue to be successful in the 1990s because they have adopted a strategic philosophy of total quality (e.g., Federal Express, Motorola, Rubbermaid; see Jacob 1993). Other companies, however, have not been effective in implementing quality management programs (Garvin 1993; Tobin 1993). Evidence of disenchantment is illustrated by the statement, "*It* was supposed to have had all the answers; *it* was supposed to turn lead into gold. It didn't" (Jacob 1993, p. 66). Surveys of American managers indicate that up to two-thirds think quality programs have

failed in their companies (Jacob 1993). The question arises as to why the large number of quality program failures. Researchers and practitioners have suggested at least two possible reasons: the loss of focus on customer orientation and the lack of commitment to learning how to be a “quality” organization.

Customer Orientation

One possible reason for the perceived failure of quality programs is that with the implementation of these programs, organizations often lose touch with customers because of an obsessive focus on quality variables such as zero defects or reduced cycle time. While these may be important objectives, companies often exclusively concentrate on them and forget to ask what is most important to their customers. In other words, organizations either lose (or never had) a customer orientation.

The basis of a customer orientation is the marketing concept. Recently, marketers have shown a renewed interest in the study of the marketing concept (Day 1990; Deshpandé, Farley, and Webster 1993; Jaworski and Kohli 1993; Kohli and Jaworski 1990; Narver and Slater 1990; Webster 1988). The principles of the marketing concept are surprisingly similar to those upon which a strategic quality philosophy is based. These principles are a customer focus, a long-run perspective, and an integrated marketing effort throughout the organization (Kohli and Jaworski 1990; Lusch and Laczniak 1987; Narver and Slater 1990; Webster 1988). Researchers have begun to be concerned with implementing the marketing concept (Day 1990; Kohli and Jaworski 1990; Jaworski and Kohli 1993; Narver and Slater 1990). This implementation—labeled market or customer orientation—has been defined as the set of organizational beliefs that places customers’ interests first (Deshpandé, Farley, and Webster 1993); it is an organizational culture that develops and supports the creation of superior value for customers (Narver and Slater 1990). By creating a customer-oriented organization, a firm ensures that customers’ needs and preferences are the bases for a quality philosophy.

Organizational Learning

Continuous improvement is a vital aspect of a quality philosophy. To reap the benefits of quality management, continuous improvement requires a dedication to learning (Garvin 1993; Tobin 1993; Watkins and Marsick 1993). In this vein, researchers have begun to study and practitioners have begun to understand and seek the benefits of organizational learning (Garvin 1993; Nonaka 1991; Senge 1990a; Sinkula 1994). The interest by researchers is exemplified by the Marketing Science Institute's (1993) research competition designed to "stimulate work on organizational learning." The essence of organizational learning is that organizations are composed of people who are inherently learners (Senge 1990a). Learning organizations are described as places "where people continually expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning how to learn together" (Senge 1990a, p. 3). The ultimate goal is to create synergy within the organization by discovering how to benefit from "people's commitment and capacity to learn at *all* levels in an organization" (Senge 1990a, p. 4).

To achieve a learning organization, Senge (1990a), who popularized the term, suggests five "disciplines" that must be mastered by organizations: systems thinking, personal mastery, mental models, shared vision, and team learning. The implicit benefit of becoming a learning organization is that an organization will be better equipped to explore and create new opportunities and sources of growth (Senge 1990b). While this is desirable by most (if not all) organizations, the prescription for creating, managing, and measuring organizational learning is not resolved. Specifically, Garvin (1993) has argued that we need clearer operational prescriptions rather than high aspirations. From this perspective, he offers the following definition of a learning organization:

... an organization skilled at creating, acquiring, and transferring knowledge, and at modifying its behavior to reflect new knowledge and insights (p. 80).

By developing organizational learning, a firm fosters continuous improvement. This creates an environment in which a strategic philosophy of quality management can thrive.

Customer-Oriented Organizational Learning

Thus far in the research literature, the organizational learning concept has been considered an organizational behavior concept, rather than one of the typical concerns of marketing (e.g., marketing mix variables). There are, however, several reasons to view organizational learning from a marketing perspective. First, Parasuraman and Deshpandé (1984) note that despite growing interest in strategic and managerial concerns in marketing management, marketing scholars have ignored certain topics. Ostensibly, the topic of the marketing organization has been neglected:

It seems almost trite to note that the empirical focus in marketing management has been on marketing almost to the exclusion of management. This implies an assumption that if product and market considerations are specified accurately, internal management issues will take care of themselves. Such an almost exclusively demand-side perspective ignores the fundamentals of organizational behavior (Parasuraman and Deshpandé 1984, p. 176).

While work has been conducted in this area since this statement was made (e.g., Capon and Glazer 1987; Dwyer, Schurr, and Oh 1987; Hutt and Speh 1984; Ruekert and Walker 1987; Ruekert, Walker, and Roering 1985), research concerning the association between marketing management and organizational behavior continues to be needed to advance the marketing management literature.

The second reason is that several notable scholars posit that the time has come for the concept of organizational learning to be introduced into the marketing discipline as the key to responsiveness to customers' needs (Adams 1993; Day 1991; Sinkula 1994). For example, Sinkula (1994) suggests that the introduction of the concept of organizational learning into the marketing discipline "could foster an innovative way of discerning how organizations process information as they attempt to make sense of their

markets” (p. 43). He labels this concept “market-based” (i.e., customer-oriented) organizational learning.

Information and Learning

Information¹ can be viewed as a core component of organizational learning. Organizational learning is exemplified by an organization that is adept at creating, acquiring, and transferring information. It is built on the concept of information flows within an organization. “*Information flows* are messages or communications . . . transmitted between organizational parties through a variety of media (e.g., written reports and letters, phone calls, face-to-face discussions, group or committee meetings)” (Van de Ven 1976b, p. 27). Internal and external information exchanged within an organizational system comprise these flows (Menon and Varadarajan 1992).

Efficient and effective flows of customer-based information by the organization is recognized by managers and researchers as critical to developing and maintaining a sustainable competitive advantage based on understanding and satisfying customers (Menon and Varadarajan 1992). A sustainable competitive advantage based on a customer-oriented strategy requires that customer-based information be widely disseminated throughout the organization to ensure agreement by the management team (Day 1990). In addition, it is argued that the effective use of customer-based information by organizations is important for increasing productivity, improving competitiveness, and getting new ideas to market more quickly (Barabba and Zaltman 1991). Information has maximum influence when it is widely shared rather than held in a few hands (Garvin 1993). A shared basis for harmonious actions by different departments within an organization is created when customer-based information is disseminated effectively (Kohli and Jaworski 1990).

¹In keeping with other organizational researchers, the terms knowledge and information will be used interchangeably in this manuscript (e.g., Huber 1991; Menon and Varadarajan 1992; Sinkula 1994).

In recent years, marketing scholars have implied that organizations engage in customer-oriented organizational learning. In particular, it has been suggested that customer-oriented organizations are skilled at organization-wide generation and dissemination of information that directly and indirectly pertains to customers' needs. Customer-oriented organizations then modify their behavior to reflect knowledge gained from the customer-based information. They accomplish this by developing plans in response to the information, and then actually implementing the plans (Jaworski and Kohli 1993; Kohli and Jaworski 1990). It can be argued that these actions are part of organizational learning. More specifically, they can be thought of as customer-oriented organizational learning.

The extent to which cross-functional information flows exist between functional units within the organization can influence the development of customer-based organizational learning. The concern in marketing is with the cross-functional interaction between marketing and other functional areas within the organization for the purpose of exchanging customer-based information. It is proposed that selected organizational characteristics can influence the extent to which the marketing manager understands the benefits of cross-functional information flows within the organization. Research (to be discussed later) provides evidence of which characteristics of organizations facilitate information flows. Depending on the characteristics, the information flows may vary from organization to organization. This implies that certain organizational characteristics are prerequisites to, or facilitators of, customer-oriented organizational learning through their influence on efficient and effective flows of information within an organization.

To develop organizational learning, managers must perform well at creating, acquiring, and disseminating information, and then modifying their range of behaviors based on the information. In other words, they must take advantage of and manage the information flows within the organization. How does an organization ensure it is successfully managing information flows and engaging in customer-oriented

organizational learning? The answer lies in skills and behaviors that represent efficient and effective information flows and therefore result in organizational learning. Sinkula and Noordewier (1994) have suggested five such skills that organizations must exhibit to manage their organizational learning effectively.

Customer-Oriented Organizational Learning Skills

The first skill that organizations must possess is a belief in the fundamental premise that learning is valued by the organization. This skill, labeled learning axioms, is present when an organization's culture is amenable to learning (Galer and van der Heijden 1992; Sinkula and Noordewier 1994; Watkins and Marsick 1993). The second skill is realized through a shared collective vision within an organization (Day 1991; Senge 1990a; Sinkula and Noordewier 1994; Tobin 1993; Watkins and Marsick 1993). This requires both organizational leaders and members to be committed to a clear and comprehensive vision and supporting goals. The third skill is the incorporation of cross-functional teams into an organization (Senge 1990a; Sinkula and Noordewier 1994; Tobin 1993; Watkins and Marsick 1993). Cross-functional teams create a means for an organization to engage in systematic problem solving and experimentation associated with searching for and testing new knowledge (Garvin 1993). They also provide a mechanism for quickly and efficiently transferring information gained from problem solving and experimentation throughout an organization (Day 1991; Garvin 1993).

The fourth skill needed by organizations to effectively manage their organizational learning is openmindedness. According to Sinkula and Noordewier (1994), openmindedness means having the capability to anticipate and respond to customers' needs and desires that are constantly changing, developing a willingness and the ability to critically reflect on shared assumptions and mental models, and developing the ability to continually question the way an organization perceives its environment (e.g., customers) and discards obsolete information.

The fifth activity, labeled experience sharing, is accomplished by organizations learning from their own experience and past history, as well as learning from the experiences and best practices of others (Garvin 1993; Sinkula and Noordewier 1994). Organizations must not let valuable information escape. They need to be adept at receiving, gathering, analyzing and preserving information and the resulting lessons learned from their own successes and failures, as well as enthusiastically “borrowing” information and lessons learned from other organizations’ successes and failures.

In summary, an organization must possess and exhibit these five skills to effectively manage their organizational learning; however, to effectively manage their customer-oriented organizational learning, an organization must connect the organization to its customers (Watkins and Marsick 1993). This implies that the five skills can be specifically focused on learning about customers. Therefore, this requirement for a connection to customers allows the five skills to be adapted to a marketing perspective as follows:

1. *Learning Axioms.* A belief in the fundamental premise that learning about customers is valued by the organization.
2. *Shared Vision.* The commitment of all organizational members to a clear and comprehensive vision that places customers’ interests first.
3. *Cross-functional Teams.* The use of cross-functional teams to solve customers’ problems, conduct experiments designed to improve customer satisfaction, and quickly and efficiently disseminate customer information throughout the organization.
4. *Openmindedness.* The ability to anticipate and respond to constantly changing customers’ needs by reflecting on organizational frames of references regarding customers and unlearning, or discarding, obsolete customer information when new information is available.
5. *Experience Sharing.* The capacity to learn from personal success and failure attempts at satisfying customers and from people in analogous organizations or situations about how to improve customer satisfaction.

The operationalization of these five organizational learning skills provides a method for studying organizational learning. To study these activities, the present research revolves around the basic underlying principle of knowledge base development.

This perspective holds that organizations learn from exchanging and evaluating information gathered from the environment and integrating it into an organizational knowledge base (Shrivastava 1983). In other words, by possessing and exhibiting the five organizational learning skills, an organization will exchange and evaluate information and create an organizational knowledge base. From this perspective, the operational definition of customer-oriented organizational learning to be used in the present study is as follows:

The acquisition or dissemination of customer-oriented information resulting in the development of a knowledge base that reflects new information and insights about customers.

The fundamental thesis of this dissertation is that the presence or absence of selected organizational characteristics will facilitate customer-oriented organizational learning within the marketing function.

Organizational Characteristics Associated with Customer-Oriented Organizational Learning

Based on the reasoning thus far, identifying organizational characteristics that facilitate the flows of information within organizations should provide us with characteristics that will foster organizational learning. A systematic, integrated model delineating the interrelationships between internal organizational characteristics, external factors influencing the organization, and customer-oriented organizational learning is needed. The objective here, however, is neither to propose a model that delineates all the relationships underlying organizational learning nor to generate a longer list of possible organizational and external factors. Rather, the present research will draw on the organizational theory and organizational behavior literatures to suggest a key set of specific internal organizational characteristics that may facilitate or hinder the efficiency and effectiveness of information flows, and hence organizational learning, within organizations.

The present study will focus on internal characteristics because this view offers a more applied perspective. That is, managers have more control over internal factors as compared to external ones. The characteristics to be studied as facilitators of organizational learning are organizational structure, strategy, innovativeness, and boundary spanning. Thus, though a myriad of potential factors may influence customer-oriented organizational learning, a parsimonious model will be developed that highlights the key organizational characteristics that might conceivably explain a large portion of the variance in the organizational learning construct. In addition to these internal organizational factors, it is recognized that several organizational context variables may also influence information flows within an organization. The organizational characteristics, as well as the organizational context variables, are briefly discussed in the following sections.

Organizational Structure

A review of the literature in the area of formal organization structure and communication reveals four key structural dimensions that dominate the literature: formalization, specialization, centralization, and integration (Jablin 1987; Miller and Dröge 1986). “Formalization represents the use of rules in an organization” (Hage and Aiken 1967, p. 79). In other words, it is the explicit rules and procedures used by the organization to handle the situations it faces (Hall 1982; Jablin 1987). Formalization includes the extent to which rules, policies, procedures, job descriptions and authority structures are formalized in writing, the use of written rather than oral communication channels, and the application of cost and quality controls (Hall, Haas, and Johnson 1967; Miller and Dröge 1986). Specialization (sometimes defined as part of formalization) refers to the division of labor within an organization (Pugh et al. 1963). The higher the level of specialization, the more an individual performs only part of an activity rather than an entire activity (Robbins 1991). As specialization increases in an organization, the

organization becomes more differentiated or complex (Miller and Dröge 1986). The structural element of centralization is concerned with the distribution of power within organizations (Hall 1982). The more concentrated decision making is within the upper echelons of the organization, the more centralized the organization (Robbins 1991). Finally, integration is the level of collaboration achieved among differentiated subsystems or departments in an organization (Galbraith 1973; Schermerhorn 1993). Integration within an organization is represented through the employment of liaison devices such as integrative personnel, task forces, committees, and teams (Galbraith 1973; Miller and Dröge 1986; Mintzberg 1979; Schermerhorn 1993). Choosing the appropriate integration device depends on the level of differentiation experienced in an organization (Lawrence and Lorsch 1967). Various researchers have suggested that these four structural elements can influence the effectiveness and efficiency of information flows within an organization.

Organizational Strategy

“Strategy is the means an organization uses to achieve its objectives” (Kerin, Mahajan, and Varadarajan 1990, p. 6). A review of the strategic management literature reveals that one of the most widely researched typologies of organizational strategy is the Miles and Snow (1978) typology of strategic behavior. This typology views the organization as an integrated system in dynamic interaction with the environment (McDaniel and Kolari 1987). It is uniquely useful because it overcomes problems of other typologies (Walker and Ruekert 1987; Shortell and Zajac 1990; Smith, Guthrie, and Chen 1989) and specifically includes information seeking behavior of organizations. Briefly, Miles and Snow’s (1978) typology identifies four strategic types: prospector, analyzer, defender, and reactor. In essence, these four types are determined by the approach taken by the organization in the strategic management of its product-markets (i.e., entrepreneurial response), in concert with its technological (i.e., engineering

response) and administrative processes (i.e., administrative response) (Hambrick 1983; Miles and Snow 1978; Slater and Narver 1993).

Strategy is thought to be an important variable when studying information flows within organizations because it establishes decision making rules that guide organizational behavior (Ansoff 1988), including organizational learning within the organization. “Strategy determines the goals and objectives and the breadth of actions available for carrying out the strategy. Thus strategy influences learning by providing a boundary to decision making and a context for the perception and interpretation of the environment” (Fiol and Lyles 1985, p. 805).

Organizational Innovativeness

Organizational innovativeness has been conceptualized in various ways. In the present study, innovativeness will be conceptualized as the organizational process of intentionally adopting, or implementing, an existing innovation (e.g., idea, practice, product) that is new to the organization (Downs and Mohr 1976). This perspective views innovativeness as the degree to which an organization departs from its traditional products, processes, business methods, or policies (Price and Mueller 1986). The present research will focus on the overall innovative bias (Menon and Varadarajan 1992) (i.e., the overall degree of innovativeness) that an organization possesses. Researchers have suggested that such a bias exists in organizations (e.g., Kirton and McCarthy 1988; Menon and Varadarajan 1992). Furthermore, it has been posited that this innovative bias is related to information flows within organizations and to organizational learning (Ebadi and Utterback 1984; Fiol and Lyles 1985; Jelinek 1979).

Organizational Boundary Spanning

Organizational boundary spanning describes the communication process of information flows across an organization’s border that separates the organization from its

external environments (Culnan 1983; Tushman and Scanlan 1981). One primary concern of boundary spanning is the detection and introduction of information about environmental changes into the organization (Daft 1992). This dimension of boundary spanning is called environmental scanning (Aguilar 1967). Scanning of the customer sector of organizations' external environments has been found to be an important part of organizations' overall environmental scanning efforts (Aguilar 1967; Daft, Sormunen, and Parks 1988). Furthermore, because of its reliance on information flows, environmental scanning has been inextricably linked to organizational information processing and learning (Culnan 1983; Hambrick 1981; Huber and Daft 1987).

Organizational Context

Organizational variables can have different implications depending on the contextual setting in which the research is conducted. For example, variable S may have a different influence on variable L in a bakery than it does in a bank (Champion 1975). This implies that contextual surroundings of organizations should be considered when interpreting research results. Therefore, several contextual variables will be included in this study because of their recognized influence on organizational behavior (e.g., Jaworski and Kohli 1993; Narver and Slater 1990; Slater and Narver 1994a). In particular organization size, environmental uncertainty, industry type, and industry concentration will be used as control variables in this study. They will be analyzed for their possible direct and moderating influence on the proposed relationships.

Conceptual Model

Figure 1 is the conceptual model on which the proposed study is based. This model is founded on an open systems perspective of an input-transformation-output-feedback process.

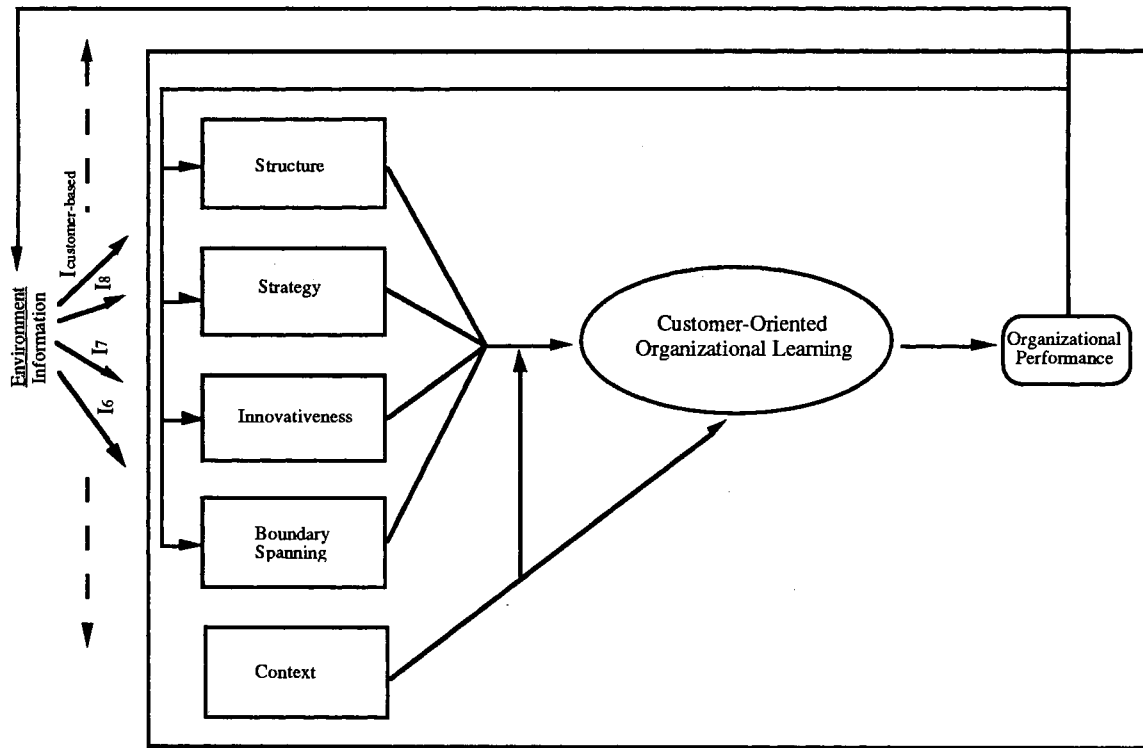


Figure 1. Conceptual Model of Customer-Oriented Organizational Learning

Each organization is expected to acquire many different types of information from the environment (I_n). This study is concerned with information gathered by the organization that is customer-based ($I_{\text{customer-based}}$). Internally, each organization has created a structure, formulated a strategy, determined a level of innovativeness, and developed boundary spanning processes. These are the organization's characteristics. The flows of the customer-based information within the organization are influenced by these organizational characteristics. Consequently, these characteristics influence the degree of customer-oriented organizational learning engaged in by the organization. In addition, the context in which the organization operates may directly influence customer-oriented organizational learning or influence the relationships between the organizational characteristics and customer-oriented organizational learning. In other words, an

organization's size, industry type, industry concentration, and the level of environmental uncertainty faced by the organization may directly or indirectly influence customer-oriented organizational learning. Customer-oriented organizational learning is then manifested through "the ultimate criterion in the assessment of organizations"—organizational performance (Van de Ven 1976a, p. 73). This relationship is supported by the fact that organizational learning has been tapped as an important element for enhancing performance (Garvin 1993; Nonaka 1991; Senge 1990b; Sinkula 1994). Organizational performance, in turn, provides feedback to the organization and the external environment by supplying information regarding the effectiveness of the organization.

Purpose of This Study

This study will specifically address the following research question: What organizational characteristics facilitate customer-oriented organizational learning? In answering this question, this study proposes and examines selected organizational characteristics that may facilitate information flows within organizations as antecedents to the development and maintenance of customer-oriented organizational learning. This investigation primarily is concerned with individual managerial perceptions of customer-oriented organizational learning.

Organizational learning is a function of many variables, including environmental factors, organizational characteristics, and personal attributes. This study will be confined to examining only those internal organizational characteristics that are controllable by the organization. The research will empirically measure the organizational characteristics thought to foster organizational learning focused on customer-based information and analyze their association with customer-oriented organizational learning. Exploration of these relationships has not been investigated in the marketing literature. Therefore, the objectives of this study are to:

1. Develop measures of the customer-oriented organizational learning construct.
2. Empirically examine the conceptualized relationships between selected organizational characteristics and customer-oriented organizational learning.

Figure 2 graphically illustrates the portion of the conceptual model to be tested in the present study.

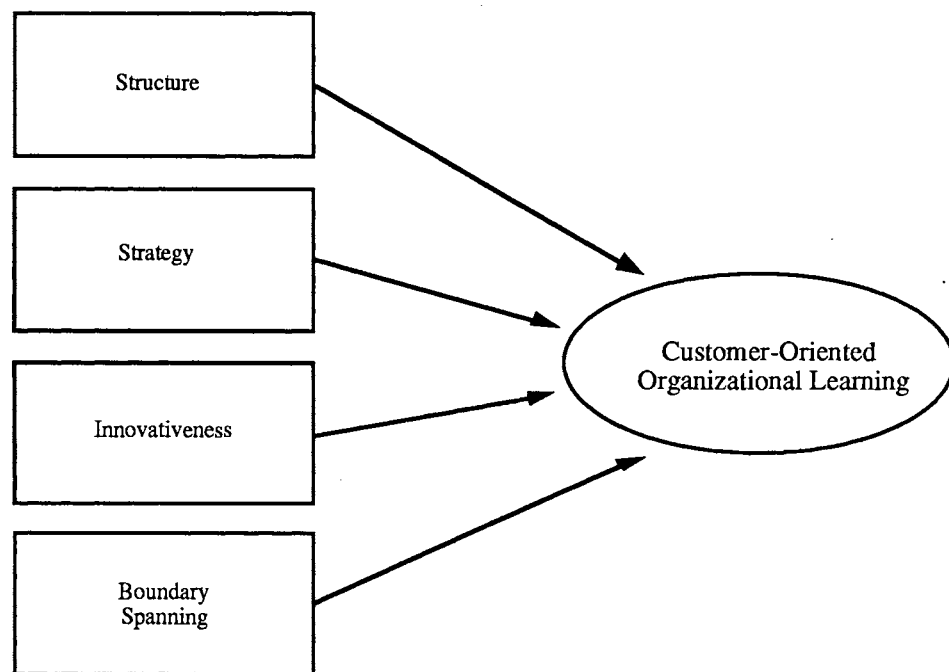


Figure 2. Proposed Model of Customer-Oriented Organizational Learning

The concept of customer-oriented organizational learning is defined as the acquisition and dissemination of customer-oriented information resulting in the development of a knowledge base that reflects new information and insights about customers. This study will extend understanding of the organizational characteristics

necessary to create and sustain organizational learning as part of a strategic marketing philosophy based on a customer orientation. It will advance the study of internal management issues in the area of marketing management.

Design Overview

Although several approaches are possible to test the hypotheses to be proposed, a survey research method will be used. A field study of key informants will be conducted to obtain information on marketing activities and organizational characteristics within organizations. The unit of analysis will be the business unit as represented by the perceptions of the respondent. While the multiple informant approach may be generally preferable (Phillips 1981), in the face of time and other resource constraints the single informant approach will allow a larger number of organizations to be surveyed (Conant, Mokwa, and Varadarajan 1990). The sample frame for the study will be strategic-level managers from manufacturing organizations generally engaged in business-to-business marketing.

The criterion variable, customer-oriented organizational learning, will be measured using a scale specifically developed for this study. It will be adapted from prior research on organizational learning (Kline and Saunders 1993; O'Brien 1993; Pedler, Burgoyne, and Boydell 1991; Sinkula and Noordewier 1994). Organizational structure, strategy, innovativeness, and boundary spanning, the predictor variables, will be measured using a number of existing scales and concepts from previously reported studies. The research hypotheses will be tested using regression techniques.

Summary of Contributions

This dissertation seeks to make both theoretical and managerial contributions, particularly in the area of marketing management. Existing research will be extended, conceptual relationships will be empirically tested, and an internal perspective of

marketing management will be advanced through the integration of organizational theory and organizational behavior research with the marketing discipline.

Theoretical Contributions

The theoretical rationale for considering organizational learning from the perspective of information flows is rooted in the systems school of thought (Sheth, Gardner, and Garrett 1988). This school advocates the position that organizations are systems that are complex, open, and behavioral (Katz and Kahn 1966). In terms of information flows, systems theory emphasizes information exchange within the organization, as well as between the organization and its environment (Rogers and Agarwala-Rogers 1976). Information exchange is “the sharing of information; . . . it is a transactional exchange between two or more individuals” (Rogers and Agarwala-Rogers 1976, p. 18). Open systems theory argues that any system that does not import information from its environment and output information to its environment will decline and eventually cease to exist. Conversely, systems that import and export information are engaging in the basic processes that sustain and grow a system (Rogers and Agarwala-Rogers 1976; Van de Ven 1976a).

Thus, systems theory provides the impetus for the proposed study. The specific theoretical contributions for this research are:

1. Existing research will be extended in the areas of customer-orientation and organizational learning.
2. Conceptual relationships linking marketing activities and organizational characteristics will be empirically tested.
3. An internal perspective of marketing management will be advanced through the integration of organizational theory and organizational behavior research with the marketing discipline.

Managerial Contributions

In addition to the theoretical contributions, this study will have several implications for managers. First, the operationalization of skills associated with information flows within the organization would be useful in determining how to create and sustain a competitive advantage based on customer-oriented organizational learning. If management knows what overt behaviors are associated with customer-oriented organizational learning, they can encourage and support those behaviors in the organization's members. Second, the identification of organizational characteristics that facilitate organizational learning would help organizations determine, for example, what structural and strategic factors would enhance their organizational learning. Managers could then take steps to facilitate the development of the specific organizational characteristics found to result in customer-oriented learning.

Outline of the Dissertation

This dissertation is organized into five separate chapters. The first chapter serves as an introduction to the dissertation. It reviews the purpose, structure, and scope of this study. The second chapter briefly explores the importance of customer orientation as a fundamental principle of marketing. Further, the construct of organizational learning is reviewed. Based on this review, the concept of organizational learning in a customer-oriented context is delimited. Finally, the organizational characteristics thought to influence organizational information flows, and therefore customer-oriented organizational learning, are discussed. Chapter Three imparts the research objectives for investigation. To study the proposed relationship between organizational characteristics and customer-oriented organizational learning, research hypotheses are proposed. Furthermore, Chapter Three considers the research design and methodology used in conducting this study. Further discussion elucidates some of the unique issues associated with organizational analysis, along with the actions taken to lessen the influence of these

problems. In Chapter Four, results of the hypotheses testing are reviewed. Implications from this study for marketing management and the limitations of this study to be addressed by future research are presented in Chapter Five.

CHAPTER II

LITERATURE REVIEW

It has been posited that organizations must have three skills to be successful. The first skill is a customer orientation, that is, a focus on total customer satisfaction. Continuous improvement, or a focus on continuous innovations, is the second necessary skill. The third skill is the recognition that it takes a concerted effort by all organization members to achieve a customer orientation and continuous improvement (Peters 1984). These three skills embody the concept of strategic quality management. This strategic approach is based on the philosophy of customer-driven, continuous improvement at all levels and across all functional areas of the organization (Dean and Evans 1994). The marketing discipline has a central responsibility for the quest for a sustainable competitive advantage gained through strategic quality management (Cravens et al. 1988).

While some have argued that the bases of quality management are, collectively, the only sources for sustainable competitive advantage (Peters 1984), there is evidence that not all organizations implementing a quality philosophy are successful. One specific reason for this lack of success has been attributed to a lack of emphasis on organizational learning (Garvin 1993). Nonaka (1991) suggests that organizations that effectively engage in organizational learning realize that their “sole business is continuous improvement” driven by a customer focus (p. 96). The strategic quality movement, with its emphasis on continuous improvement, has been intricately linked to organizational learning (Senge 1990b; Watkins and Marsick 1993). Continuous improvement processes are organizational learning processes (Dixon 1992).

With these ideas in mind, the purpose of this literature review is to examine the concept of organizational learning from a marketing perspective. This requires the following:

1. A discussion of the organizational behavior foundation of the organizational learning construct.
2. An examination of the type of organizational learning that is a major concern to marketing—customer-oriented organizational learning.
3. An investigation of selected organizational characteristics thought to facilitate customer-oriented organizational learning.

The three sections of the manuscript that follow fulfill this requirement.

Organizational Learning: An Organization Behavior Perspective

The study of organizations is an emerging discipline (Bedeian 1986). The traditional model of organizational behavior, that those at the top of the hierarchy think while those at the bottom merely act, must give way to the idea that integrative thinking and acting should occur at all levels of the organization. This results in the need for researchers and practitioners to understand how organizations learn, as well as how to increase that learning (Senge 1990b). From this perspective, organizational learning may be one framework for improving our understanding of organizations (Bedeian 1986).

Researchers have noted that the concept of learning, whether individual, group, or organizational, is an elusive one. In particular, the concept of organizational learning is a complex human social activity that is difficult to specify (Daft and Weick 1984; Duncan and Weiss 1979; Jalland and Gunz 1993). A basic belief in the strategic management literature is that, to survive, organizations learn and adapt (Fiol and Lyles 1985).

While it has rarely been made explicit by organizational theorists, organizational learning has been a key inference in organization theory since the 1950s (Daft and Huber 1987; Duncan and Weiss 1979). Nonetheless, there has been a general lack of conceptual synthesis and the number of empirical studies of organizational learning is quite small (Bedeian 1986; Huber 1991). Therefore, there is little in the way of a

substantiated or widely accepted theory or model of organizational learning (Bedeian 1986; Fiol and Lyles 1985; Huber 1991). This creates a considerable need and opportunity for research in the area of organizational learning.

History, Definitions, Descriptions

The concept of organizational learning has been discussed—both implicitly and explicitly—in the organizational theory literature since the 1950s. One of the first scholars to discuss the concept of organizational learning was Herbert Simon in his description of the creation of the Economic Cooperation Administration (Simon 1953). During the 1960s, organizational learning was discussed from a macro perspective (Terreberry 1968; Thompson 1967) and a behavioral perspective (Cyert and March 1963). The 1970s ushered in ideas of theories of action (Argyris and Schön 1978), learning cycles (March and Olsen 1976), and action-outcome relations (Duncan and Weiss 1979). During the 1980s and 1990s, organizational learning continued to be a topic for organization theorists. For example, in 1983, *Journal of Management Studies*, and in 1991, *Organization Science*, devoted entire issues of their journals to organizational learning research (e.g., Argyris and Schön 1983; Cohen 1991; Huber 1991; Simon 1991).

Organizational learning has been defined in many ways, which has led to little consensus on exactly what organizational learning is. Confusion about the definition of the concept of organizational learning began in 1953 with Herbert Simon (Fiol and Lyles 1985). In his description of the Economic Cooperation Administration, he portrayed organizational learning as a progressive process of organizational members restructuring organizational problems, with the result being organizational outcomes (Simon 1953).

Since Simon, organizational learning has been described in a variety of ways. These descriptions deal with adaptation, modification, and change. Researchers who define organizational learning as adaptation, believe organizations adapt their decision

processes as a function of the organization's experience (Cangelosi and Dill 1965; Cyert and March 1992). Argyris and Schön (1978) describe this adaptation as a continual process of error detection and correction: "Organizational learning is a process in which members of an organization detect error or anomaly and correct it" (p. 58). This is a continual process in which there is continual monitoring, continual questioning, continual interpreting, and continual interaction (Argyris and Schön 1978).

Similar to the idea of adaptation, other researchers have concentrated on modification of behavior as a function of the organization's experience. March and Olsen (1976) believe the focus of organizational learning is on experiential learning—"how individuals and organizations make sense of their experience and *modify behavior* in terms of their interpretations of events" (March and Olsen 1976, p. 56; italics added). Organizational learning is "the process of *improving actions* through better knowledge and understanding" (Fiol and Lyles 1985, p. 803; italics added). It is the process by which organizations obtain and use new insights and knowledge to modify their behavior and actions (Bennis and Nanus 1985; Stata 1989).

Others have focused on organizational learning as change in the conceptual schemes, or mental models, of management teams of organizations. Organizational learning from this perspective is a process of interpreting events related to the organization, in terms of their markets and their competitors, and using these interpretations to change managers' shared conceptual schemes (i.e., mental models) of the organization, their markets, and their competitors (Daft and Weick 1984; De Geus 1988; Galer and van der Heijden 1992).

Generally accepted among organizational theorists is the idea that organizational learning is greater than the sum of the individual learning of organizational members. Organizational learning is thought to be "the management of the collective self" (Bennis and Nanus 1985, p. 7). This implies that organizations learn but not through the same processes of learning as do individuals—that it is something more than anything we can

infer simply by observing, in isolation, the learning processes of organizational members (Bedeian 1986; Cyert and March 1992; Daft and Weick 1984; Fiol and Lyles 1985; Simon 1991).

This assumption, however, raises concerns. The first concern is that the risk of reification charges are inherent in the suggestion that organizations learn (Bedeian 1986). The second concern is the creation of a paradox. The paradox that exists is that “organizational learning is not merely individual learning, yet organizations learn only through the experience and actions of individuals” (Argyris and Schön 1978, p. 9). While it is accepted that organizational learning is more than the sum of learning of organizational members, exactly how organizational learning relates to individual learning is unclear (Bedeian 1986; Simon 1991). Nonetheless, there are identified differences that separate individual from organizational learning.

First, because organizational learning uses the organization’s members as instruments (Cyert and March 1992), organizations can learn only as fast as the slowest member learns (Stata 1989). The second distinction is that individual and organizational learning differ in terms of the kind of information produced. “Individual learning may produce changes in the private (e.g., noncommunicable) knowledge held by an individual. Organizational learning is limited to public knowledge, but which is socially defined as valid, relevant, and available to other members of the organization” (Duncan and Weiss 1979, p. 87-88). In other words, the distinctive feature of organizational learning is information sharing (Daft and Weick 1984).

Finally, organizational learning depends on organizational memory, in other words, the institutional mechanisms (e.g., policies, strategies, and explicit models) used to retain information. Naturally, organizations also depend on the memory of individuals. Individuals, however, come and go, and exclusively relying on individuals is risky as people move from one job to another. Through organizational memory, over time, organizations preserve information and the associated behaviors, norms, and values (Daft

and Weick 1984; Fiol and Lyles 1985; Stata 1989). Because of these distinctions between individual and organizational learning, it is believed that it is possible to deal with learning at the aggregate level of the organization (Cyert and March 1992; Simon 1991).

To summarize thus far, organization theorists have conceptually defined organizational learning in terms of adaptation, modification, and change within the organization. In addition, while it has not specifically been determined how individual learning and organizational learning are related, it is clear that there are distinct differences between the two. Consequently, it is widely accepted that learning can and should be studied at the organizational level.

Recently, a general theme based on information processing has emerged in the organizational learning literature. This stream of research has taken a more operational approach to studying organizational learning than has the literature in the past. For example, Garvin (1993) suggests that earlier ideas regarding organizational learning do not provide a framework for organizational action. Therefore, he and others have applied a more logistical definition of organizational learning.

Specifically, these researchers view organizational learning as comprised of two parts. The first is a process of consistently creating, acquiring, and disseminating information throughout the organization (Garvin 1993; Huber 1991; Nonaka 1991). The second element is concerned with how an organization responds to the information. There is divergence among researchers as to what organizational responses are necessary for learning to occur. One view is that for learning to occur the organization must modify its behavior by embodying the insights from new information into its technologies and products (Garvin 1993; Nonaka 1991). In other words, organizational learning results in observable changes in organizational behavior. The other view claims that, "An entity learns if, through its processing of information, the range of its potential behaviors is changed" (Huber 1991, p. 89). In other words, organizational learning does not

necessarily result in observable change in organizational behavior; rather, it is sufficient for a change to occur in the spectrum of behaviors from which the organization will choose. Regardless of which view of organizational response one adheres to, the benefit of the information processing approach is that it lays a foundation for operationalizing, measuring, and managing organizational learning (Garvin 1993).

Theories and Perspectives of Organizational Learning

According to Daft and Huber (1987), the literature related to organizational learning can be reduced to two overarching themes. The first is based on the open systems view of organizations. Researchers in this area (Burns and Stalker 1966; Emery and Trist 1965; Lawrence and Lorsch 1967; Terreberry 1968; Miller and Friesen 1980) take the stance that organizations develop distinctive learning styles as they learn to adapt to their environments (Kolb, Rubin, and Osland 1991). An organization learns about its environment through transactions with the environment, and then learns which organizational design features help it best relate to its particular environment (Daft and Huber 1987; Kolb, Rubin, and Osland 1991).

The second theme of organizational learning is concerned with congruence rather than adaptation. These theorists (Aldrich, McKelvey, and Ulrich 1984; Dutton and Freedman 1985) believe that organizations learn which combination of organizational characteristics, such as strategy, structure, and technology, facilitate goal achievement. They accomplish this learning by copying, by experimenting, or by engaging in trial and error (Daft and Huber 1987).

Aside from these two overarching themes, organizational learning research has been multidisciplinary and fragmented (Fiol and Lyles 1985; Shrivastava 1983). The definitions of organizational learning (discussed earlier) are based on various theoretical positions. Shrivastava (1983) has summarized the research in this area in terms of four distinct and contrasting perspectives. Table 1 is based on his summarization. Because

these perspectives are founded on very divergent theoretical assumptions, they should be viewed as adjuncts to each other in developing an understanding of organizational learning (Shrivastava 1983). The following sections discuss each of the four perspectives.

TABLE 1
PERSPECTIVES ON ORGANIZATIONAL LEARNING

<u>Organizational Learning Perspectives</u>	<u>Core Ideas</u>	<u>Representative Contributing Authors</u>
Adaptation	Organizations adapt to changes in the environment by readjusting their goals, attention rules, and search rules.	Bedeian (1986) Cangelosi and Dill (1965) Chakravarthy (1982) Cyert and March (1963) Hedberg (1981) Hedberg, Nystrom, and Starbuck (1976) March and Olsen (1976)
Assumption Sharing	Organizational theories-in-use result from shared assumptions. Learning involves changes in these theories.	Argyris and Schön (1978) Weick (1979)
Development of Knowledge Base	Learning is the process by which knowledge about action-outcome relations is developed. Action learning.	Duncan and Weiss (1979) Fiol and Lyles (1985) Jelinek (1979) Morgan and Ramirez (1983) Revans (1980)
Institutionalized Experience Effects	Learning curve effect extended to managerial decision-making.	Abernathy and Wayne (1974) Boston Consulting Group (1970) Yelle (1979)

Adapted from Shrivastava, Paul (1983), "A Typology of Organizational Learning Systems," *Journal of Management Studies*, 20 (1), 10.

Adaptation. The adaptation perspective is one of organizational learning being a process whereby an organization modifies its behavior to adapt to its environment.

Researchers have described this idea of adaptive learning in the following ways:

- Organizational learning is adaptation of the organization as evidenced through “procedural shortcuts,” “reassignment of functions to team members,” “increased sensitivity to patterns of information and increased awareness of response alternatives,” and “the incorporation of redundant actions into the system to make judgments and decisions more clearly ‘fail-safe’” (Cangelosi and Dill 1965, p. 191).
- Adaptive processes, such as learning, are the specific processes by which an organization can “adjust its behaviors to accommodate” a threatening environment (Hedberg, Nystrom, and Starbuck 1976, p. 46).
- “[T]he endeavors of an organization to be fitted better to its environment” as exhibited through the organization’s information processing ability and its latitude for experimentation (Chakravarthy 1982, p. 35).
- “To grow and develop, organizations must maintain an understanding of the discontinuities inherent in their supporting environment. They must develop processes for learning to cope with environmental changes” (Bedeian 1986, p. 193).
- Organizational adaptation to problems, opportunities, and changes in the environment . . .” (Daft and Huber 1987, p. 3).
- “[O]rganizational learning results from understanding the changes occurring in the external environment and then adapting beliefs and behavior to be compatible with those changes” (Stata 1989, p. 67).

March and Olsen (1976) state that the organizational learning cycle is based on understanding “organizational behavior in terms of adaptive rationality” (p. 56). Figure 3 illustrates this adaptive learning cycle. This cycle represents organizational learning as a feedback cycle whereby individual organizational members interpret and evaluate information from the environment; an adaptive action is taken that then influences the environment; the environment then responds reflecting the influence of the sequence; and the cycle continues.

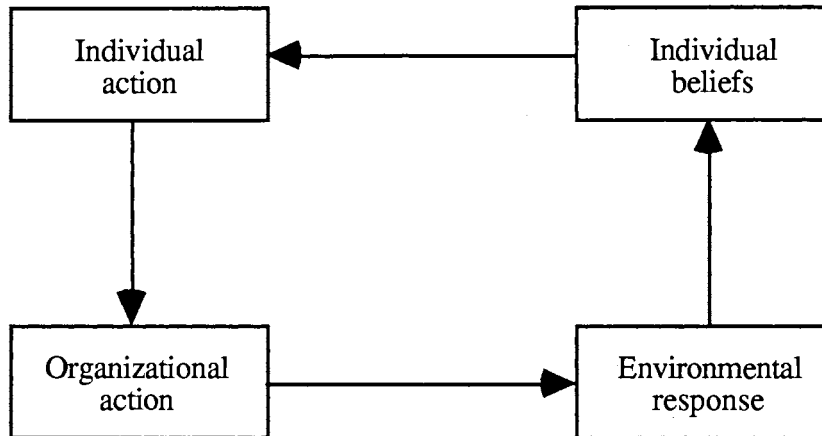


Figure 3. Learning Cycle (from March, James G. and Johan P. Olsen (1976), *Ambiguity and Choice in Organizations*, Oslo, Norway: Universitetsforlaget, 13.)

Cyert and March's (1963) behavioral theory of the firm is founded on the idea that, over time, organizations exhibit adaptive behavior at the aggregate level. Organizational learning focuses on three different phases of the decision-making process: adaptation of goals, adaptation in attention rules, and adaptation in search rules. The behavioral theory of the firm asserts that organizations change their goals, shift their attention, and revise their search procedures on the basis of their experience (Cyert and March 1992). Learning through adaptation of goals means organizations learn what is important to strive for in their environment. This learning is a function of the experience of succeeding or failing in meeting previous years' goals, other organizational experiences, and the experience of other organizations in a similar situation (Cyert and March 1992).

Another phase of the decision-making process in which organizations learn is concerned with the adaptation of attention rules. Learning occurs here as, based on

selected criteria, organizations learn to attend to some parts of their environment and disregard others (Cyert and March 1992). This includes such things as the tendency of organizations to shift their performance criteria toward measures that produce generally satisfactory results. For example, organizations have begun to move away from strictly production-financial based performance measures to customer-based performance measures.

Finally, organizations learn by adapting their search rules. Organizations learn which solution search rules work and which do not. Success in solving a problem using a particular way of searching leads to repetition of that search procedure; conversely, failure in finding a problem solution using a particular search procedure leads to discouragement of the use of that particular search approach (Cyert and March 1992).

Based on this perspective of organizational learning, “effective organizations are those in which members have a capacity to learn to predict changes in their environments, identify the influence of these changes, search for suitable strategies to cope with changes, and develop appropriate structures to implement these strategies. Organizational learning in this view becomes the process of identifying environmental changes and organizational contexts, and successfully coping with them” (Shrivastava 1983, p. 11).

Assumption Sharing. In contrast to the idea of adaptive learning, other researchers have viewed learning as a modification to shared assumptions held by organizational members. Weick (1979) believes that partitioning the world into an external environment versus the organization ignores the interdependence between the two, as well as ignores the possibility that people invent rather than discover what they perceive. While Weick (1979) does not explicitly discuss organizational learning, he does discuss how individuals and organizations make sense out of the information they receive. He believes that this sense-making results from an interaction of procedures, behaviors, interpretations, and a puzzle. Figure 4 illustrates this idea.

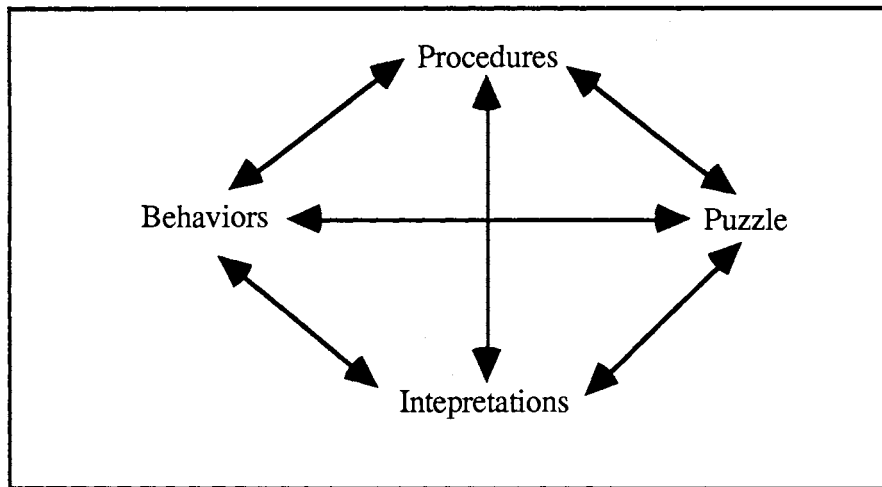


Figure 4. Sense-Making Within an Organization (from Weick, Karl E. (1979), *The Social Psychology of Organizing*, second edition, Reading, MA: Addison-Wesley, 4.)

Individuals within an organization share a sense of the appropriate procedures, interpretations, and related behaviors available to them. The puzzle that faces the individuals is that information is often perceived as equivocal. Individual sense-making occurs as, individually, the organization's members attempt to remove the equivocality. Merely by being a member of the organization, the members participate in interlocked behavior cycles with one another. Through these interlocked behavior cycles, individuals within the organization interact with one another to negotiate collective, or organizational, sense-making (i.e., organizational learning).

One of the most widely cited views of organizational learning from the assumption sharing perspective is the theory of action (Argyris and Schön 1978). Organizational theories of action are the norms, strategies, and assumptions created to help people achieve organizational objectives. There are two types of theories of action. The first is organizational espoused theories. These are represented by the organization's formal documents (e.g., organization charts, policy statements, and job descriptions) that

are communicated to others and to which individuals within the organization give allegiance. The second type of theories of action is organizational theories-in-use. These actually guide organizational members' behaviors. They are determined by the collective rules for decision, delegation, and action as part of the organization's identity and continuity. They are largely unspoken. These organizational theories-in-use result from sharing of assumptions and cognitive maps among organizational members. "The continual and concerted sharing and meshing, of individual assumptions, of individual images of self and others, of one's activities in the context of collective interaction, maintains the organization's theories-in-use" (Shrivastava 1983, p. 12). The result is organizational maps—"the shared descriptions of organizations which individuals jointly construct and use to guide their own inquiry" (Argyris and Schön 1978, p. 17). The construction and revision of these organizational maps through individual and collective inquiry is organizational learning. For organizational learning to occur, the discoveries, inventions, and evaluations of organizational members must be embedded in organizational theories-in-use. If they are not, individual learning may occur, but organizational learning does not (Argyris and Schön 1978).

Based on this perspective of organizational learning, effective organizations are those in which members have a capacity to learn to use organizational inquiry to discover the inconsistencies and incongruities in the organizational theories-in-use, successfully resolve the conflict resulting from the inconsistencies and incongruities, and modify the organizational theories-in-use by internalizing the new information gained from the resolution of the conflict. Organizational learning in this view becomes the process of responding to changes in internal and external environments by detecting errors and correcting them to maintain and modify the core organizational theories-in-use (Argyris and Schön 1978).

Development of Knowledge Base. Researchers advocating the knowledge base development perspective of organizational learning argue that earlier perspectives of

organizational learning are limited simply to the individual's knowledge. These earlier views (e.g., Argyris and Schön 1978; March and Olsen 1976) do not understand the development of knowledge required for systematic organizational action (Duncan and Weiss 1979). Duncan and Weiss (1979) suggest that these earlier researchers have done little more than taken the basic concepts of individual learning and applied them to an organizational context. They state:

The outcomes of this process can only be understood to affect organizational processes through the specific actions of individuals. If there is any organizational learning, it could only be understood as changes in some aspect of the organization reflecting the aggregation of changes in individual behavior. . . . Such a model cannot explain systematic organization action. . . . Organizational learning must be understood as more than the simple aggregation of individual learning. If this were the case, the only knowledge in the organization would be fragmented (Duncan and Weiss 1979, p. 88).

They extend this view by arguing that while Argyris and Schön (1978, p. 129-147) recognize the organizational level of learning they do not explain how the process of modification and change of organizational theories-in-use transcends the individual—“how changes become accepted by others and integrated into other theories as a basis for organizational action” (Duncan and Weiss 1979, p. 90).

Researchers from the knowledge base development perspective take a systems view to organizational learning (Shrivastava 1983). Organizations are thought of as open systems that engage in exchanges with their environments (Duncan and Weiss 1979). Specifically, data (i.e., inputs) enter the organization from the environment. A transformation process, in the form of organizational learning, takes place. An organizational knowledge base emerges from the transformation and results in organizational effectiveness. Figure 5 displays this process.

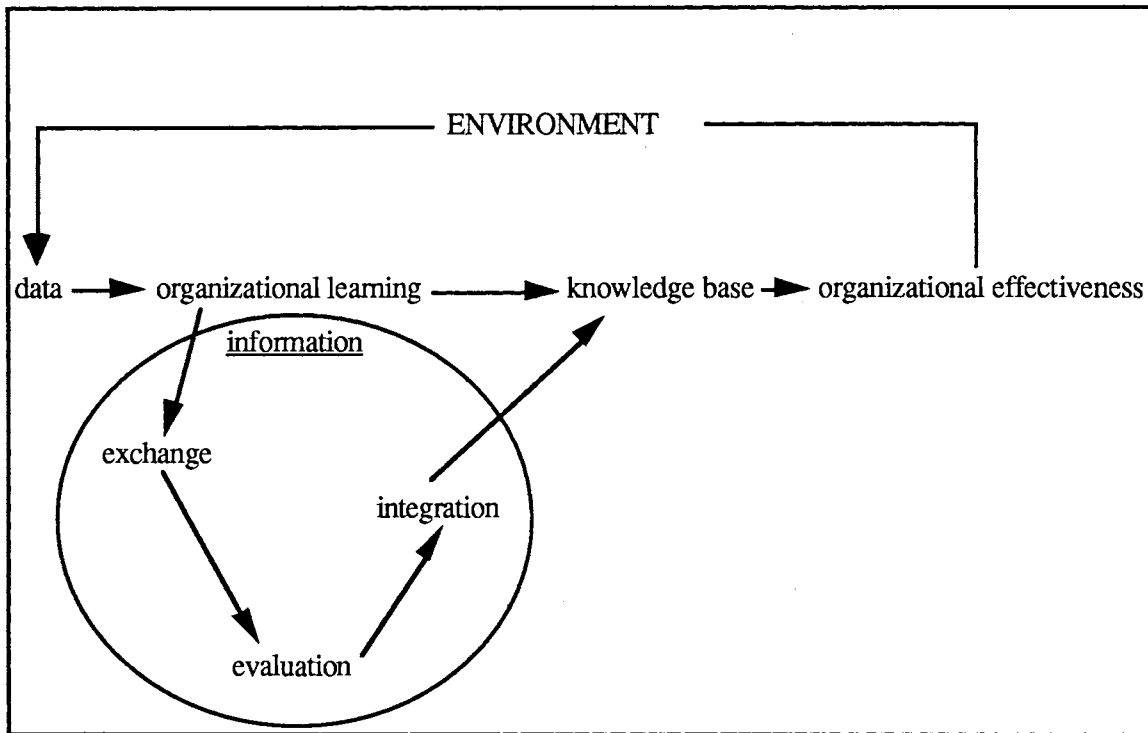


Figure 5. Open Systems Perspective of Organizational Learning (based on Duncan, Robert and Andrew Weiss (1979), "Organizational Learning: Implications for Organizational Design," *Research in Organizational Behavior*, Vol. 1, Greenwich, CT: JAI Press, 75-123.)

Fiol and Lyles (1985) describe organizational learning from this perspective as the process of improving organizational effectiveness through better knowledge and understanding developed from the "insights, knowledge, and associations between past actions, the effectiveness of those actions, and future actions" (p. 811). This has been referred to as knowledge about action-outcome relationships (Duncan and Weiss 1979). Therefore, organizational learning is defined as "the process within the organization by which knowledge about action-outcome relationships and the effects of the environment on these relationships is developed" (Duncan and Weiss 1979, p. 84). Knowledge, rather than change or specific action, is the outcome of organizational learning. Organizational learning may result in (a) knowledge about new action-outcome relationships or

knowledge about new conditions of previously known action-outcome relationships, (b) replacement of existing knowledge about action-outcome relationships, or (c) an increase of knowledge (i.e., additional support or validity) about an existing action-outcome relationship (Duncan and Weiss 1979).

Knowledge is the basis for organizational effectiveness—“knowledge that accurately describes the action-outcome relationships relevant to organizational activities, knowledge that is distributed across the organization, is communicable among members, has consensual validity, and is integrated into the working procedures and administrative structures of the organization” (Shrivastava 1983, p. 13). Organizational effectiveness is a function of the organization’s knowledge development processes (i.e., organizational learning) and the administrative procedures and structures which support these processes. Organizational effectiveness is thus determined by the quality of the knowledge base available to the organization (Duncan and Weiss 1979; Shrivastava 1983).

Related to the idea of action-outcome relations is the concept of action learning (Revans 1980). Similar to action-outcome relations, action learning is based on the premise that “it is as important that knowledge be able *to help one to act in a situation*, as it is to just explain or understand that situation” (Morgan and Ramirez 1983, p. 10). Action learning seeks to learn from others’ experiences and self experiences; it is “ultimately concerned with creating processes that facilitate learning” (Morgan and Ramirez 1983, p. 22). It suggests that a knowledge base of wisdom and effectiveness should be institutionalized by designing “organizations in which the various elements are multi-skilled, interchangeable, and systematically allow for errors arising in other parts of the system. . . . The guiding principle is that variety should be built into the organization where it is needed for interacting *directly* with the perceived problem, rather than at a distance” (Morgan and Ramirez 1983, p. 5).

Based on the action-outcome perspective of organizational learning, effective organizations are those in which members have a capacity to learn to exchange, evaluate,

and integrate information, develop an organizational knowledge base about the action-outcome relationships relevant to the organization, and incorporate this knowledge into the organization's design for effectiveness. Organizational learning in this view becomes the process of identifying the relevant action-outcome relations and the influence of the environment on these relationships, and successfully developing an organizational knowledge base about the relationships.

Institutionalized Experience. Other researchers have deviated from the perspectives of adaptation, assumption sharing, and action-outcome relationships by looking at learning as “an accumulation of efficiencies through experience and tradition” (Daft and Huber 1987, p. 4). From this perspective, organizational learning “involves development of capabilities in administrative and decision-making tasks” (Shrivastava 1983, p. 16). In particular, concepts studied from this perspective are learning curves (Abernathy and Wayne 1974; Boston Consulting Group 1970; Yelle 1979) and socio-technical systems (Utterback and Abernathy 1975).

The learning curve phenomenon was first reported in the literature by Wright in 1936 (Yelle 1979). Specifically, the learning curve is observed when, “as the quantity of units manufactured doubles, the number of direct labor hours it takes to produce an individual unit decreases at a uniform rate. The uniform rate (i.e., 90 percent, 80 percent, 70 percent, etc.) of learning is peculiar to the manufacturing process being observed” (Yelle 1979, p. 302).

From an organizational learning view, the learning curve can be thought of as an aggregate model because it includes learning from all sources within the organization. Accordingly, the learning curve is a model which represents labor learning (i.e., “the inherent susceptibility of the labor in an operation to improve” [Yelle 1979, p. 306]) as well as managerial learning (Yelle 1979). Unlike other organizational learning perspectives, there is empirical support for the association between organizational learning and learning curves. Examples of this evidence include the following:

- Hirsch (1952) found that technical knowledge, a form of organizational learning, accounted for approximately 87 percent of the changes in direct labor requirements (Yelle 1979).
- Wyer (1953) found that the quality of managerial planning, another form of organizational learning, is positively reflected in the slope of the learning curve (Yelle 1979).
- Hirschmann (1964) found evidence of the learning curve phenomenon in the petroleum refining industry. In essence, he found that learning observed in this industry cannot be solely attributed to direct labor learning because direct labor is practically nonexistent in the petroleum refining industry. This learning is attributable to organizational learning in the form of technological learning (Yelle 1979).
- The Boston Consulting Group (1970) found that unit costs decline as a function of experience. This experience can be considered a form of organizational learning in the form of institutionalized learning.

Based on this perspective of organizational learning, effective organizations are those in which members have a capacity to learn to reduce the number of direct labor hours and other costs as they increase the number of units manufactured. Organizational learning in this view becomes the process of identifying the relationship between costs and cumulative experience, and successfully implementing the results of experience faster than the competition (Kerin, Mahajan, and Varadarajan 1990).

Summary of Organizational Learning Perspectives. Each of these perspectives views the concept of organizational learning from a different approach. This is attributable to the different theoretical assumptions upon which each of the perspectives is built. Nonetheless, the perspectives are not mutually exclusive. Therefore, some overlapping ideas and consistent themes have been identified.

First, while learning occurs at both the individual and aggregate levels in the organization, learning at the organization level is most important to strategic decisions (Shrivastava 1983).

Second, organizational learning is an organizational process rather than an individual process. Although organizational learning takes place through individuals, it would be erroneous to conclude that organizational learning is nothing but the cumulative

result of members' learning. Over time, as individuals share their knowledge, beliefs, and assumptions organizations preserve certain behaviors, mental maps, norms, and values (Fiol and Lyles 1985; Shrivastava 1983).

Third, organizational learning involves fundamental changes in the frames of reference, or organizational maps, held by the organization's members (Shrivastava 1983). For organizational learning to occur, these changes must influence the organizational action-outcome relationships or the organizational theories-in-use.

Fourth, the outcome of organizational learning is organizationally shared, confirmed, and integrated into a system of organizational action-outcome heuristics or theories-in-use (Shrivastava 1983).

Fifth, organizational learning is closely linked with experience that the organization possesses (Shrivastava 1983). Organizations learn, unlearn, and relearn from past experience.

Sixth, "[o]rganizational learning is institutionalized in the form of learning systems which include informal and formal mechanisms of management information sharing, planning, and control" (Shrivastava 1983, p. 17).

Levels and Modes of Organizational Learning

Researchers have classified organizational learning into different levels and different modes which result in different learning systems within organizations. In general, organizational learning has been classified into two levels. Table 2 identifies various terms that have been used to label these two levels.

TABLE 2

LEVELS OF ORGANIZATIONAL LEARNING

Authors	Level	
	1	2
Argyris and Schön (1978)	single loop	double loop
Chakravarthy (1982)	adaptive specialization	adaptive generalization
Fiol and Lyles (1985)	lower level	higher level
Bennis and Nanus (1985)	maintenance	innovative
Senge (1990b)	adaptive	generative

The first level of learning has been referred to as single loop, adaptive specialization, lower level, maintenance, and adaptive (Argyris and Schön 1978; Bennis and Nanus 1985; Chakravarthy 1982; Fiol and Lyles 1985; Senge 1990b). All of these terms refer to a level of organizational learning that functions to preserve the constancy within the organization. It is the level of learning designed to maintain an existing system or an established way of operating within an organization (Argyris and Schön 1978; Bennis and Nanus 1985).

This level of learning occurs when an organization receives information and takes corrective action within its present policies or to achieve its present objectives (Argyris and Schön 1978). Organizational learning at this level has been described as (a) focusing on routinization and institutionalization of past behaviors occurring in a well-understood context at all levels within organizations (Fiol and Lyles 1985); (b) enhancing an organization's problem solving ability through "the acquisition of fixed outlooks, methods, and rules for dealing with known and recurring situations (Bennis and Nanus 1985, p. 7); and (c) the process of improving the goodness of fit between the organization and its external environment by maintaining the organization's existing information processing ability and extent of experimentation (Chakravarthy 1982). This is "the

organization's ability to remain stable in a changing context" (Argyris and Schön 1978, p. 18).

The result of this first level of organizational learning is a "particular behavioral outcome or level of performance" (Fiol and Lyles 1985, p. 808). It is relatively peripheral learning, but it is indispensable to the functioning and stability of organizations (Argyris and Schön 1978; Bennis and Nanus 1985; Fiol and Lyles 1985).

The second level of organizational learning takes place on a higher "intellectual" plane than lower level learning². Rather than functioning to maintain the stability within an organization, the second level of learning is designed to improve the long term survival potential of the organization, especially in times of uncertainty (Bennis and Nanus 1985; Chakravarthy 1982). This level of learning has been referred to as double loop, adaptive generalization, higher level, innovative, and generative (Argyris and Schön 1978; Bennis and Nanus 1985; Chakravarthy 1982; Fiol and Lyles 1985; Senge 1990b). This level of learning occurs when an organization grasps the systemic source of problems and modifies the organization's policies, objectives, and underlying norms (Argyris and Schön 1978; Senge 1990b).

Organizational learning at this level has been described as (a) focusing on the development of complex rules and cause-effect associations regarding new actions (Fiol and Lyles 1985); (b) enhancing an organization's long term survivability through "change, renewal, restructuring, and problem reformulation" (Bennis and Nanus 1985, p. 7-8); and (c) the process of improving the goodness of fit between the organization and its external environment by increasing the organization's information processing ability and degree of experimentation (Chakravarthy 1982). Higher level learning³ is the

²The first level of organizational learning will be referred to as lower level learning from this point forward in the manuscript.

³The second level of organizational learning will be referred to as higher level learning from this point forward in the manuscript.

organization's ability to understand and eliminate the cause of problems (Fiol and Lyles 1985; Senge 1990b).

The desired result of this level of learning is "the development of frames of reference or interpretive schemes," "new cognitive frameworks within which to make decisions," and "insights, heuristics, and collective consciousness" (Fiol and Lyles 1985, p. 808, 810). It is relatively deep learning that results from ambiguous and ill-defined contexts and environmental complexity (Argyris and Schön 1978; Fiol and Lyles 1985).

Rather than merely separating organizational learning into higher and lower levels, other researchers have defined modes of organizational learning. Daft and Weick (1984) propose a model of organizational interpretation, or learning modes. The four learning modes are based on two underlying dimensions: assumptions about the environment and organizational intrusiveness. The first dimension, assumptions about the environment, is based on the organization's view of the external environment. If the organization assumes the environment can be determined and is measurable, it seeks to gather concrete data and engage in environmental vigilance and rational analysis. On the other hand, if the organization assumes the environment is not determinable, the organizational learning process will be "more personal, less linear, more ad hoc and improvisational" (Daft and Weick 1984, p. 287).

The second dimension, organizational intrusiveness, identifies whether organizations take an active approach to environmental search and seek information or remain passive and let information come to them. Organizations faced with hostile, threatening, intensely competitive, or resource constrained environments are more likely to be active environmental searchers because they need more exhaustive information to solve problems and exploit new opportunities. Organizations faced with more benevolent environments are more likely to be passive because they have diminished incentives to be intrusive (Daft and Weick 1984).

Based on these two dimensions, four learning modes are proposed. These four modes are described below and shown in Figure 6. While these four modes of organizational learning do not identically match the descriptions of lower and higher level learning, there are similarities that allow comparisons.

UNANALYZABLE ASSUMPTIONS ABOUT ENVIRONMENT	undirected viewing	enacting
	conditioned viewing	discovering
ANALYZABLE	Passive	Active
ORGANIZATIONAL INTRUSIVENESS		

Figure 6. Model of Organizational Learning Modes (from Daft, Richard L. and Karl E. Weick (1984), "Toward a Model of Organizations as Interpretation Systems," *Academy of Management Review*, 9, 289.)

Both undirected and conditioned viewing reflect a passive approach to environmental analysis. The difference between the two learning modes is in the organization's reliance on data. Undirected viewing relies on nonroutine and informal data, hunches, rumors, and chance opportunities, while conditioned viewing relies on routine and formal data (Daft and Weick 1984). Organizations using one of these two learning modes exhibit characteristics associated with lower level learning. In particular,

their external search for information is passive. In addition, interpretations of information (upon which corrective actions are based) are constrained and made within traditional boundaries (Daft and Weick 1984).

The other two organizational learning modes—discovering and enacting—can be associated with higher level learning. Both discovering and enacting reflect an active approach to environmental analysis. Organizations using one of these two learning modes attempt to (1) increase their information processing ability through active data gathering and questioning or (2) increase their degree of experimentation by “trying new behaviors and seeing what happens” (Daft and Weick 1984, p. 288). The difference between the two modes of organizational learning is based on their reliance on data. Discovering relies on formal search and active detection, while enacting relies on “learning by doing” (Daft and Weick 1984).

Other researchers have expanded this idea of organizational learning modes. Daft and Huber (1987) have developed a model based on Shrivastava’s (1983) proposed perspectives of organizational learning research discussed earlier. Daft and Huber’s (1987) approach to organizational learning identifies which learning mode an organization would use based on information load⁴ in an organization and the equivocality of the information received. Figure 7 displays this model, including the level of each organizational learning mode and some of the characteristics found in organizations using each mode.

⁴Information load is defined as “the volume of information inputs required for an organization to perform its tasks” (Daft and Huber 1987, p. 11).

		Amount of Information (Logistics Problem)	
		<u>Low</u>	<u>High</u>
<u>Equivocality of Information (Interpretation Problem)</u>	<u>High</u>	<p><i>Self-Designing Organization</i></p> <ul style="list-style-type: none"> • Low-Moderate Information Load • Assumption sharing: Moderate level of learning through equivocality reduction, sense-making, enactment. • Communication Structure: decentralization, disaggregation, personal networks, group meetings 	<p><i>Experimenting Organization</i></p> <ul style="list-style-type: none"> • High Information Load • Adaptive learning: Highest level of learning through information processing and equivocality reduction. • Communication Structure: personal networks, decentralization, boundary departments, surveys
	<u>Low</u>	<p><i>Traditional Bureaucracy</i></p> <ul style="list-style-type: none"> • Low Information Load • Institutionalized experience: Low level of learning through remembering information stored in precedents, scripts, and routine procedures. • Communication structure: few boundary departments, centralized, routine data systems 	<p><i>Extended Bureaucracy</i></p> <ul style="list-style-type: none"> • Moderate-High Information Load • Development of knowledge: High level of learning through formal information acquisition and processing. • Communication structure: many boundary departments, surveys, chunk data, satellites

Figure 7. Model of Organizational Learning Modes and Associated Characteristics (from Daft, Richard L. and George P. Huber (1987), "How Organizations Learn: A Communications Framework," in *Research in the Sociology of Organizations*, Vol. 5, Nancy DiTomaso and Samuel B. Bacharach, eds. Greenwich, CT: JAI Press Inc., 25.)

Each of these modes is used in different organizational situations and results in different levels of learning. Self-designing organizations are used during crises (Daft and Huber 1987). They require low to moderate amounts of information for effective organizational performance. These organizations continually appraise and revise their behaviors and invent their futures in order to survive and maintain long-term viability. These organizations place "greater emphasis on flexibility, creativity, immediacy, and initiative than on authority, clarity, decisiveness, or responsiveness" (Hedberg, Nystrom, and Starbuck 1976, p. 45). This results in a communication structure that is

decentralized, disaggregated, and comprised of many personal networks (Daft and Huber 1987). “The self-designing organization is perhaps best described as being unceasingly motivated to learn through the institutionalization of continued experimentation” (Bedeian 1986, p. 194). These organizations are effective at organizational learning, especially through reduction of equivocality and learning by doing (Daft and Huber 1987; Hedberg, Nystrom, and Starbuck 1976).

Experimenting organizations are used in emerging industries or in industries with rapid technological development. The learning situation for experimenting organizations is the most demanding because these organizations require large amounts of information for effective organizational performance, as well as facing the need to define their environment (i.e., high equivocality of information) (Daft and Huber 1987). These organizations, like self-designing organizations, place emphasis on flexibility, creativity, immediacy, and initiative. This is reflected in a communication structure similar to self-designing organizations (i.e., decentralized with many personal contacts); additionally, because of the high need for information, there are many boundary-spanning departments and the organization relies on surveys to obtain information.

Traditional bureaucracies, used in conventional bureaucratic organizations, exhibit the lowest level of learning. These organizations require little information for organizational performance, are faced with little equivocality in the information environment, and mainly use institutionalized learning in the form of routine procedures. This results in a communication structure that is highly centralized (Daft and Huber 1987).

The extended bureaucracy learning mode is used in all other situations (i.e., except crises, emerging industries or rapid technological development, and traditional bureaucracies). These organizations acquire information to answer relevant questions and to plan future actions. They place greater emphasis on adopting structural or technological mechanisms to process and integrate a large volume of information (Daft

and Huber 1987). This results in a communication structure that allows the organization to extend itself into the environment to acquire information. This requires many boundary departments and satellite departments assigned to obtain useful information. The premise for learning is the development of a large internal knowledge base through planning, data collection, and data transmission (Daft and Huber 1987; Shrivastava 1983).

Similar to Daft and Huber's (1987) organizational learning modes, Shrivastava (1983) has developed a typology of organizational learning systems. According to Shrivastava (1983), organizational learning systems are "systems which acquire, communicate and interpret organizationally relevant *knowledge for use* in decision-making" (p. 17). They are composed of subjective information from individuals that is objectified into organizational knowledge. These learning systems have several characteristics (Shrivastava 1983). First, they are not function or task specific, and therefore, they provide inputs to a broad range of organizational activities. Second, they are based on the organization's actual practices, and therefore, they reflect the actual "theories-in-use" rather than the "espoused theories" of the organization. Finally, organizational members know about organizational learning systems, "even though some of the systems may not have been explicitly verbalized or documented" (Shrivastava 1983, p. 18).

Shrivastava's typology (see Figure 8) rests on the assertion that organizational learning systems are determined by two dimensions. The first dimension determines whether a learning system has evolved within the organization or whether it was designed. The second dimension determines whether a learning system is individually or organizationally-oriented. While the dimensions of Daft and Huber's (1987) organizational learning modes model are different than Shrivastava's dimensions of learning systems, these two models are related. This will become evident through a discussion of Shrivastava's typology with references to Daft and Huber's model.

		<i>Individual-Organizational Dimension</i>		
		<u>Individually oriented</u>	<----->	<u>Organizationally oriented</u>
<u>Evolutionary</u> ↑ <i>Evolutionary Design Dimension</i> ↓ <u>Designed</u>	One man institution	Mythological learning system	Information seeking culture	
	Participative learning system	Formal management system	Bureaucratic learning system	

Figure 8. A Typology of Organizational Learning Systems (from Shrivastava, Paul (1983), "A Typology of Organizational Learning Systems," *Journal of Management Studies*, 20 (1), 18.)

The "one-man" institution is individually-oriented and evolutionary in design (Shrivastava 1983). It is exemplified by the entrepreneurial start-up company that has one person (generally the founder) who filters and controls the flow of information within the organization. Similarly, participative learning systems are individually-oriented, however, they are formally designed by the organization (Shrivastava 1983). Their use is reflected in the organizational practice of forming ad hoc committees or working teams. These groups come together to work on a problem and then are disbanded. These two learning systems—the "one-man" institution and the participative learning system—have no equivalent in the Daft and Huber (1987) model because Daft and Huber's learning modes tend toward organizationally-oriented learning systems. Shrivastava's typology moves that direction with the identification of mythological learning systems and formal management systems.

Mythological systems are evolutionary within the organization. They are similar to Daft and Huber's (1987) self-designing organizations. Both mythological systems and self-designing organizations are based on subjective information and personal networks. Learning within self-designing organizations is based on assumption sharing among

individuals. One way to create and maintain assumption sharing is to rely on stories of the organization. Stories are the basis for mythological learning systems (Shrivastava 1983).

Formal management systems are similar to Daft and Huber's (1987) traditional bureaucracies. Formal management systems perpetuate learning within the organization through the implementation and maintenance of formal organizational systems designed for management of information (Shrivastava 1983). These parallel traditional bureaucracies in their emphasis on learning through routine data systems and procedures.

Related to Daft and Huber's (1987) experimenting organization and extended bureaucracy are Shrivastava's (1983) concepts of information seeking culture and bureaucratic learning system. These concepts can be linked using the idea of information processing. Information seeking cultures promote inquisitiveness and curiosity (Shrivastava 1983). Similar to experimenting organizations, information seeking cultures require a high level of information for organizational effectiveness. Additionally, information seeking cultures evolve within the organization and rely on personal networks to share information within the organization (Shrivastava 1983).

Similar to the extended bureaucracy (Daft and Huber 1987), Shrivastava's (1983) bureaucratic learning systems engage in learning through highly formal information collection and dissemination. The premise for learning is the development of a large internal knowledge base through data acquisition and transmission (Daft and Huber 1987; Shrivastava 1983). In both models, organizational learning takes place within the environment of a designed system.

Summary of Organizational Learning Modes. While at first glance it appears that organizational learning research has been fragmented and noncumulative, there are similarities among the theorists' ideas. These similarities provide a foundation for several summarizing comments. First, it seems evident that organizational learning takes place at two levels. These levels have been labeled by a variety of terms, but it is implied

by all the terms that organizational learning can take place at both a lower level and a higher level. The lower level of learning is engaged in to maintain the organization within its existing environment by receiving information and taking corrective action within the organization's existing system. It is focused on increasing the efficiency of existing organizational systems. The higher level of learning is used to improve the long term survivability of the organization by identifying the underlying causes of problems and making systemic modifications within the organization to deal with the problems. It is focused on building the effectiveness of organizational systems by making systemic adjustments in response to the environment.

A second similarity among organizational researchers is the identification of modes of organizational learning. Each set of researchers has developed their own distinct labels and descriptions of organizational learning modes. Nonetheless, there are links among these modes based on determining how active or passive an organization is in its information gathering and whether the system for learning is evolutionary or designed within the organization.

Components of Organizational Learning Systems

The components of organizational learning systems refer to the elements that determine what activities an organization will engage in as part of its organizational learning. These components, which are "ongoing and interactive rather than sequential and independent" (Dixon 1992, p. 33), include information acquisition, information dissemination, information interpretation, information storage, and information retrieval (Dixon 1992; Huber 1991). According to Huber (1991), four attributes can be considered when investigating the composition of organizational learning systems. Huber suggests that organizational learning occurs if any of these attributes is found; however, the presence or absence of each of the attributes determines which component(s) will be emphasized within a particular organization.

The first attribute is existence. Huber (1991) posits that “an organization learns if any of its units acquires knowledge that it recognizes as potentially useful to the organization” (Huber 1991, p. 89). This implies that an organization learns through information acquisition when any organizational member obtains information that has the potential to be of use to the organization. Additionally, it means the organization can learn even if not every member learns.

The second attribute is breadth. Huber (1991) suggests that “more organizational learning occurs when more of the organization’s components obtain this knowledge and recognize it as potentially useful” (p. 90). This implies that an organization learns through dissemination of information among the organization’s members. Again, the members must recognize the information as potentially useful to the organization for organizational learning to occur.

Huber’s (1991) identification of the third and fourth attributes indicates that organizations can also learn through the process of information interpretation. Elaborativeness suggests that “more organizational learning occurs when more and more varied interpretations are developed” (Huber 1991, p. 90). The presence of the fourth attribute, thoroughness, suggests that “more organizational learning occurs when more organizational units develop uniform comprehensions of the various interpretations” (Huber 1991, p. 90).

Huber’s (1991) ideas lead to the conclusion that organizational learning takes place through information acquisition, information dissemination, or information interpretation within organizations. In other words, organizational learning can occur when any one of these components is present within an organization’s learning system. Each of these components will be discussed in more detail in the following sections. In addition, the elements of information storage and information retrieval will be discussed. While the mere existence of storage or retrieval within an organization does not result in

organizational learning, both of these components can influence organizational learning directly or indirectly through the other components.

Component One: Information Acquisition. Information acquisition is a process whereby information is gathered and obtained by organizations (Daft and Huber 1987; Daft and Weick 1984; Huber 1991). Information can be acquired both actively and passively, as well as through formal or informal methods. Passive information acquisition, or monitoring, takes the form of routinized activities to identify problems and opportunities within the organization's internal and external environments. In contrast, probing is an active examination of environments to obtain more information in response to existing or suspected problems or new opportunities (Daft and Huber 1987). Both formal (e.g., customer surveys) and informal (e.g., gathering information about a supplier during a coffee break) methods can be used to acquire information directly from experience, vicariously from others, or either purposely or unintendedly from the environment. In addition, by hiring new organizational members organizations can acquire new information (Huber 1991). Organizational learning occurs through information acquisition if any of the organization's members obtains information that is potentially useful to the organization (Huber 1991).

Component Two: Information Dissemination. Information dissemination is the process whereby information from different sources within the organization is shared among organizational members (Huber 1991). Information dissemination, or distribution, is necessary to carry out the functions of decision making and control. From a decision making standpoint, organizations learn what to do from distributed information. In terms of control, organizations use distributed information to learn what needs to be done differently (Daft and Huber 1987).

Increased organizational learning occurs when information that is disseminated among members leads to new information or understanding. In other words, greater

organizational learning occurs as more organizational members receive the information and recognize it as potentially useful to the organization (Huber 1991). This implies that a greater amount and frequency and a wider distribution of information leads to enhanced organizational learning (Dixon 1992).

Component Three: Information Interpretation. Information interpretation is the process whereby disseminated information is translated and given one or more commonly understood interpretations (Daft and Weick 1984; Huber 1991). This process is influenced by existing cognitive maps, conceptual schemes, and mental models of organizational members (Daft and Weick 1984; Huber 1991; Senge 1990a), decision frames (Tversky and Kahneman 1981), media richness (Daft and Huber 1987), information load (Daft and Huber 1987), and unlearning (Hedberg 1981). Organizational learning occurs when ambiguity is reduced through the development of varied interpretations that lead to shared understandings among organizational members (Dixon 1992; Huber 1991).

Component Four: Information Storage. Organizational theorists have discussed information storage as organizational memory for some time (e.g., Argyris and Schön 1978; Daft and Weick 1984; Hedberg 1981; Levitt and March 1988; March and Olsen 1976). Although organizational memory does not necessarily resemble human memory (Walsh and Ungson 1991), the idea that organizations process information as part of learning implies that the concept of memory should be incorporated as one of the components of organizational learning.

Organizational memory is defined as “stored information from an organization’s history that can be brought to bear on present decisions” (Walsh and Ungson 1991, p. 61). It is the means by which information that is acquired and disseminated, as well as the interpretations attached to the information, is stored for future use by the organization (Huber 1991). Information that is retained by the organization as part of organizational

memory is thought to be retained in organizational members' minds, in cultural norms and stories of the organization, in organizational structures, policies, procedures, and processes, in the physical structure of the organization's workplace, and in archives (Lawson and Ventress 1992; Walsh and Ungson 1991). A recent phenomenon for retaining information as part of organizational memory has been the introduction and use of expert systems (Anonymous 1992a, 1992b). Specifically, expert systems provide a means for capturing human expert experience in an information system and managing that knowledge to allow retrieval of appropriate information (King 1995). Modern computer-based technology has substantially reduced the costs of developing expert systems to capture the expertise of organizational members (Levitt and March 1988).

Organizational memory can have either a positive or negative influence on organizational learning. On the positive side, it can help the organization identify what is important, decrease the number of possible explanations to a practical number, and prevent the organization from making the same mistake twice (Dixon 1992). Conversely, it can negatively influence organizational learning by predisposing how a situation will be viewed, by "automatically eliminating alternative explanations that might be more useful" (Dixon 1992, p. 44).

Organizational memory influences the other components of organizational learning systems. First, "*information acquisition* depends in many instances on attention, which is directed by previous learning retained in memory" (Huber 1991, p. 106). Second, the distribution of information in terms of what information is routed to whom, routing delays, and information distortion is influenced by information contained in organizational memory. Third, organizational memory influences how information is interpreted within the organization. Finally, only what has been stored in organizational memory can be retrieved (Huber 1991).

Organizational learning occurs as part of information storage when the learning gained from acquisition, dissemination, and interpretation survives the individuals who

originate the learning and is embedded in organizational memory (Galer and van der Heijden 1992). The continuous effectiveness of organizational memory as a component of organizational learning is contingent upon at least four variables (Huber 1991). First, membership turnover creates great loss in the human elements of an organization's memory. As individuals leave the organization, relevant organizational learning can be lost. Second, how information is disseminated and interpreted within the organization influences the effectiveness of organizational memory, and hence organizational learning. Third, the norms and methods for storing information influence organizational memory. Fourth, organizational memory is influenced by the methods for locating and retrieving stored information. "[O]rganizational members with information needs frequently do not know of the existence or whereabouts of information possessed or stored by other members" (Huber 1991, p. 105).

Component Five: Information Retrieval. Information retrieval refers to the process whereby stored information is located and recovered. As mentioned in the previous section, organizational memory and information retrieval are interrelated. First, information storage is a precursor to information retrieval. To retrieve information it must be stored in organizational memory. Conversely, information retrieval methods influence the structure of organizational memory, the accessibility of information stored in organizational memory, and the cognitive capacity of the organization for new learning (i.e., methods for automatic retrieval of information from organizational memory must be available in order to free cognitive capacity) (Dixon 1992). Information retrieval is considered a component of organizational learning because in order "to demonstrate or use organizational learning, that which has been learned must be stored in memory and then brought forth from memory" (Huber 1991, p. 106).

Skills Associated with Organizational Learning

Organizational learning scholars have categorized learning elements as “disciplines,” “foundations,” and “action imperatives” (Senge 1990a; Sinkula and Noordewier 1994; Tobin 1993; Watkins and Marsick 1993). Table 3 compares representative categorizations of organizational learning and their corresponding labels and elements.

The intent of Table 3 is not to create dialog concerning whether the conceptualizations of organizational learning are exactly matched across researchers. They are not. For example, the argument could be made that one researcher’s element overlaps with two of another researchers’ elements. The objective of the comparison in Table 3 is to illustrate that researchers have identified similar elements necessary for organizational learning.

As shown in Table 3, existing research has identified five skills that exemplify organizational learning. The identification of these skills by researchers has been based on observations of organizations that are believed to be actively engaged in organizational learning (with the exception of Sinkula and Noordewier who quantitatively operationalized and measured the skills). In other words, the observations are based on organizations (e.g., Analog Devices, AT&T, Boeing, Canon, Chaparral Steel, Herman Miller, Honda, Matsushita, NEC, Royal Dutch/Shell Group, Sharp, Xerox) that are thought to effectively acquire information, disseminate information, and modify their potential range of behaviors based on their interpretation of the information (Garvin 1993; Nonaka 1991; Senge 1990a).

TABLE 3

COMPARISON OF REPRESENTATIVE ORGANIZATIONAL
LEARNING CATEGORIZATIONS

<u>Categorizations of Organizational Learning</u>						
<u>Author</u>	<u>Category Label</u>	<u>Category 1</u>	<u>Category 2</u>	<u>Category 3</u>	<u>Category 4</u>	<u>Category 5</u>
Senge 1990a	Disciplines	Learning Principles ⁵	Building Shared Vision	Team Learning	Mental Models	Systems Thinking/ Personal Mastery
Sinkula & Noordewier 1994	Foundations	Learning Axioms	Shared Vision	Cross-functional Teams	Open-mindedness	Experience Sharing
Tobin 1993 ⁶	Foundations	Thinking Literacy	Visible Leadership	Building Learning Teams	Overcoming Functional Myopia	-
Watkins & Marsick 1993	Action Imperatives	Create Continuous Learning Opportunities	Empower People Toward a Collective Vision	Encourage Collaboration and Team Learning	Promote Inquiry and Dialog	Establish Systems to Capture and Share Learning

The first skill needed for effective organizational learning is a fundamental belief in the premise that learning is of value to the organization. The foundation for this skill relies on an organization's cultural knowledge base, or what Sackmann (1991) calls axiomatic knowledge. This culture provides the basic guidelines and fundamental beliefs and assumptions underlying behavior within an organization (Sackmann 1991). For this skill to be present, an organization must have a culture that is amenable to learning (Galer

⁵“Learning principles” is not one of Senge's (1990a) disciplines, rather it is presented as the guide to ideas and insights for the five disciplines.

⁶Tobin (1993) has a fifth foundation, “Managers as Enablers”; however, it does not fit well with the other categorizations as it is a discussion of the new role of middle managers.

and van der Heijden 1992). Learning must be seen as the key to an organization's improvement, competitive advantage, and ultimate survival (Sinkula and Noordewier 1994). For example, Tobin's (1993, p. 14) "five principles for the learning organization" represent this type of culture:

1. Everyone is a learner.
2. People learn from each other.
3. Learning enables change.
4. Learning is continuous.
5. Learning is an investment, not an expense.

When these five principles are regularly practiced (not merely espoused), the fundamental belief in the value of learning is exemplified by the culture. In contrast, when organizations place little value on these five principles, little learning will occur.

The explanation of the first skill is based on Sinkula and Noordewier's (1994) "learning axioms," or the value an organization places on learning. This is similar to Senge's (1990a) "learning principles," which are the guiding ideas and insights about learning that underlie an organization's practice of organizational learning. For effective organizational learning to take place, researchers argue that an organization's learning principles or axioms must involve the creation of continuous learning opportunities (Watkins and Marsick 1993) and the development of "thinking literacy" (i.e., the collective ability of organizational members to think and reason) (Tobin 1993).

Most researchers who write about organizational learning skills agree that a shared vision within an organization is a crucial foundation for learning (Day 1991; Galer and van der Heijden 1992; Senge 1990a; Sinkula and Noordewier 1994; Tobin 1993; Watkins and Marsick 1993). This concept of shared vision is the second skill associated with organizational learning. It is represented by a clear, coherent, and comprehensive vision shared by all organizational members. Senge (1990a) describes a shared vision as deeply shared goals, values, and missions that "bind people together around a common

identity and sense of destiny” (p. 9). Tobin’s (1993) discussion of “visible leadership” focuses on the clarity and constancy of a vision throughout the organization as being vital to organizational learning. Watkins and Marsick (1993) believe that organizational learning depends on the participation of all organizational members in a collective, or shared, vision. A truly shared vision results in commitment to goals, values, and missions rather than compliance (Senge 1990a; Tobin 1993; Watkins and Marsick 1993). People “excel and learn, not because they are told to, but because they want to” (Senge 1990a, p. 9).

The third skill possessed by organizations that engage in organizational learning is the incorporation of cross-functional teams. Teams are an overriding theme of the recent management theory and organizational learning literatures. From a management theory perspective, teams are an integral part of lateral (or horizontal) organizations. Customer-oriented organizations are structured based on “a set of horizontal processes that begin with the supplier and end with the customer” (Spencer 1994, p. 447). Multidisciplinary teams are organized around core processes to facilitate accomplishment of organizational objectives (Byrne 1993; Chung 1994; Spencer 1994).

From an organizational learning perspective, Day (1991) suggests that cross-functional teams are the key learning unit. Senge (1990a, p. 10) states, “Team learning is vital because teams, not individuals, are the fundamental learning unit in modern organizations. This is where ‘the rubber meets the road’; unless teams can learn, the organization cannot learn.” Similarly, other researchers view team learning as the key to building organizational learning. When individuals learn, they may not share their new knowledge with others, or it may not be used by the organization. Teams provide a means whereby individuals can constantly interact with one another through dialogue and discussion. They serve as mechanisms for activities that are essential to organizational learning: systematic problem solving and experimentation. Systematic problem solving is the search for underlying causes of problems by depending on the scientific method

and analytical processes rather than relying on assumptions, guesswork, or intuition (Bennis and Nanus 1985; Garvin 1993). Experimentation is the use of formal, empirical methodologies to find the underlying cause-effect relationships relevant to the organization.

Teams accumulate their information from problem solving and experimentation and investigate it from various angles (Nonaka 1991; Watkins and Marsick 1993). They encourage opposing ideas to be brought together and confronted—“ideas that otherwise would remain within the heads of individuals and not linked together in new combinations” (Watkins and Marsick 1993, p. 97). Finally, cross-functional teams act as media for quickly and efficiently transferring information throughout the organization. The quick and efficient transfer of information has been identified as a required activity for effective organizational learning (Garvin 1993). When a team learns (i.e., adopts something new) through their combined efforts, they spread new learning faster and further via their contacts throughout the organization (Tobin 1993; Watkins and Marsick 1993). Watkins and Marsick (1993) argue, “When people know how to work and learn together, they spread new learning farther and faster because they form a critical mass” (p. 111-112).

The fourth skill needed by organizations to effectively manage their organizational learning is composed of openmindedness (Sinkula and Noordewier 1994) and unlearning (Hedberg 1981). It has been implied throughout this review that organizations must learn in order to survive in an environment that is continually changing. As organizations learn, they evolve more efficient control techniques. The paradox is that the very control techniques that have evolved from organizational learning create conditions that inhibit the organization’s capacity to learn (Argyris and Schön 1978). What organizations must do to prevent the control mechanisms from hindering organizational learning is to rely on openmindedness and unlearning.

For openmindedness and unlearning to be exhibited, several activities need to be present within an organization (Sinkula and Noordewier 1994). First, an organization needs to develop the ability to “see the customer” in new ways (Adams 1993) or “hear the voice” of the customer (Barabba and Zaltman 1991). In other words, the organization must anticipate and respond to constantly changing customers’ needs and desires. Second, the organization needs to develop the willingness and capacity to rigorously scrutinize shared assumptions (Argyris and Schön 1978) and mental models (Senge 1990a) that organizational members hold. For example, Tobin (1993) suggests that when organizations or functions within organizations become focused on the organization’s or group’s goals and values, they lose sight of the overall goals and values. This is what Tobin refers to as functional myopia. Openmindedness and unlearning imply that the shared assumptions and mental models of the myopic organization or group should be scrutinized.

Third, the organization needs to continually question its perceptions of the environment and abandon information that is obsolete. This continual questioning is the essence of inquiry and dialogue (Watkins and Marsick 1993). The questioning should be based on open-minded curiosity, where biases and judgments are suspended to allow new view points to emerge. The process of discarding existing information to make way for new information, and the resultant new interpretations of the information and modifications of behaviors based on the new information is the essence of unlearning (Hedberg 1981; Nystrom and Starbuck 1984). In other words, organizations must abandon old information when the organizations’ actions conflict with changes in the environment (Bennis and Nanus 1985).

The final skill associated with organization learning is concerned with capturing and storing lessons learned from personal experiences (Bedeian 1986; Duncan and Weiss 1979; Galer and van der Heijden 1992; Huber 1991; March and Olsen 1976) and the experiences of others (Dutton and Freedman 1985; Garvin 1993; Levitt and March 1988).

This skill includes reviewing both successes and failures of the organization, systematically assessing them, and recording the lessons in a form that is easily accessible by organizational members (Garvin 1993). In accordance, Bennis and Nanus (1985) have suggested that a reinterpretation of organizational history is critical for organizational learning. “Every organization has its experiences and traditions. . . . When we examine these experiences in light of new and evolving environments, it is often possible to draw lessons about what works under different sets of circumstances” (Bennis and Nanus 1985, p. 8).

This skill also involves gaining insights from outside the organization’s immediate environment by gathering information about the ideas and actions of organizational stakeholders or people in analogous organizations or situations (Bennis and Nanus 1985; Duncan and Weiss 1979; Garvin 1993). Organizations commonly strive to learn about the strategies, administrative practices, and technologies of other organizations (Huber 1991).

Summary

The concept of organizational learning has a rich history in the organizational behavior literature; however, the research surrounding organizational learning is fragmented because of divergent theoretical bases. Nonetheless, there is agreement on several ideas. First, organizational learning takes place at different levels or in different modes. Specifically, lower levels of learning are aimed at improving efficiency, while higher levels concentrate on building effectiveness into the organizational system. Second, organizational learning can occur through any one or a combination of components of organizational learning systems—information acquisition, dissemination, interpretation, storage, or retrieval. Third, researchers have identified five skills that represent organizational learning. The implication is that the presence of these activities

in an organization would indicate that an organization is engaging in organizational learning.

The organizational behavior research concerned with organizational learning does not focus on any specific target for learning or any particular type of organizational learning. In other words, the implication is that organizations can learn about various topics (e.g., manufacturing processes, financial and accounting practices, MIS tools and techniques, marketplace requests, training and development practices). The next section of this manuscript focuses on one type of organizational learning that is of relevance to the marketing discipline.

Organizational Learning: A Marketing Perspective

At this point, it might be asked, what does this discussion have to do with marketing? Thus far, the variable of interest—organizational learning—has been what most might consider to be an organization behavior concept. While this may be true, there are several reasons to view organizational learning from a marketing perspective. First, there has been a growing recognition that the association between marketing management and organization behavior should be studied in order to advance the marketing management literature (Parasuraman and Deshpandé 1984).

Second, from a strategic quality perspective, customer orientation and organizational learning are distinct, yet inseparable. As discussed earlier, the three organizational skills that embody the concept of strategic quality management are continuous improvement, customer orientation, and a combined effort among all members of the organization. The foundation for continuous improvement is organizational learning. Based on the philosophy of strategic quality management, it stands to reason that for organizational learning to be used effectively as part of a quality philosophy, the learning must be directed at improving customer orientation within an organization.

Third, several notable scholars suggest that the time has come for the concept of organizational learning to be introduced into the marketing discipline as the key to responsiveness to customers' needs (Adams 1993; Day 1991; Sinkula 1994). For example, Day (1991) claims that organizations that are market-driven (i.e., "driven to be responsive to market requirements and continuously strive to satisfy their customers" [Day 1990, p. 15]) are well educated about the customers they serve.

Finally, recent research has implied that the ultimate purpose of organizational learning is to learn about customers in order to better satisfy their needs and desires (e.g., Kline and Saunders 1993; Pedler, Burgoyne, and Boydell 1991; Preskill 1994; Watkins and Marsick 1993; Wick and León 1993).

These reasons, therefore, provide the bases for investigating organizational learning from a marketing perspective. In other words, organizational learning focused on learning about customers in order to improve an organization's customer orientation is one domain of organizational learning. As such, it deserves attention from the marketing discipline.

Prior to examining examples of organizational skills associated with organizational learning directed at improving customer orientation, a foundation for the importance of studying these skills will be developed. First, a brief history of the customer orientation concept will be explored. Second, trends supporting the study of customer-oriented organizational learning will be discussed. The discussion will describe customer-oriented organizational learning, as well as how customer-oriented learning can be a basis for a sustainable competitive advantage.

Customer Orientation

Almost four decades ago, researchers and practitioners began to write about the marketing concept—the philosophical foundation of customer orientation :

Marketing "is the whole business seen from the point of view of its final result, that is, from the customer's point of view" (Drucker 1954, p. 39).

A marketing philosophy is “the recognition and acceptance of a customer-oriented way of doing business. . . . the customer becomes the fulcrum, the pivot point about which the business moves in operating for the balanced best interests of all concerned” (Borch 1957, p. 4).

The marketing concept is a business philosophy whereby the organization is “skillful in conceiving and then making the business do what suits the interests of the customer” (McKitterick 1957, p. 78).

“The difference between marketing and selling is more than semantic. Selling focuses on the needs of the seller, marketing on the needs of the buyer. Selling is preoccupied with the seller’s need to convert his product into cash, marketing with the idea of satisfying the needs of the customer by means of the product and the whole cluster of things associated with creating, delivering, and finally consuming it. . . . A truly marketing-minded firm tries to create value-satisfying goods and services that consumers will want to buy” (Levitt 1986, p. 153).

Since the time of these early writers, the marketing concept has been considered a fundamental business philosophy in marketing practice (Deshpandé, Farley, and Webster 1993). It has been defined in many ways, including: an integrated consumer focus and profit orientation that guides and coordinates the operations of the entire organization (Barksdale and Darden 1971); a business philosophy based on a concern for the consumer in all business decisions and operational considerations, with profit as a reward for efficiently satisfying customers (Bell and Emory 1971); the integration and coordination of all marketing functions with all other corporate functions (Felton 1959); an emphasis on knowledge of customer needs and wants, profit orientation, and recognition of the importance of the marketing function (Hise 1965; McNamara 1972); satisfying customers within the constraints of human resource limitations (Payne 1988); a customer focus and a long-term strategic orientation, with the key to profitability being long-term customer satisfaction rather than current sales volume (Webster 1988). As these definitions illustrate, the three core principles or “pillars” of the marketing concept are: (1) a customer focus, (2) a long-term perspective, and (3) an integrated marketing effort throughout the organization (Kohli and Jaworski 1990; Lusch and Laczniak 1987; Narver and Slater 1990; Webster 1988).

Recently, researchers have shown a renewed interest in the marketing concept as they attempt to study its implementation (Day 1990; Kohli and Jaworski 1990; Jaworski and Kohli 1993; Narver and Slater 1990; Slater and Narver 1994a). This research has led to the recognition of a concept labeled customer orientation. There are a number of different conceptualizations of customer orientation (Swartz 1990). The conceptualization used here follows Deshpandé, Farley, and Webster's (1993) definition of customer orientation as "the set of beliefs that puts the customers' interests first . . . in order to develop a long-term profitable enterprise" (p. 27). This allows the terms customer orientation and market orientation to be used synonymously. This can be justified because the conventional definition of the term "market" is all potential customers of an organization (Kotler 1994).

In general, this definition is in concert with other definitions of customer orientation. Each of the following representative descriptions exemplifies Deshpandé, Farley, and Webster's (1993) idea of putting customers' interests first. Shapiro (1988) points out that a customer orientation requires organization-wide gathering of information about customers, along with organization-wide coordination and commitment to meet market needs. Kohli and Jaworski's (1990) definition of customer orientation focuses on generating, disseminating, and responding to information pertaining to customers' current and future needs, as well as information about external market factors that influence these needs. Narver and Slater (1990) describe customer orientation as "the organizational culture . . . that most effectively and efficiently creates the necessary behaviors for the creation of superior value for buyers" [i.e., customers] (p. 21).⁷

To summarize, the marketing concept, first identified in the 1950s, is a business philosophy that emphasizes a long-term customer focus, along with an integrated

⁷It should be noted that while Narver and Slater (1990) argue that customer orientation and competitor orientation are equally important for an organization, the present research relies on scholars who view a competitor orientation as contrary to a customer orientation when the organization focuses exclusively on the strengths and weaknesses of the competitor rather than on customers' needs (Deshpandé, Farley, and Webster 1993).

marketing effort throughout the organization. The identification of the concept of customer orientation has been an attempt to operationalize the marketing concept. Using the marketing concept as a foundation, customer orientation is a focus on satisfying customers in order to gain long-term profitability. The next section builds on this by discussing why organizational learning should be directed at improving customer orientation.

Importance of Customer-Oriented Organizational Learning

Adopting a customer orientation as a business philosophy leads to the reasoning that all activities performed by a customer-oriented organization should be focused on satisfying customers' current and future needs and desires. To do this, organizations must learn about customers. Organizations that lose touch with their customers do not learn. They fail either to obtain accurate information about customers or they do not interpret information correctly (Daft and Huber 1987). Hence, organizations must engage in customer-oriented organizational learning. Before describing this concept in more detail, however, let's investigate several reasons that customer-oriented organizational learning is important.

Recently, researchers have implied that the ultimate goal of organizational learning is to satisfy customers' needs and desires. Preskill (1994) suggests that meeting customers' needs and expectations is an outcome of effective organizational learning. Kline and Saunders (1993) claim that organizational learning is enhanced when organizational members can think the way a customer would think. This type of learning allows organizations to truly serve customers' needs. Pedler and his colleagues (1991) believe that one of the characteristics of a "Learning Company" is that they strive "to delight customers."

To determine what organizations should learn, Wick and León (1993, p. 49-50) identify five questions an organization should ask (*emphasis added*):

1. Is your business or department clear about its mission, the *customers* it serves, and results that are needed?
2. Are there technological trends that can put your company in a better *position* than your competitors?
3. What initiatives can your company take, such as improving quality or reducing cycle time, that can give it a *competitive advantage*?
4. What steps might your *competitor* take to put your company at a disadvantage?
5. Do our *customers* have an unmet need or unfulfilled expectation?

Each of these questions, in some way, is related to learning about customers or factors that influence customers. Furthermore, Wick and León (1993, p. 147) imply that the customer is the primary target of organizational learning. Indications of this include the following guidelines: learning goals should be selected to meet the customers' needs; one key to organizational learning is gathering information from customers; the vision of the organization towards which organizational learning should be directed is "to make the organization and its product the customer's first choice."

Another team of researchers echoes this emphasis of organizational learning on customers. Watkins and Marsick (1993) state that it is imperative for organizational learning to be focused on being responsive to external customers—their "needs influence all members of an organization" (p. 18). The initial starting point for organizational learning is often envisioning "what an organization needs to look like in order to be the best it can be from the customers' perspective" (Watkins and Marsick 1993, p. 247). This involves participation of customers in information sharing. Examples of this idea of the customer as the focal point of organizational learning are evident in Watkins and Marsick's (1993) research. Many organizations (e.g., Consumer Communications Services, AT&T; The Brewster Company; Granite Rock; Intermedics Orthopedics, Inc.; Advanced Micro Devices, Inc.) that are beginning to engage in organizational learning activities have "a stronger customer focus" as one of their learning initiatives. Another example is the proposal of an accounting system designed to audit the degree to which an

organization engages in organizational learning. One of the five features used in the audit is an index of customer satisfaction (Watkins and Marsick 1993).

There are several forces and trends that can explain why it has become increasingly important for organizations to have a superior ability to learn about customers. First, the customer environment is constantly shifting because of shortened product life cycles, the competitive challenge of a global economy, the continual emergence of new customer segments, and a heightened awareness of customer service (Bedeian 1986; Day 1991; Dixon 1992; Watkins and Marsick 1993). The inevitable pressure accompanying the complexity and instability of the changing markets makes it harder to stay well educated about customers.

Second, organizational learning has, at the same time, become easier and more difficult because of the proliferation of media channels and the exponential growth in the amount of available market information (Day 1991). The paradox is that increased information can enhance organizational learning, while making it difficult to learn for organizations that do not have the appropriate information processing capacity (Daft and Huber 1987).

A third trend that has made customer-oriented organizational learning important is the emergence of total quality as a strategic business philosophy. Quality initiatives involve “learning to monitor work, reduce errors, and contribute suggestions” to satisfy customers (Watkins and Marsick 1993, p. 4). This has drawn attention to the interdependency of the organization’s end-to-end processes in satisfying customers (Watkins and Marsick 1993), thus making it important for the entire organization to learn about customers.

Another force encouraging organizations to continually invest in organizational learning is a condition labeled “lockout” (Cohen and Levinthal 1990). Lockout occurs when an organization stops learning in a particular area. Once the organization ceases to invest in learning in the area, “it may never assimilate and exploit new information in that

field, regardless of the value of that information” (Cohen and Levinthal 1990, p. 136).

This lockout condition occurs for two reasons (Cohen and Levinthal 1990):

1. If an organization does not develop its learning in some initial period of time, the organization will not recognize new opportunities in this same area.
2. The lack of early investment in an opportunity makes it more costly to develop a given level of learning in subsequent periods of time.

The increasing pace of change in customer markets makes it vital for organizations to continually learn about customers in order to avoid lockout.

Finally, effective organizational learning results in shared assumptions by organizational members. Shared assumptions about customers’ needs and desires are critical “to assure the coherency and timeliness of strategies that anticipate rather than react to the market” (Day 1991, p. 2).

These trends and forces are leading more organizations to the realization that they must “pay more attention to the learning processes that generate and update market knowledge” (Day 1991, MSI Report Summary). It has been suggested that knowledge, or information, is the basis for organizational effectiveness (Duncan and Weiss 1979), and the one sure source of sustainable competitive advantage (Nonaka 1991). If executed properly, organizational learning can be considered a distinctive competence (Dixon 1992)—something the organization does especially well in comparison to its competition (Kerin, Mahajan, and Varadarajan 1990). In fact, Day (1991) suggests that superior customer-oriented organizational learning is a distinctive competence because it satisfies the following conditions:

1. Unattainable with money alone: All organizations have market data available to them but only those with a distinctive competence know how to use it for effective organizational learning.
2. Takes time to cultivate: Organizations must work for years to be truly responsive to customer information.
3. Difficult for competitors to imitate: Organizations cannot reproduce customer-oriented organizational learning merely by gaining individuals’ skills— it is “difficult to duplicate the supportive environment and systems capabilities to enable that person to function effectively” (p. 3).

4. Capable of multiple uses: Organizations can use their customer-oriented organizational learning to be responsive to new opportunities.
5. Enhanced by repeated use: Organizations can increase their understanding of and confidence in their knowledge through repeated use of customer-oriented organizational learning skills.

From this perspective, it is posited that the consistency and rate at which organizational learning takes place determine an organization's sustainable competitive advantage. It is argued that successful organizations consistently create and disseminate new information faster than the competition (Day 1991; Nonaka 1991). Additionally, "the ability to learn faster than competitors may be the only sustainable competitive advantage" (De Geus 1988, p. 71).

Description of Customer-Oriented Organizational Learning

Organizations that are responsive to customer requirements and constantly striving to satisfy their customers (i.e., market-driven organizations) are well educated about the customers they serve (Day 1991). They engage in organizational learning in a customer information context. To understand this type of organizational learning, how organizations process customer information must be understood. An information processing approach provides a strong foundation for conceptualizing and operationalizing how organizations learn about their customers (Sinkula 1994).

Information processing may be appropriate for studying organizational learning from any of the four perspectives proposed by Shrivastava (1983) and discussed earlier (i.e., adaptation, assumption sharing, development of knowledge base, institutionalized learning). Nonetheless, the present research is based on the knowledge base development perspective, which views organizational learning as "the process within the organization by which knowledge about action-outcome relationships and the effects of the environment on those relationships is developed" (Duncan and Weiss 1979, p. 84). This perspective is particularly relevant to the information processing approach for two reasons. First, the knowledge base perspective is based on systems theory. Briefly, it

views organizations as open systems that use data from the environment as input to organizational learning (i.e., the transformation process). An organizational knowledge base emerges as the output from the transformation process. This systems view is consistent with the information processing approach based on acquisition and resulting knowledge about organizational behaviors. The second reason that the knowledge base perspective fits well with the information processing approach is because both recognize that knowledge, not necessarily specific actions, is the outcome of organizational learning.

The information processing approach describes organizational learning as the acquisition, dissemination, interpretation, and storage of information within the organization resulting in either modification of organizational behavior or modification of the potential range of organizational behaviors to reflect new knowledge and insights (Garvin 1993; Huber 1991; Nonaka 1991).⁸ Marketing scholars have further defined one domain of organizational learning as the acquisition, dissemination, interpretation, and storage of relevant information about customers (Adams 1993; Day 1991; Sinkula 1994). Because the present research is concerned with organizational learning about customers, the conceptual definition of customer-oriented organizational learning to be used is:

The acquisition, dissemination, interpretation, and storage of customer-oriented information resulting in the development of a knowledge base that reflects new information and insights about customers.

Illustrations of Customer-Oriented Organizational Learning

The question arises as to how researchers can determine if an organization engages in customer-oriented organizational learning. The problem stems from the idea that effective organizational learning is systemic. Researchers implicitly and explicitly

⁸As mentioned earlier, researchers disagree about the outcome of organizational learning. Following Sinkula (1994), the present research takes the view that neither overt change nor decision making is a necessary outcome for organizational learning to occur; rather, the outcome of organizational learning need only be a change in the range of potential behaviors available to the organization.

argue that systems thinking must integrate the components of organizational learning (Duncan and Weiss 1979; Hedberg 1981; Lee, Courtney, and O'Keefe 1992; March and Olsen 1976; Senge 1990a; Shrivastava 1983; Watkins and Marsick 1993). For example, Senge (1990a) states:

. . . vision without systems thinking ends up painting lovely pictures of the future with no deep understanding of the forces that must be mastered to move from here to there. This is one of the reasons why many firms that have jumped on the "vision bandwagon" in recent years have found that lofty vision alone fails to turn around a firm's fortunes. Without systems thinking, the seed of vision falls on harsh soil. If nonsystemic thinking predominates, the first condition for nurturing vision is not met: a genuine belief that we can make our vision real in the future (p. 12).

This systemic element of organizational learning makes it difficult to identify organizational learning within organizations. Therefore, the question still remains: how can organizations that engage in customer-oriented organizational learning be differentiated from those that do not?

A possible solution to this dilemma might lie in the five skills, discussed earlier, that exemplify organizational learning. The inference from this discussion was that the presence of these skills in an organization would imply that an organization engages in organizational learning. Taking this argument one step further, an organization would be thought to be engaging in customer-oriented organizational learning if the use of the skills resulted in learning about customers. In other words, the organization would concentrate on the organizational learning skills of learning axioms, shared vision, cross-functional teams, openmindedness, and experience sharing on improving customer orientation within the organization.⁹ Business strategies for operationalizing each of these skills in a marketing context can be found by examining a variety of companies. The following sections contain illustrations from organizations that exhibit the use of organizational learning skills in a customer-oriented context. These examples are not

⁹Sinkula and Noordewier's (1994) research on organizational learning will be used as the basis for the categorization of organizational skills. At this time, they are the only researchers known to this author to have quantitatively operationalized and empirically measured organizational learning skills. The other conceptualizations (displayed in Table 3) closely follow theirs.

meant to imply that any of the named organizations necessarily have all the components essential for customer-oriented organizational learning. Rather, the intent is to illustrate that customer-oriented organizational learning skills can be identified.

Learning Axioms. Some organizations believe in the value of continuous learning to the organization. For the learning axioms skill to be present, this belief must be supported by an organization's culture (Galer and van der Heijden 1992; Sinkula and Noordewier 1994; Tobin 1993; Watkins and Marsick 1993). One example of this skill is illustrated by AT&T's Consumer Communications Services business group. In August 1990, then-Vice-President Bob Clark recognized that his business group was going to have to change to be successful in creating "a perfect customer contact every time" (Watkins and Marsick 1993, p. 40). He discovered, however, that the word "change" frightened people. To bring about the major cultural change needed to create the perfect customer contact, Clark and his group found that a learning context needed to be supported by the culture. The idea was that a fundamental belief in the value of continuous learning would "help people to pull themselves toward change" whereas without this fundamental belief, the organization would attempt to push people into change (Watkins and Marsick 1993, p. 40). AT&T's definition of continuous learning exemplifies the skill of learning axioms (Watkins and Marsick 1993, p. 40-41, *emphasis added*):

Continuous learning is the ongoing formal and informal acquisition, both on and off the job, of individual, team, and organizational skills, knowledge, and abilities. . . . For this strategy to be supported, the business environment must include the following characteristics:

- A *mindset* that views every experience as a potential learning experience
- A *value* that encourages individual and team learning and involvement
- An *attitude* that encourages the routine reexamination of individual, team, and organizational assumptions, values, methods, and policies

This example illustrates the learning axioms skill in a marketing context. In other words, it provides an example of how customer-oriented organizational learning requires a fundamental belief in the value of learning about customers. The purpose of the change at AT&T was clear: AT&T wanted to retain existing customers and attract new customers in the face of growing competition. Bob and his group believed that the best way to do this was to create an environment that valued and supported continuous learning for all organizational members. They found this approach to be a better solution than attempting to convince members to change because of the threat of competition.

Shared Vision. An example of a commitment by all organizational members to a clear and comprehensive vision that places customers' interests first is found at Corning Inc. In 1983, Jamie Houghton, Corning's CEO, had a vision for 1995, that included improved customer satisfaction. For nine months, a group of ten key people worked on developing the plan to put the vision in place. Ed O'Brien, corporate director of education, went to the group's manager and said (Wick and León 1993, p. 169):

When you say, 'Follow me and go over the mountain,' you're going to have nine people with you, but how are you going to get the hearts, minds, and the souls of the others to come over the mountain with you?

The group's plan was to hold a traditional two hour communications meeting, where the vision was explained and then questions were answered. O'Brien told the manager that the result of such a meeting would be typical. In other words, the organizational members would not be committed to a shared, collective vision. He said that traditional meetings do not address the basic concerns of people, like "What's in it for me?" "Will it affect my pay?" "What's going to happen to my career?"

To begin to ensure that the vision became a shared vision, a large-scale, two-day, highly structured, interactive workshop was used. The intent of the workshop was to convince organizational members that change was desired because they were dissatisfied with the status quo and that the new vision offered a desirable future. In addition, agreement on the first steps for change was sought. An important element of this

interactive workshop was the inclusion of external customers to ensure that customers' interests were placed first as part of the vision. They were asked to be blunt about their likes and dislikes. They were told that, "Now is not the time to be tactful or diplomatic or to smooth over real issues" (Wick and León 1993, p. 170). One specific outcome of this meeting and the subsequent steps was customer visits. Workers are sent out to Corning's customers to look at what the customer does and discuss their needs and desires. The commitment to this shared vision has resulted in measurable progress: in 1991, return on equity was almost sixteen percent, up over seven percent since 1983.

This example illustrates how customer-oriented organizational learning requires a shared vision among all organizational members. Before the collective acceptance of the shared vision at Corning, such things as customer visits and quality reviews were not performed. The new emphasis of the shared vision on customer satisfaction resulted in increased performance for Corning Inc.

Cross-functional Teams. Cross-functional teams provide mechanisms for engaging in customer-oriented organizational learning. The success of cross-functional teams appears to be the result of two factors related to customers (Dumaine 1993; Nussbaum 1992). First, cross-functional teams are blurring the boundaries between traditional functions. These teams are composed of marketing, design, manufacturing, and engineering members organized around the customer rather than around functions. Rather than focusing on the product, the teams focus on consumers and their needs (Dumaine 1993). Second, consumers are involved in every step of the product development process, from inception to design to manufacture. Team members attempt to solve problems and experiment to ensure customer satisfaction with the new product. Information from consumers is shared throughout the organization.

An example of using cross-functional teams as a skill of customer-oriented organizational learning is provided by Thermos and their development of the Thermal Electric Grill (Dumaine 1993). Thermos sent a field research team on the road for a

month to set up focus groups, visit people's homes, and videotape barbecues to learn everything about consumers' cookout needs. The field research team identified problems consumers experienced with existing grills (e.g., messy charcoal, safety and environmental concerns). This information was shared with the rest of the organization. Problem solving and experimentation resulted in the design and commercialization of an innovative and ecologically-minded electric grill. Thermos projects its share of the electric grill market could increase from two percent to twenty percent in the next few years from sales of this product (Dumaine 1993).

Other indications of using cross-functional teams for customer-oriented organizational learning include:

- By bringing together software designers, industrial engineers, marketers, and industrial designers to go out and observe potential customers, Apple Computer was able to design the Powerbook. It became number one in the computer notebook market in 1993 (Nussbaum 1992).
- Gillette asked razor users what they wanted and then designed the Sensor and Sensor for Women razors for manufacturability. As a result, Sensor for Women amassed sixty percent of the market in its first six months on forty million dollars of sales (Maremont 1993; Nussbaum 1992).
- Motorola brought together a team of people from engineering, design, marketing, and manufacturing departments to watch customers use cellular phones and develop their MicroTac cellular phone to meet customers' needs. The MicroTac defined the pocket-size cellular phone market and had a year's edge over Japanese companies (Nussbaum 1992).

All of these examples illustrate how customer-oriented organizational learning is exhibited through the use of cross-functional teams to solve customers' problems, conduct experiments designed to improve customer satisfaction, and quickly and efficiently disseminate customer information throughout an organization.

Openmindedness. Organizational learning in a customer-oriented context also means having the skill to be openminded, or the ability to unlearn obsolete customer information (Day 1991). This is exemplified by organizations that discard old customer information when new information is available. Sometimes unlearning is triggered by either customer requirements or the loss of a key customer, or the combination of both

(Bennis and Nanus 1985). One example that illustrates unlearning is that of Servolift Eastern, a manufacturer of food handling equipment (Wick and León 1993):

Walking through their factory three years ago was like negotiating a maze. The production flow was choked by work-in-progress inventory that had been piled in aisles to be picked up later. More importantly, the lead time from order to shipment date was often eight weeks or longer, causing many customers to place orders elsewhere (p. 20).

Recognizing that customers were leaving, changes were made to open up the aisles, unclog the production flow, and reduce the product lead time to less than 2 weeks (Wick and León 1993). These actions required that the company unlearn. In other words, they had to realize that there was a better way to produce their products.

Another illustration of unlearning comes from Boeing, and their design of the interior of the 777. For years, Boeing's customers had requested an airplane with a flexible fuselage, quick-change seats, and movable galleys. Boeing welded the seats to the floor, and therefore mentally rejected the idea of flexibility and movable seats. Until the introduction of the Airbus, Boeing had succeeded by telling their customers that the request was impossible to meet; however, Airbus met the customers' request. Boeing almost lost a key customer when United decided to make a major purchase from Airbus rather than Boeing. It was devastating to Boeing; they never expected to lose United as a customer. This critical episode forced Boeing to unlearn, or abandon conditions that were inhibiting the organization's capacity to learn (Argyris and Schön 1978). To win back the United contract, Boeing had to abandon their rigid mental frames of reference and truly listen to the customer. The result was that:

Overnight, the interior of the 777 can be reconfigured from vacation-travel, family-style seating to business travel seating for fewer higher-paying passengers. Without customer involvement, the paradigm of a rigid interior would not have been broken (Wick and León 1993, p. 137).

Both the Servolift and the Boeing examples illustrate how customer-oriented organizational learning involves a conscious process of unlearning (Bennis and Nanus 1985; Hedberg 1981; Nystrom and Starbuck 1984). Servolift realized that if it did not abandon old manufacturing processes it would continue to lose customers because of the

long product lead times. Boeing recognized, after almost losing an incredibly valuable customer, that if customer requirements were not taken seriously the competition would respond.

Experience Sharing. Experience sharing in a customer-oriented context involves the capacity to learn from personal experience as well as the experiences of others. Learning from personal experience in a customer-oriented context includes learning from both failures and successes of satisfying customers. This learning can result from chance or from established processes for evaluating mistakes (Garvin 1993). Boeing is one company that has established a process for systematically evaluating and learning from mistakes. Immediately after the launch of the 737 and 747 airplane programs, Boeing used its system:

Both planes were introduced with much fanfare and also with serious problems. To ensure that the problems were not repeated, senior managers commissioned a high-level employee group, called Project Homework, to compare the development processes of the 737 and 747 with those of the 707 and 727, two of the company's most profitable planes. The group was asked to develop a set of "lessons learned" that could be of use on future projects. After working for three years, they produced hundreds of recommendations and an inch-thick booklet. Several members of the team were then transferred to the 757 and 767 start-ups, and guided by experience they produced the most successful, error-free launches in Boeing's history (Garvin 1993, p. 85).

This example illustrates how an organization can use its past experience to identify customer problems and correct those problems in the future. Boeing was able to reflect on their past, even though it involved examining their failures, and capture valuable information to make future rollouts more successful.

Learning from others' experiences, the other piece of experience sharing, is also concerned with capturing lessons learned. In a customer-oriented context, this means gathering information directly from customers or from people in analogous organizations or situations about how to enhance customer satisfaction. W. L. Gore & Associates learned the hard way that organizations need to listen carefully to their customers in order to learn. After the introduction of Gore-tex, a few customers began to complain about

leaks. The complaints were sporadic, and Gore researchers were unable to reproduce the problem in the laboratory. Even though Gore could not duplicate the problem, they did think it was real. They mistakenly thought, however, that the leaks were a result of customers not sealing the seams of the garments properly. The story continues:

. . . then Gilson [an employee of Gore] got a letter from a mountain guide who was leading a small group of campers into the Sierras when they were hit by a storm. "He had been trapped in a freak snowstorm in the Sierras and had come very close to freezing to death because our product leaked," Gilson said. "The guy said he had seam-sealed his garment perfectly, according to our instructions, and yet had horrible leakage problems. And he sent us his garment. It was at that point that we agreed to recall the product." What Gore researchers soon discovered was that over a period of time the oils in perspiration clogged the pore structure of the membrane and caused the material to leak, a problem that was easy to solve in second generation Gore-tex. Gore ended up taking back roughly \$4.3 million in products, a huge, difficult decision for a small company that had about \$6 million in sales (Wick and León 1993, p. 55).

What Gore learned was that if they had carefully listened to their customers and worked closely with them—instead of assuming that their customers were using the product improperly—Gore could have recalled the product a lot earlier and for a lot less cost.

Another place to learn from others' experiences is from people in analogous organizations or situations. One common approach to this is called benchmarking. Benchmarking is "the search for industry best practices that lead to superior performance" (Camp 1989, p. 12). This does not imply, however, that benchmarking only involves investigating direct competitors. Rather, it involves uncovering best practices in one's own organization, competitors, and organizations in totally different fields (Wick and León 1993). The link to customer-oriented organizational learning is to find the best practices for improving customer orientation.

Examples of successful benchmarking abound in the popular press. Nonetheless, organizations are not always successful at benchmarking. Compaq Computer Corporation learned that they had been benchmarking with the wrong competitor. During the 1980s, Compaq exclusively focused on IBM as a benchmark. In doing this, they did not recognize the new competition—Dell, CompuAdd, AST Research, Northgate,

Gateway 2000. Consequently, Compaq's stock price fell, their market share decreased, and their domestic sales stagnated (Wick and León 1993). What Compaq learned was that organizations can successfully benchmark if they use the right focal point(s) and use as many analogous organizations as possible to extract whatever information is available (Wick and León 1993).

The Gore and the Compaq examples are stories of near disaster for the companies; however, they poignantly illustrate the importance of learning from others. While neither Gore nor Compaq immediately recognized what their customers were trying to teach them, over time, they eventually learned to listen carefully and gather as much information as possible from others' experiences.

Summary of Customer-Oriented Organizational Learning. The above illustrations provide qualitative evidence of the existence of customer-oriented organizational learning. As stated previously, however, the companies mentioned may not actually engage in all the components of organizational learning. Nonetheless, the examples do illustrate that the skills associated with organizational learning can be identified. Furthermore, these skills can be found in a customer-oriented context. This provides at least some evidence, therefore, that organizations that engage in customer-oriented organizational learning can be differentiated from those that do not. This differentiation relies on identifying the presence or absence of customer-oriented organizational learning skills.

Identifying the presence or absence of these skills, however, does not aid companies in creating customer-oriented organizational learning environments. Rather, what is needed is to determine those characteristics that can facilitate organizational learning associated with improving customer orientation. Toward this end, the next section of this manuscript provides an investigation of selected organizational characteristics thought to facilitate customer-oriented organizational learning.

Organizational Facilitators of Customer-Oriented Organizational Learning

Information is viewed by systems theorists as the element that binds the organization together (Rogers and Agarwala-Rogers 1976). From the organizational learning perspective, information that flows with speed, accuracy, and openness is the key to effective organizational learning—information drives organizational learning (Argyris and Schön 1978; Cohen and Levinthal 1990; Galer and van der Heijden 1992; Stata 1989; Watkins and Marsick 1993; Wick and León 1993). Information is the essential input into the organization for organizational learning. Furthermore, customer-oriented organizational learning requires information about customers as an input into the organization. For organizations striving to learn about their customers, customer information is the element that binds the organization together. This idea is supported by scholars writing about the marketing concept—the foundation for customer orientation:

- Bell and Emory (1971) advocated that adequate resources should be allocated to gather customer-based information.
- Borch (1957) suggested that organizations should diligently monitor their mechanisms for acquiring and transmitting customer information “to assure keeping continually in phase with requirements” (p. 8).
- McNamara (1972), in a study of company presidents and chief marketing executives, found that there was general agreement that information flows were of major importance in coordinating the marketing activities within organizations.
- Shapiro (1988) suggested that for an organization to be customer-oriented, information from customers must “permeate every corporate function” (p. 120) and cross-functional information flows should be interactive rather than serial.
- Webster (1988) identified an important role of marketing management is “to be sure that information about customer service and satisfaction is gathered and sent to all parts of the organization on a regular basis” (p. 39).

It is evident that customer information is paramount to customer-oriented learning. The organizational customer knowledge base emerges out of a process of information exchange, evaluation, and integration (Duncan and Weiss 1979).

Even with this conceptual support for the importance of organizations engaging in customer-oriented organizational learning to obtain and transmit information about customers, little empirical research has been conducted in the area of organizational learning, and virtually none in the area of customer-oriented organizational learning. What has been conducted has utilized simulations (e.g., management games and exercises). For example, Cangelosi and Dill (1965) investigated how the learning process evidenced itself and the relationship between individual adaptation and organizational learning. Using management games, they found that organizational learning (1) is not a smooth process; (2) is evidenced in various ways (e.g., procedural shortcuts, reassignment of tasks among group members, redundant systems to make judgments more “fail-safe”); and (3) improves performance. Cangelosi and Dill called for future research to identify the organizational characteristics that define an organization’s learning potential.

Lieberman (1972) suggested that organizational learning research should focus on the interactive relation between organizational behavior (i.e., learning) and the elements of the learning environment (e.g., the characteristics of the organization). He stated, “Few management problems have even been formulated in terms of alternative learning environments” (Lieberman 1972, p. 5). Lieberman discovered, through simulations, that the way organizational learning environments are structured influences organizational learning.

In another simulation, Miles and Randolph (1980) found that two different learning approaches were used within organizations that were created under identical simulated conditions and run simultaneously. They found, among other things, that the initial organizing choices of the groups influenced the level or mode of learning.

The results of these simulations have extended our knowledge about organizational learning. Nonetheless, far too little is known to combine these findings into a complete theory of organizational learning. One underlying idea, however, is a

need for research that explores the relationships between the organizational characteristics that comprise the learning environment and the process of organizational learning. Other researchers have suggested that this is an idea that merits further investigation. Daft and Weick (1984) believe that organizations systematically differ in their organizational learning because of organizational and environmental characteristics. There is, however, little understanding of the organizational configurations that may enhance the overall learning processes of organizations (Daft and Weick 1984). Similarly, Watkins and Marsick (1993) suggest that from a management perspective, researchers should give more emphasis to organizational variables, such as strategy and structure, that accompany progress toward organizational learning. These ideas provide an impetus for studying the central question of the present research: What are the organizational characteristics that facilitate customer-oriented organizational learning?

It could be posited that many organizational characteristics and external factors influence organizational learning, and specifically customer-oriented organizational learning. The present research will examine four of these characteristics: structure, strategy, innovativeness, and boundary spanning. The reason for selecting these four organizational characteristics is twofold. First, internal organizational characteristics, rather than a mix of internal and external factors, were chosen because managers have more control over internal factors. This, then, lends a more applied perspective to the research. Second, the justification for choosing these four specific organizational characteristics from the multitude of possibilities is because (1) in conceptual writings, they are the most often discussed as facilitating or hindering organizational learning (e.g., Fiol and Lyles 1985) and (2) the organizational theory and organizational behavior literatures suggest they influence the effectiveness and efficiency of organizational information flows.

The following sections review the literature to define these four organizational characteristics and describe their dimensions. Figure 9 provides a graphical guide to this

discussion. Additionally, a brief overview of how each variable is thought to influence customer-oriented organizational learning is proposed. Specific hypotheses are developed in the next chapter.

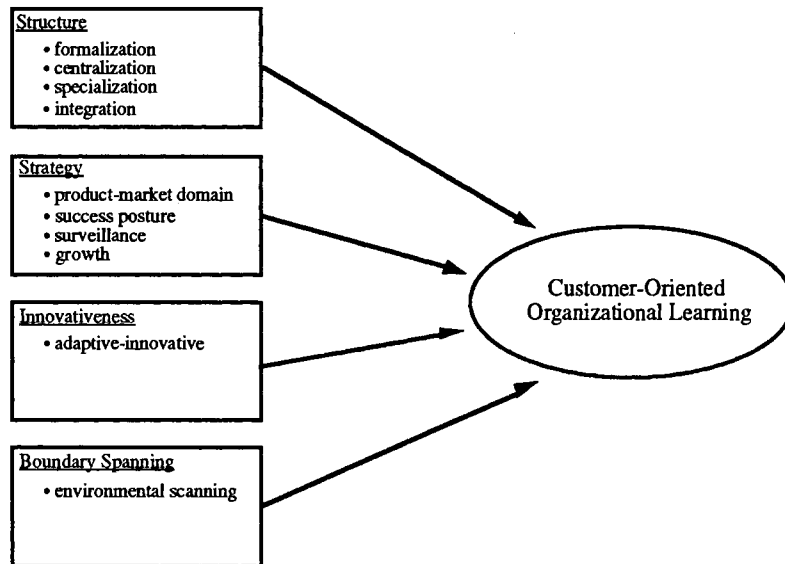


Figure 9. Proposed Model of Customer-Oriented Organizational Learning and Dimensions of Predictor Variables

Organizational Structure

The way in which the components and subsystems of an organization are arranged is referred to as “organizational structure.” Structure specifies the patterns of relationships among the parts of the organization (Rogers and Agarwala-Rogers 1976). More formally, organizational structure “is the enduring allocation of work roles and administrative mechanisms that allow organizations to conduct, coordinate, and control their work activities” (Miller 1987, p. 8). This allocation results in a system of authority

and communication that links people within the organization. Its purpose is to create a division of labor and provide coordination to establish enduring patterns of behavior within the organization (Mintzberg 1979).

Organizational structure and its dimensions have been a topic of much empirical research. In a review of this literature, Champion (1975) grouped organizational variables according to their frequency of use in key journals and textbooks. His list of structural variables includes specialization, formalization, number of personnel on the payroll, differentiation, centralization of authority, and span of control. Other researchers have assessed structure along many of these same dimensions (e.g., Aiken and Hage 1966, 1968; Hall 1982; Hall, Haas, and Johnson 1967; Jablin 1987; Mintzberg 1979; Van de Ven 1976a). Other researchers have introduced the concept of structural integration as an important dimension of organizational structure (Galbraith 1973; Lawrence and Lorsch 1967; Mintzberg 1979).

While researchers in marketing have concentrated on only one or two of these dimensions when investigating organizational structure (e.g., Deshpandé 1982; Deshpandé and Zaltman 1984; Jaworski and Kohli 1993), to be as comprehensive as possible, the present study will investigate organizational structure along all of its identified latent dimensions. The four dimensions that fit this criterion are formalization, centralization, specialization, and integration. Below are explanations of each of these dimensions.

Formalization. The first dimension to be examined, formalization, is the degree to which the work processes of the organization are standardized and the amount of deviation that is allowed from those standards (Aiken and Hage 1966; Mintzberg 1979). It is the design parameter by which the organization explicitly defines roles, authority relations, communications, norms and sanctions, and procedures of the organization (Hall, Haas, and Johnson 1967; Jablin 1987; Price and Mueller 1986). Organizations use formalization to reduce variability in members' behaviors and to increase coordination,

consistency, and fairness to customers (Mintzberg 1979). Formalization regulates behavior in the organization through the use of job descriptions outlining behavioral specification of a particular job, written instructions describing behavior specifications of specific work orders, and rules, policies, and procedures that “specify who can or cannot do what, when, where, to whom, and with whose permission” (Mintzberg 1979, p. 82).

Organizational designers (especially management scientists) have long promoted formalization in the form of well-defined authority structures. This widely accepted property was thought to improve the performance of an organization if it faced a stable, unchanging environment. More recently, however, it has been suggested that organizations facing changing environments should place greater emphasis on flexibility of authority structures (Hedberg, Nystrom, and Starbuck 1976).

Researchers have examined the influence of formalized structures on different types of information flows and information processing capacity of organizations. Duncan (1973) indicated that when organizational structure is formalized, information flows are restricted and the organization is not able to process necessary amounts of information (Duncan and Weiss 1979). In his review of the relationship between organizational structure and communication, Jablin (1987) summarizes that one proposition about the relationship can be made. Specifically, that formalization and information flows are inversely related.

In related research regarding the use of information within organizations, Hage and Aiken (1970) show that organizations that are less formalized are more likely to make greater use of new information. Deshpandé and Zaltman (1982) found that less formalized organizations are more likely to use market research than more formalized organizations. Similarly, Deshpandé and Kohli (1989) found that formalization has an indirect influence on how and when reliable and relevant information is shared among organizational members. Specifically, rigid rules and procedures (i.e., high

formalization) were found to intensify group disagreement among managers resulting in less information sharing.

Centralization. Centralization is the second dimension of organizational structure to be discussed. The most obvious aspect of centralization is the right to make decisions (Hall 1982). Centralization taps the delegation of decision-making authority within an organization and the participation of members in decision making (Aiken and Hage 1966, 1968; Van de Ven and Ferry 1980). It represents the tradeoff between decision making power that is distributed throughout an organization versus power that is concentrated at higher levels of authority (Jablin 1987; Price and Mueller 1986). The maximum degree of centralization occurs when all the power for decision making in an organization resides in the hands of a single individual; the minimum degree of centralization—decentralization—occurs when the decision making power is dispersed and all the members of the organization share equally in the exercise of power (Mintzberg 1979; Price and Mueller 1986).

In practice, most organizations fall somewhere between maximum centralization and maximum decentralization. When most decisions are made according to the hierarchy of authority, an organization is considered to be centralized; when the major source of decision making has been delegated by managers to subordinate members, an organization is considered to be decentralized (Price and Mueller 1986; Van de Ven and Ferry 1980).

Centralization is thought to decrease an organization's information processing capabilities (Duncan and Weiss 1979). Research indicates that high centralization can lead to "rigidity and ossification" (Galer and van der Heijden 1992) and restriction of information flows in organizations (Duncan and Weiss 1979). In other words, centralization of strategic decision making is negatively related to the volume of communication and information flows in organizations (Jablin 1987). The relationship

generally hypothesized between centralization and information flows is succinctly stated by Hage, Aiken, and Marrett (1971):

There is less need for feedback when power is concentrated at the top of the organization hierarchy, since the role of subordinates is to implement decisions rather than to participate in the shaping of those decisions. Therefore, as the concentration of power becomes greater, and consequently as the degree of participation in decision-making by lower participants becomes less, we would expect inhibitions on communications in an organization (p. 863).

Specific findings related to centralization and information flows exist. Hage, Aiken, and Marrett (1971) found positive correlations between decentralization and frequency of attending scheduled meetings, and between decentralization and frequency of cross-functional interaction. These and related results led the researchers to conclude, in support of their hypothesis, that “if power is dispersed in the organization, not only does the volume of communication increase, but the flow of communications across departmental boundaries is also increased” (p. 869). Bacharach and Aiken (1977) found significant, positive correlations between decentralization and the frequency of upward, downward, lateral, and total information flows within organizations. Deshpandé and Kohli (1989) found that centralization has a positive influence on how and when reliable and relevant information is shared among organizational members. In more centralized organizations, information was shared less often than in more decentralized organizations.

In related research regarding the use of information within organizations, Hage and Aiken (1970) indicate that organizations that are less centralized are more likely to make greater use of new information. Deshpandé and Zaltman (1982) found that the more decentralized organizations are the more likely they are to use market research than more centralized organizations.

Finally, in his study of a physician’s strike, Meyer (1982) found that centralized structures retard organizational learning “but that learning is enhanced by structures that diffuse decision influence” (p. 533). Some researchers believe that this link between

organizational learning and centralization is related to empowerment. Empowerment is defined as “giving others the authority to act and make decisions on their own” (Schermerhorn 1993, p. 290). Empowerment is often discussed as a prerequisite for organizational learning (e.g., Watkins and Marsick 1993). “In a highly centralized situation, the personnel are not trusted to make decisions or evaluate themselves. Less centralized situations indicated a greater willingness to permit the personnel to carry out their activities in a more autonomous way” (Hall 1982, p. 115).

Specialization. The third dimension of organizational structure to be examined is specialization. Specialization is related to the concept of division of labor within the organization (Pugh and Hickson 1976; Pugh et al. 1963; Pugh et al. 1968). It is concerned with the distribution of official tasks among positions in the organization and the number of tasks in each specific job (Mintzberg 1979; Pugh and Hickson 1976; Pugh et al. 1968). It examines the degree to which tasks are divided into distinct elements (Ruekert, Walker, and Roering 1985). High specialization is found in an organization when a particular set of activities is performed by one or more persons (Pugh and Hickson 1976). Organizations use specialization to increase productivity through repetition (Mintzberg 1979).

Specialization has been promoted as a way to internally differentiate the organization (Hedberg, Nystrom, and Starbuck 1976). It is, however, “a double-edged sword” (Tushman and Scanlan 1981, p. 290). Specialization can increase the efficiency of information processing within a work unit while simultaneously create obstacles to information processing between a work unit and other work units. Specialization creates boundaries that impede cross-functional communication (Tushman and Scanlan 1981). Mintzberg (1979) illustrates how specialization creates problems in information flows and coordination within organizations:

Consider a simple example, the way in which orders are taken in French and American restaurants. In this respect, the work in many French restaurants is more specialized: the maitre d'hôtel takes the order and writes it on a slip of paper and the waiter serves it. In the American restaurant, the waiter generally does both tasks. Thus, if the customer in the French restaurant has a special request, for example to have coffee with his dessert instead of after it as is the norm in France, a communication problem arises. The maitre d'hôtel must go to the trouble of telling the waiter or making a note on the slip of paper. (In fact, it is unlikely that he will do either and it is left to the customer to try, often in vain, to get his message across to the waiter directly.) In effect, specialization creates problems of coordination (p. 73).

Wilensky (1967) points out that specialization encourages rivalry and restriction of information because every work unit within the organization:

becomes a guardian of its own mission, standards, and skills; lines of organization become lines of loyalty and secrecy. In industry, the personnel department defends its control over selection and training; accounting, its standards of reporting; production, its schedules of output; sales, its interests in product design and customer service—each restricting information that might advance competing interests of the others (p. 48).

The result of specialization is parochialism—"the production of misleading or irrelevant information" (Wilensky 1967, p. 50). Specialization narrows the perspective of individuals within organizations (Mintzberg 1979). Day (1991) labels this "collective myopia." "Collective myopia is especially prevalent within organizations that carefully segment their activities and keep functions separate and distinct in the belief that problems are best solved by breaking them into pieces for assignment to specialists working in isolation" (Day 1991, p. 13). As a result of specialization, "organizations do not know what they know" (Huber 1991, p. 106).

Nonaka (1991) suggests that redundancy—"conscious overlapping of company information, business activities, and managerial responsibilities" (p. 102)—is the key to creating knowledge within organizations. Redundancy (as opposed to specialization) is important because it encourages and facilitates the transfer of information (Nonaka 1991). "The organizational logic of redundancy helps explain why Japanese companies manage product development as an overlapping process where different functional divisions work together in a shared division of labor" (Nonaka 1991, p. 102).

Integration. The final structural dimension to be discussed is integration.

Integration is the level of coordination achieved among work units in an organization (Schermerhorn 1993). It is related to coordination among individuals and groups within the organization, that is, cross-functional coordination (Galbraith 1994; Mintzberg 1979). Integration is an attempt to create a lateral mechanism to ensure information is acquired and transmitted throughout the organization (Galbraith 1994). For example, a complaint or request from a key customer may require representatives from customer service, sales, R&D, marketing, and manufacturing to sit down together to develop plans to respond to the customer. If this interaction is left to chance, generally it will not occur; such an organization is characterized by low integration. If, however, the organization has developed some mechanism for encouraging this interaction and it regularly occurs, this organization would be characterized by a relatively high level of integration (Mintzberg 1979).

Galbraith (1973) proposes seven mechanisms that an organization can use to increase structural integration. Mintzberg (1979) collapses these seven into four forms that encompass all of Galbraith's ideas. The four forms of integration are:

1. liaison positions: positions (often nonmanagerial) established to link departments
2. task forces, standing committees, teams: temporary or permanent groups established to link several departments
3. integrating managers: managerial positions established when formal leadership is needed for successfully linking departments
4. matrix structure: dual reporting relationships established to create cross-functional groups at critical points in the organization

As the organization desires to obtain greater amounts of information it can sequentially adopt these mechanisms. Additionally, the mechanisms are cumulative because successful development of the higher forms requires the lower forms to be in place (Galbraith 1973).

In a traditional model of organizational structure, without integration, some behaviors are determined by rules communicated to organizational members before events occur, others are determined by the organizational member in accordance with limited goals and targets, and still others are decided by managers in the hierarchy after an unanticipated event occurs (Galbraith 1973). Today, companies are experiencing forces that make these traditional models of structure inadequate: organizations offer a greater diversity and variety of products or serve a greater diversity and variety of markets; organizations face a turbulent environment characterized by unanticipated changes; an organization requires interdependence of work units to get a product or service to market; quality and speed initiatives have brought about extensive use of cross-functional coordination (Galbraith 1994). The hierarchy becomes overloaded as these forces generate large numbers of exceptions to the rules and targets of the organization (Galbraith 1973).

These changes have led to the realization “that complementary functions within the organization ought to be tightly intermeshed . . . a process in which one unit simply hands off the design to another unit is likely to suffer greater difficulties” (Cohen and Levinthal 1990, p. 134). Integrative mechanisms are necessary because behaviors within the organization must be coordinated. It is impossible for each employee to communicate with all the others with whom he or she is interdependent. The goal is to create organizational structures that permit coordinated information flows across large numbers of interdependent organizational members (Galbraith 1973).

The use of integration (i.e., the creation of lateral relations) is one structural alternative that increases an organization’s information processing ability (Galbraith 1973). This integration permits the organization to process more information without overloading hierarchical channels and encourages information flows when work in the organization is highly interdependent (Galbraith 1973; Mintzberg 1979).

Galbraith (1994) suggests that integration, or what he calls the lateral organization, provides flexibility to the organization in at least three ways. First, with more focus on the customer, the lateral organization allows an organization to gain speed for competitive advantage. Peer-to-peer information flows are often better and faster than using the hierarchy. Second, the lateral organization allows the organization to be responsive to multiple constituencies and unforeseen issues without having to reorganize to do it. “The lateral organization is an organization that is flexible and adaptable and suited for an uncertain and changing world” (Galbraith 1994, p. 148). Third, integration promotes organizational learning. The cross-functional information flows encourage faster learning in a rapidly changing environment.

Structural Combinations. In addition to examining the four structural dimensions in isolation, researchers have examined the influence of structural combinations on organizational behavior (e.g., Burns and Stalker 1966; Mintzberg 1979). One of the simplest classifications of organizations based on these four dimensions is Burns and Stalker’s (1966) identification of two systems of organizational structure. Table 4 displays the characteristics of these two structural types—mechanistic and organic—in terms of the four dimensions.

TABLE 4
DIMENSIONS OF ORGANIZATIONAL STRUCTURE

<u>Dimension</u>	<u>Mechanistic Structure</u>	<u>Organic Structure</u>
Formalization	High	Low
Centralization	High	Low
Specialization	High	Low
Integration	Low	High

(Adapted from Burns, Tom and G. M. Stalker (1966), *The Management of Innovation*, London: Tavistock Publications.)

The mechanistic/organic classification is a continuum of organizational structure alternatives. The classification addresses the four structural dimensions in terms of hierarchy of authority, rules and procedures, division of labor, spans of control, and coordination (Schermerhorn 1993). Mechanistic structures are characterized by many rules and procedures (high formalization); a rigid hierarchy of authority for decision making (high centralization); a precise division of labor with each individual concerned with a set of narrow, distinct tasks (high specialization); formal, impersonal coordination and communication controlled by the vertical hierarchy (low integration). In comparison, organic structures are characterized by few rules and procedures (low formalization); a flexible decision making hierarchy (low centralization); an open division of labor where tasks are not broken down and distributed among specialists (low specialization); personal coordination and communication occurring both laterally and vertically, resembling consultation (high integration) (Burns and Stalker 1966).

This structural classification lends itself to using information processing as a way to conceptualize organizational structure (Galbraith 1973, 1977, 1994; Jablin 1987; Knight and McDaniel 1979; Stinchcombe 1990; Tushman and Nadler 1978). One critical task of the organization is “to facilitate the collection, gathering, and processing of information” about customers (Tushman and Nadler 1978, p. 614). From this perspective, organizations are viewed as information processing systems. The basic function of organizational structure is, therefore, “to create the most appropriate configuration of work units (as well as linkages between these units) to facilitate collection, processing, and distribution of information” (Tushman and Nadler 1978, p. 614).

Just by knowing an organization’s formal structure a great deal about the nature of information flows within it can be predicted (Rogers and Agarwala-Rogers 1976). The structures of organizations influence what type of information is collected from the

environment, who is exposed to what information in the organization, and how the information is processed by the organization (Galbraith 1994; March and Olsen 1976).

Parts of an organization are joined together by flows of information, including flows that involve customer information. These information flows are regulated by the organization's formal structure. Only by focusing on the flows of information can we begin to see how an organization really functions. An organization's structural design contains mechanisms (i.e., formalization, centralization, specialization, integration) that influence how organizations function, including how information flows through the organization (Mintzberg 1979). "The key characteristic of the structure of the organization is that it links the various elements of the organization through the transformation of information" (Duncan and Weiss 1979, p. 105). "By defining authority relationships and communication networks, the internal design of the firm directs the flow of information through the system" (Lewis and Fandt 1989, p. 13). Organizational structure provides the channels of communication through which information flows in the organization and tends to be a major influence on its information capacity (Duncan and Weiss 1979; Smith et al. 1991).

Information processing theory suggests that variations in organizational structures represent differences in how organizations adapt to their information processing requirements. For coordination purposes, organizations have invented mechanisms (i.e., organizational structure) for collecting information and disseminating information (Galbraith 1977; Tushman and Nadler 1978). These structures influence how information flows within organizations (Porter and Roberts 1976). To be effective, organizations must learn how to process information that is increasing in quantity and complexity. Alternative organizational structures represent alternative capacities for responding to the increasingly difficult problems of processing information (Galbraith 1973, 1977).

Information processing capacity influences organizational learning because organizational learning is predicated on information flows within the organization.

Researchers have argued that organizational structure can impede or facilitate organizational learning (Argyris and Schön 1978; Bennis and Nanus 1985; Wick and León 1993); play a crucial role in determining organizational learning processes (Cohen 1991; Cyert and March 1992; Fiol and Lyles 1985); and determine the speed with which organizational learning takes place (De Geus 1988). Unless the structure of the organization is designed to optimize flows of customer-oriented information, the company-customer transactions will suffer and, in turn, negatively influence the organization's long term success. Therefore, we should be concerned with what type of organizational structures increase information processing and facilitate the flows of customer information.

Three areas of research provide support that the organic structural combination will facilitate customer-oriented organizational learning. First, mechanistic organizations perform better in stable circumstances. Organic structures perform better in uncertain situations (i.e., those requiring innovation or adaptation) (Burns and Stalker 1966; Mintzberg 1979). Researchers (e.g., Slater and Narver 1994c) have argued that today's organizations that are in need of organizational learning are those that operate in ever-changing customer environments. Therefore, organic structures and their corresponding dimensions should facilitate customer-oriented organizational learning.

Second, Chakravarthy (1982) suggests that an organization's information processing ability is exhibited by its structure. An organization that anticipates environmental changes and invests in their adaptive ability develops an abundant organizational capacity to process information. Researchers argue that an organic structure facilitates the development of this ability to process information (Chakravarthy 1982; Tushman and Nadler 1978). Therefore, the ability to anticipate changes in customer environments and process this information should be facilitated by an organic structure.

Finally, organizations have various forces that pull them in different structural directions (Mintzberg 1979). Each of the structural directions is driven by different coordination mechanisms. A structure that tends towards more organic dimensions is driven by a pull to collaborate and use information flows between individuals within the organization as the coordination mechanism. The other structures (i.e., relatively more mechanistic structures) are driven by coordination mechanisms that rely on standardization and direct supervision rather than information flows (Mintzberg 1979). When organizations want to learn they tend toward coordination through information flows. Information flows are the basis for organizational learning. More specifically, the flow of customer information throughout the organization is the basis for customer-oriented organizational learning. Hence, organizations can be designed to encourage learning, but this generally means moving away from relatively mechanistic structures.

Organizational Strategy

It has been realized that, over time, organizations develop a means of fulfilling their objectives related to their markets or constituencies in ways that are recognizable to industry observers and competitors. These means of achieving these objectives are referred to as organizational strategy (Kerin, Mahajan, and Varadarajan 1990; Miles and Snow 1978). More formally, organizational strategy has been defined as:

the determination of the basic long-term goals and objectives of an enterprise, and the adoption of courses of action and the allocation of resources necessary for carrying out these goals (Chandler 1962, p. 13).

the dynamic process of adjusting to environmental change and uncertainty—of maintaining an effective alignment with the environment while efficiently managing internal interdependencies (Miles and Snow 1978, p. 3).

a pattern in a stream of decisions (past or intended) that (a) guides the organization's ongoing alignment with its environment and (b) shapes internal policies and procedures (Hambrick 1983, p. 5).

There is a hierarchy of strategy levels composed of corporate, business, and functional strategies (Schermerhorn 1993). Corporate strategy establishes the overall

direction of the organization by defining the businesses in which an organization will compete (Kerin, Mahajan, and Varadarajan 1990). Business strategy refers to how an organization will compete in a given industry or product market domain (Aaker 1992). Functional strategies determine how allocated resources will be used within functional areas (e.g., marketing, R&D, manufacturing, human resources) to efficiently support the business strategy (Kerin, Mahajan, and Varadarajan 1990).

The present research will investigate strategy at the level of business strategy. Specification of a business strategy (sometimes called competitive strategy) includes definition of the product market in which the business will compete, selection of the functional areas necessary to successfully compete, and identification of the assets or skills that will provide a sustainable competitive advantage (Aaker 1992).

The field of strategic management has made a noticeable shift away from the view that each firm is considered unique in all aspects of its strategy, toward a new view that recognizes commonalities exist among firms (Dess and Davis 1984; Smith, Guthrie, and Chen 1989). Upon this recognition, several strategic typologies have been set forth in the strategic management and organizational behavior literatures (e.g., Ansoff 1988; Chandler 1962; Miles and Snow 1978; Miller and Friesen 1980; Porter 1980). A review of the strategic management and marketing literatures reveals Miles and Snow's (1978) typology of strategic behavior has received widespread use in the literature and has generated a relatively large amount of investigation and support (Conant, Mokwa, and Varadarajan 1990; Doty, Glick, and Huber 1993; Hambrick 1981, 1983; McDaniel and Kolari 1987; Miles and Cameron 1982; Ruekert and Walker 1987; Smith, Guthrie, and Chen 1989; Snow and Hambrick 1980; Snow and Hrebiniak 1980; Zahra and Pearce 1990).

While other strategic typologies may be appropriate for the study of strategic behavior, the Miles and Snow typology offers several advantages. First, the typology is generalizable across industrial settings because it is based on an in-depth analyses of four

different industries (Smith, Guthrie, and Chen 1989). Second, it measures strategy at the appropriate level of abstraction. It has specific detail and theory while allowing application across a wide variety of organizations and industries (Smith, Guthrie, and Chen 1989; Ruekert and Walker 1990; Shortell and Zajac 1990). Third, a characteristic of the typology specific to the present research is that Miles and Snow define the information seeking behavior of each strategic type.

Components of Miles and Snow Typology. The Miles and Snow typology views the organization as an integrated system in dynamic interaction with the environment (McDaniel and Kolari 1987). The typology is a general model of organizational adaptation that defines the linkages among organizational decisions and actions, emphasizes the necessity for consistency, and acknowledges the limits one managerial action or decision imposes on subsequent organizational actions (Miles and Snow 1978). The proposed typology is a relatively complex one that interrelates organizational response set variables within a theoretical framework of co-alignment (Conant, Mokwa, and Varadarajan 1990). The organizational response set variables are the components represented by the different approaches taken by organizations when reacting to the competitive environment. These components are captured by the entrepreneurial response, engineering response, and the administrative response. The components of the typology address the key problems that organizations must solve. They are interrelated and must be consistent in order for an organization to have an effective competitive strategy (Miles and Snow 1978). Each of the components represent the set of response variables an organization uses in adapting to environmental conditions. The entrepreneurial response is the strategic response variables; the engineering response

represents the process response variables; the administrative response is manifested through the variables associated with the organization's administration.¹⁰

The first component, the entrepreneurial response, centers on a concrete definition of an organization's viable product market domain and a set of objectives relative to it (Miles and Snow 1978). The entrepreneurial focus is the strategic component and the primary variable underlying the Miles and Snow typology (Hambrick 1983; Walker and Ruekert 1987; Slater and Narver 1993; Zahra and Pearce 1990). The foundation of the typology is "the key decisions and actions that occur as an organization perceives, enacts, and responds to conditions in and around its [product market] domain" (Miles and Snow 1978, p. 94).

The entrepreneurial response solves the problem of the strategic management of product markets in which an organization competes (Slater and Narver 1993). Acceptance of this product market becomes evident when the organization commits resources to achieve objectives relative to the domain. The entrepreneurial response is sought through an organizational image developed by surveillance and growth activities relative to the organization's orientation in the selected product market domain (Conant, Mokwa, and Varadarajan 1990; Miles and Snow 1978).

The second component of the strategic typology is the engineering response. It is the process factor of the typology involving the organization's technical system. The engineering response involves the creation of a technological process for serving the selected product market domain (Miles and Snow 1978). It is the selection of an appropriate technology and processes used to obtain, produce, and distribute the organization's chosen goods or services. It also includes creating or modifying the procedures to ensure proper operation of the technology (Miles and Snow 1978; Shortell and Zajac 1990).

¹⁰Miles and Snow (1978) use the term "structure" to describe an organization's administrative response variables. In this manuscript, the term "administration" has been adopted to avoid confusion with the organizational structure construct described earlier.

The final component of Miles and Snow's strategic typology is the administrative response. The administrative response involves how the organization develops and implements processes that support its entrepreneurial and engineering responses (Slater and Narver 1993). It is the administrative justification and stabilization of those activities that successfully solved problems faced by the organization during the entrepreneurial and engineering responses. It involves formulating, coordinating, and implementing those processes that will enable the organization to continue to survive (Conant, Mokwa, and Varadarajan 1990; Miles and Snow 1978; Shortell and Zajac 1990).

Strategic Types of the Miles and Snow Typology. The Miles and Snow (1978) strategic typology is embodied in a configurational theory that identifies four ideal types of organizations (Doty, Glick, and Huber 1993). The four strategic types are prospector, analyzer, defender, and reactor. Each of these ideal types is described as a unique configuration of its entrepreneurial, engineering, and administrative responses. Miles and Snow's research indicates that an organization's type can be identified by its pattern of response mechanisms and that the actions of each strategic type are internally consistent. In other words, organizations have a tendency to discover, develop, and maintain patterned behavior that is relatively enduring and that actively co-aligns organizations with their environments (Conant, Mokwa, and Varadarajan 1990). The idea is that successful organizations develop a consistent, systematic, identifiable approach to their adaptation to the environment. Each type emphasizes different dimensions of the responses to develop a sustainable competitive advantage (Zahra and Pearce 1990). Accordingly, each of the components (i.e., entrepreneurial, engineering, and administrative) involves multiple dimensions. Conant, Mokwa, and Varadarajan (1990) performed a detailed, comprehensive analysis of Miles and Snow's descriptions of the four types that reveals eleven distinctive strategic dimensions comprise the model. These dimensions, along with the relative responses of each ideal type, are displayed in Table 5.

TABLE 5

DIMENSIONS OF ORGANIZATIONAL STRATEGY

<u>Component</u>	<u>Dimension</u>	<u>Prospectors</u>	<u>Analyzers</u>	<u>Defenders</u>	<u>Reactors</u>
Entrepreneurial Response (Strategy)	Product market domain	Broad and continuously expanding	Segmented and carefully adjusted	Narrow and carefully focused	Uneven and transient
	Success posture	Active initiation of change	Calculated followers of change	Prominence in 'their' product market(s)	Opportunistic thrusts and coping postures
	Surveillance	Market and environmentally oriented; aggressive search	Competitive oriented and thorough	Domain dominated and cautious; strong organizational monitoring	Sporadic and issue dominated
	Growth	Enacting product market development and diversification	Assertive penetration and careful product market development	Cautious penetration and advances in productivity	Hasty change
Engineering Response (Process)	Technological goal	Flexibility and innovation	Technological synergism	Cost-efficiencies	Project develop- ment and completion
	Technological breadth	Multiple technologies; 'pushing the edge'	Interrelated technologies; 'at the edge'	Focal, core technology; basic expertise	Shifting technological applications; fluidity
	Technological buffers	Technical personnel skills; diversity	Incrementalism and synergism	Standardization, maintenance programs	Ability to experiment and 'rig' solutions
Administrative Response (Administra- tion)	Dominant coalition	Marketing and R&D	Planning staffs	Finance and production	Trouble-shooters
	Planning	Problem and opportunity finding; campaign (program) perspective	Comprehensive with incremental changes	Inside-out; control dominated	Crisis oriented and disjointed
	Departmental- ization	Product and/or market centered	Staff dominated; matrix oriented	Functional/ line authority	Tight formal authority; loose operating design
	Control	Market performance; sales volumes	Multiple methods; careful risk calculations; sales contributions	Centralized and formal; financially anchored	Avoid problems; handle problems; remain solvent

(From Conant, Jeffrey S., Michael P. Mokwa, and P. Rajan Varadarajan (1990), "Strategic Types, Distinctive Marketing Competencies and Organizational Performance: A Multiple Measures-Based Study," *Strategic Management Journal*, 11, 367.)

The Miles and Snow strategic typology provides a theoretical framework that is useful for analyzing how organizations interact with their environments and the subsequent marketing orientations and behaviors they adopt (McDaniel and Kolari 1987). From Table 5, it can reasonably be inferred that different strategic types would have different marketing orientations and, consequently, engage in different marketing behaviors. As discussed earlier, the primary component that differentiates the strategy types is the entrepreneurial response (Hambrick 1983; Ruekert and Walker 1990; Slater and Narver 1993; Zahra and Pearce 1990). In addition, of the three component responses, the definition of organizations' product market domains could arguably be of most interest to the marketing discipline. Therefore, the orientations and behaviors associated with the entrepreneurial response of each strategic type will be emphasized in the following descriptions of the strategic types.

Prospectors. Prospectors are organizations that continuously search for and exploit new opportunities through both product and market development (Miles and Snow 1978; Slater and Narver 1993). The environment they are most concerned with is their broadly defined customer markets (Conant, Mokwa, and Varadarajan 1990; Ruekert and Walker 1990). They approach their environment proactively by anticipating changes in their environments and experimenting with potential responses to emerging environmental trends (Miles and Snow 1978; Slater and Narver 1993). They consistently attempt to be first in the market by taking aggressive new product market positions and offering frequently changing product lines (Hambrick 1983; Ruekert and Walker 1990; Shortell and Zajac 1990). They primarily compete by stimulating and meeting new marketing opportunities (Hambrick 1983). Because they actively initiate change, they often create uncertainty to which their competitors must respond (Miles and Snow 1978).

Many studies have successfully found evidence of Miles and Snow's (1978) ideal strategy types (e.g., Conant, Mokwa, and Varadarajan 1990; Doty, Glick, and Huber 1993; Hambrick 1983; McDaniel and Kolari 1987; Shortell and Zajac 1990; Slater and

Narver 1993; Smith, Guthrie, and Chen 1989; Snow and Hrebiniak 1980; Zajac and Shortell 1989). In general, this research has found agreement with Miles and Snow's contention that prospector's prime capability is identifying and exploiting new product and market opportunities. Their primary orientation is towards new product and market development. In addition, it has been found that prospectors devote more resources to four behaviors within the organization.

First, their planning is contingent upon experimenting in the marketplace and obtaining feedback from markets (Miles and Snow 1978). Prospectors have been found to give greater emphasis to obtaining feedback for new product development than the other strategy types (Hambrick 1983; McDaniel and Kolari 1987; Shortell and Zajac 1990). Walker and Ruekert (1987) argue that because of this dependence on the marketplace, those organizational functions closest to the customer are of vital importance. This is supported by the second finding that, when compared to other strategic types, prospectors consider marketing tasks associated with customers (e.g., marketing research; creation of customer information systems) to be more important components of marketing strategy (McDaniel and Kolari 1987), invest more heavily in marketing expenditures (Hambrick 1983), and consider marketing and marketing-related competencies to be among their greatest strengths (Conant, Mokwa, and Varadarajan 1990; Smith, Guthrie, and Chen 1989; Snow and Hrebiniak 1980).

The third behavior that prospector organizations devote resources to is monitoring evolving trends in the marketplace (Conant, Mokwa, and Varadarajan 1990; Hambrick 1983). Prospectors, when compared to the other strategy types, display more interest in and frequency of monitoring technological developments and competitor and customer reactions to new products (Hambrick 1982; Miller 1989). In addition, they often compare themselves to similar organizations (Miles and Snow 1978). Finally, prospectors devote more resources to channeling information to the people who can take action rather than always to top management (Miles and Snow 1978). They recognize the importance of

using integrative mechanisms such as liaisons, coordinators, task forces, and teams to ensure information gets to the appropriate people. In support of this, Miller (1989) found that the strategic orientation of prospector-like firms was positively related to interdepartmental collaboration.

In summary, the major orientation of prospector organizations, when compared to Miles and Snow's (1978) other strategic types, is developing new products and markets. This is evidenced by their allocation of resources to obtaining feedback from the marketplace, strengthening marketing and marketing-related competencies, monitoring the marketplace for trends, and using interdepartmental collaboration to distribute information.

Defenders. Defenders are organizations that have narrow and carefully focused product market domains. They offer a relatively stable product line to defined markets, concentrating on doing the best job possible in their area of expertise (Shortell and Zajac 1990). As a result of this narrow focus, these organizations seldom make major adjustments in their methods or structure of operation. Rather, they continually look for ways to improve the efficiency of their existing operations (Miles and Snow 1978).

Defenders take a conservative view of new product development, engaging in little or no new product market development. They attempt to maintain a secure position in narrower and more mature market segments, often competing on price, quality, or service (Hambrick 1983; Ruekert and Walker 1990). Defenders deliberately create stability through their decisions and actions designed to lessen the organization's vulnerability to environmental change and uncertainty (Miles and Snow 1978). Therefore, defenders tend to view the organization's environment as unimportant and predictable (Miles and Snow 1978).

A defender's prominent position in its product market domain makes it difficult for competitors to penetrate. Nonetheless, while defenders know their current market quite well, they are not adept at making rapid internal adjustments in response to changes

in customers' needs and desires (Miles and Snow 1978). This internal orientation leads to an emphasis on those functions that appear most critical to organizational efficiency, namely production, finance, or engineering. Defenders concentrate on knowing the strengths and capacities of "our company" rather than knowing the trends and developments in "our industry" (Conant, Mokwa, and Varadarajan 1990; Miles and Snow 1978).

A defender organization generally will not evaluate its performance by comparison to other similar organizations because of the belief that "we can do what we do better than anybody else" (Miles and Snow 1978). Information flows in defender organizations tend to be vertical channels: directives and instructions flow down the hierarchy, and progress reports and explanations flow up. Defenders restrict interdependence to largely sequential interaction: the output of one subunit is the input for another. Lateral relations are limited (Miles and Snow 1978).

In summary, there is evidence that of Miles and Snow's strategic types, defenders are found to be least likely to consider specific marketing activities as being important to achieving their organization's overall strategic objectives, to be fairly consistent in their relative lack of marketing orientation, to be more likely to rely on the more traditional products in their industry rather than placing much emphasis on newer technology and product types, and to pursue narrowness and stability in their product market domain (McDaniel and Kolari 1987).

Analyzers. Analyzers are hybrid organizations that operate in segmented product market domains. These organizations represent an intermediate form of strategy, sharing elements of both the prospector and defender strategies. Analyzers attempt to maintain a secure position within a prominent market, much like a defender; they are less committed to stability and efficiency than are defenders. They also seek new market positions through new product development as do prospectors; however, they make fewer and slower product market changes than do prospectors (Hambrick 1983; Ruekert and Walker

1990). Analyzers attempt to maintain a relatively stable base of goods and services while selectively moving into new areas with demonstrated promise (Shortell and Zajac 1990).

In their dominant areas, analyzer organizations operate routinely and efficiently through use of formalized processes. In their markets where they seek new product development, the organization watches its competitors closely for new ideas, and then rapidly adopts those that appear to be the most promising (Miles and Snow 1978). The goal of the analyzer is “to locate and exploit new product and market opportunities while simultaneously maintaining a firm base of traditional products and customers” (Miles and Snow 1978, p. 78).

Thus, whereas the prospector actively initiates change in the industry, the analyzer follows change. The analyzer’s goal is to adopt innovations developed by prospectors that appear to have strong market potential without incurring extensive research and development costs (Conant, Mokwa, and Varadarajan 1990; Miles and Snow 1978). This implies that analyzers are more externally than internally oriented and relatively more competitor-oriented than customer-oriented.

Analyzers exhibit behaviors of both prospectors and defenders. For example, they rely on both vertical and lateral communication and interdependence (Miles and Snow 1978). These organizations pay close attention to customer demands to maintain market share, but also carefully monitor costs to protect profit margins (Walker and Ruekert 1987). In summary, these organizations possess characteristics of both prospectors and defenders. They maintain balance between the two strategic types by emphasizing a competitor orientation in their new product market areas and a production orientation in their more stable product market areas.

Reactors. Until recently, reactor organizations have been thought of as a “residual” strategic type where organizations are forced when they are unable to pursue one of the three stable strategies of defender, analyzer, or prospector (Conant, Mokwa, and Varadarajan 1990). After a critical review of Miles and Snow’s (1978) original

writings and case studies of organizations classified as reactors by strategy researchers, Conant, Mokwa, and Varadarajan (1990) found that reactors can be identified as a separate category because they possess a set of enduring response characteristics.

Reactors have been found to have no consistent approach for competing in their industry (Smith, Guthrie, and Chen 1989). They are short term dominated, relying on ad hoc and opportunistic reactions (Conant, Mokwa, and Varadarajan 1990). Because they have no well-developed or consistent plan for competing (Hambrick 1983; Ruekert and Walker 1990; Shortell and Zajac 1990), they cope on a situational basis (Conant, Mokwa, and Varadarajan 1990). This lack of consistent strategy also results in little or no internal motivation for change (Miles and Snow 1978). Consequently, reactors are easily influenced by fluctuating market and environmental problems or opportunities, with their responses being sporadic and issue dominated. This indicates a strong dependence on the environment (Conant, Mokwa, and Varadarajan 1990). While reactors can perceive change and uncertainty in their environment, their lack of assertion and their varied approach to competition makes them ill-equipped to effectively respond (Conant, Mokwa, and Varadarajan 1990).

Organizational Innovativeness

An innovation is “any idea, practice, or material artifact perceived to be new by the relevant unit of adoption” (Zaltman, Duncan, and Holbek 1973, p. 10). The adopting unit can vary from a single consumer to an organization such as a business firm, a non-profit organization, or a governmental agency (Zaltman, Duncan, and Holbek 1973). The distinguishing characteristic of an innovation is not whether the innovation is “objectively” new, in terms of elapsed time since its first use or discovery, but rather, the perception of the adopting unit as to the innovation’s newness (Mohr 1969; Rogers 1964; Zaltman, Duncan, and Holbek 1973). The adopting unit of concern to the present research is the organization.

The term “innovativeness”¹¹ has generally been used in two contexts resulting in two distinct definitions (Zaltman, Duncan, and Holbek 1973). The first definition is the broadest use of the term and is synonymous with inventing. It refers to a creative process of bringing something new into being through imagination or ingenuity. This is the ability of an organization to create something new for its own use or for utilization by others (Mohr 1969; Zaltman, Duncan, and Holbek 1973).

The second definition refers to the process whereby an existing innovation that is new to an organization is intentionally adopted, or implemented, by that organization (Downs and Mohr 1976; Price and Mueller 1986; Zaltman, Duncan, and Holbek 1973). This is a process of “doing things differently” through assimilation and internalization (Downs and Mohr 1976; Kirton 1976; Meyer and Goes 1988; Mohr 1969; Zaltman, Duncan, and Holbek 1973). It is relative to the innovation, the time frame, and the organization (Bigoness and Perreault 1981). This definition views innovativeness as the degree to which organizations intentionally implement and emphasize products, processes, business methods, or policies that are departures from their own traditions (Jelinek 1979; Mohr 1969; Price and Mueller 1986). It is different than inventing because it is not merely the production of new ideas, rather it is the adoption of the ideas that defines this type of innovativeness (Price and Mueller 1986). Organizational innovativeness is difficult because it involves doing something new in the organization. The introduction of innovative products, processes, business methods, or policies into an organization implies actions that entail uncertainty, risk, or hazard for the organization (Mohr 1969). This second definition of innovativeness is the view that will be of interest to the present research.

Researchers have separated innovativeness into the process of introducing new products to the marketplace (i.e., product innovations) and the implementation of ideas

¹¹Several of the researchers cited in this section refer to these processes as “innovation.” I have chosen to use the term “innovativeness” to distinguish between the new idea (i.e., the innovation) and the processes of creating or adopting the new idea (i.e., innovativeness).

that improve quality and productivity within an organization (i.e., process innovations). Kotabe (1990) found that to sustain their long-term competitive advantages, organizations must have a policy that links innovativeness concerned with product innovations with that concerned with process innovations. Based on his study of European and Japanese multinational companies operating in the U.S., Kotabe (1990, p. 29) found that the:

introduction of new products alone does not seem to guarantee any measurable immunity from competitive threat in an environment of rapid technological turnover. . . . In the past, the introduction of a new product meant a competitive advantage due to the product's temporary monopoly in the marketplace. Today, product innovations are easily reverse-engineered, improved upon, and invented around by competitors without violating patents and other proprietary protections.

Further, he contends that process innovations appear to be more difficult to imitate because they are built on intangible knowledge and human skills hidden within the organization. To sustain competitive advantage, organizations should be committed to continual improvement of their processes and business methods in addition to their emphasis on introducing product innovations. Kotabe's (1990) findings indicate that process innovation can bolster a product-innovation-led competitive advantage.

This is supported by Drucker's (1986) argument that as part of every business organization's purpose "to create a customer" there are only two basic functions. One of these functions is to be innovative. (The second function is marketing.) Innovativeness "goes right through all phases of business" and "extends through all forms of business" (Drucker 1986, p. 40). In the organization, innovativeness can therefore not be thought of as a separate function. "It is not confined to engineering or research but extends across all parts of the business, all functions, all activities" (Drucker 1986, p. 40). Every area within an organization should have clear responsibility and definite goals for being innovative (Drucker 1986).

Innovativeness Climate. With the above discussion in mind, the present research is concerned with the overall innovative bias that an organization possesses rather than solely with how quick to market an organization is with product innovations. From this

perspective, Kirton (1976, p. 622) has suggested that individuals can be positioned on a continuum extending from an ability to “do things better” (i.e., be adaptive) to an ability to “do things differently” (i.e., be innovative). In brief, Kirton’s (1976) theory of adaptiveness-innovativeness proposes that individuals have different styles of creativity, problem solving, and decision making. For example, the ideal adaptive style is characterized by “preference for precision, reliability, efficiency, discipline, conformity, safety and soundness” (Kirton and McCarthy 1988, p. 176). The adaptive style tends to be conservative, operating within the confines of generally accepted guidelines. The behavior and solutions associated with this style tend to reinforce these guidelines because they generally concentrate on the refinement of existing processes (Holland 1987). Conversely, the ideal innovative style is the opposite in terms of these characteristic preferences (Kirton and McCarthy 1988). The innovative style tends to see guidelines as a part of the problem. They are “risk-takers” with solutions that incorporate new and often untried processes, frequently bringing about a change in the existing guidelines (Holland 1987).

Based on this theory, Kirton and McCarthy (1988) argue that organizations develop adaptive-innovative climates. These climates are created by the collective preferred adaptive-innovative style of the group’s majority. Consequently, an organization can develop an innovative climate or an adaptive climate. Organizations will display a tendency towards either adaptiveness or innovativeness depending on the demands of the tasks undertaken by the organization (Holland 1987). Table 6 shows the general characteristics of adaptive and innovative organizations.

TABLE 6

DESCRIPTORS OF ADAPTIVE AND INNOVATIVE ORGANIZATIONS

<u>Adaptive Organizations</u>	<u>Innovative Organizations</u>
<i>Characterized by members that:</i>	<i>Characterized by members that:</i>
prefer and exhibit precision, reliability, efficiency, methodicalness, prudence, discipline, conformity.	are seen as undisciplined, thinking tangentially, approaching tasks from unsuspected angles.
are concerned with resolving problems rather than finding them.	are concerned with discovering problems and discovering avenues of solution.
seek solutions to problems in tried and understood ways.	query problems' concomitant assumptions; manipulate problems.
reduce problems by improvement and greater efficiency, with maximum of continuity and stability.	are catalysts to settled groups, irreverent of their consensual views, seen as abrasive, creating dissonance.
are seen as sound, conforming, safe, dependable.	are seen as unsound, impractical; often present shocking ideas.
are liable to make goals of means.	are in pursuit of goals and treat accepted means with little regard.
seem impervious to boredom, seem able to maintain high accuracy in long spells of detailed work.	are capable of detailed routine (system maintenance) work for only short bursts. Quick to delegate routine tasks.
use authority within given structures.	tend to take control in unstructured situations.
challenge rules rarely, cautiously, when assured of strong support.	often challenge rules, have little respect for past custom.
tend to have high self-doubt; react to criticism by closer outward conformity; are vulnerable to social pressure and authority; are compliant.	appear to have low self-doubt when generating ideas, not needing consensus to maintain certitude in face of opposition.
occasionally need to be "dug out" of their systems.	are ideal in unscheduled crises, or better still to help avoid them, if they can be controlled.

(Adapted from Kirton (1976), "Adopters and Innovators: A Description and Measure," *Journal of Applied Psychology*, 61 (5), 623.)

Kirton and McCarthy (1988) argue that individuals who find themselves in an organizational climate that is not suited to their personal style are likely to fall into one of the following categories:

1. A temporary member of the working group.
2. A permanent member of the working group who finds a “niche” that requires a minimum amount of coping behavior.
3. A permanent member of the working group who is unhappy and actively trying to leave the group.

Research indicates support for Kirton and McCarthy’s (1988) idea that organizations display adaptive-innovative climates, and that these climates can be identified. Hayward and Everett (1983) administered the Kirton Adaptive-Innovative (KAI) scale to professional staff in a local authority setting and found that new recruits tended toward innovativeness. In contrast, the staff who had tenure of five years or more were found to be a more homogeneous and adaptive group. Kirton and McCarthy (1988) argue that this is unlikely to be solely explained by an age effect, because the largest correlation to date between KAI and age is small ($r = -0.19$). Hayward and Everett (1983) contend that it is unlikely that the organization exerted its influence on earlier recruits who had then changed their personal styles to accommodate the prevailing organizational climate. Rather, they argue that organizations become adaptive or innovative mainly because people leave or stay according to whether the organization fits their personal style. They observed that those with innovative styles tended to leave the adaptive organization within five years. This created an adaptive organizational climate in the local authority. The implication is that an increasing shift in the mean of an organization towards one end of the adaptive-innovative continuum must lead to more entrenched positions—adaptive organizations become more adaptive, innovative organizations become more innovative (Hayward and Everett 1983).

Further support is found in statistically significant differences in the banking industry in the KAI scores of branch managers and bank trainees in branches of UK clearing banks. Generally, bank trainees had higher innovative scores than the

established bankers (Holland 1987). In parallel with these results, other researchers have found similar results in an American bank setting. Again, there were statistically significant differences in the KAI scores of established bankers and bank trainees (Gryskiewicz et al. 1987, cited in Kirton and McCarthy 1988). Generally, bank trainees had higher innovative scores than established bankers.

In other research, Thomson (1985) used adaptiveness-innovativeness to classify organizations. She then examined the fit between the organization and its individual members. Her results indicate that those individuals who found themselves in fit with the organization's climate were less likely to express the intention to leave their job than the individuals who were not in organizational fit (cited in Kirton and McCarthy 1988). Similarly, McCarthy (research reported in Kirton and McCarthy 1988) found that managers who perceived a gap of one or more standard deviations between themselves and the organization (as measured by the manager's assessment using the KAI scale of a "typical colleague") reported significantly more work pressures than managers who had closer fit. It is the gap (i.e., the lack of fit with the organization) which seems to determine the amount of pressure (reported in Kirton and McCarthy 1988).

These studies, taken in total, lend support to the proposition that organizations tend to develop an overall innovative bias. In other words, there is a degree of how innovative an organization will be in terms of adopting product and process innovations. Furthermore, there are indications that a pro-innovativeness bias in organizations is necessary for effective information flows and organizational learning. For example, Hayward and Everett (1983) suggest that more adaptive organizational styles, as compared to innovative styles, reduce the range of responses available to the organization and lead to it becoming less flexible in its search for solutions.

Menon and Varadarajan (1992) suggest that an important organizational characteristic that facilitates the use of knowledge in an organization is a proclivity for gathering and sharing information. If an organization has a pro-innovativeness bias that

promotes change and innovative behavior this would encourage active exchange of ideas and increased information flows within the organization. This pro-innovative orientation would be reflected in a general atmosphere that actively promotes exchange of information and a willingness to adopt and use new ideas and concepts. Hence, Menon and Varadarajan (1992) propose that the stronger the pro-innovativeness bias within an organization, the greater the amount of information flows in the organization.

Ebadi and Utterback (1984) provide empirical evidence of this link between innovativeness and information flows. In their study of Sea Grant projects (funded by the U.S. Department of Commerce for the purpose of developing effective use of marine resources), they found positive correlations between innovativeness and information flows. Information flows were operationalized as social interaction (i.e., network cohesiveness), amount of information directed at the innovative project (i.e., centrality), and the number of different sources of information (i.e., diversity).

Pro-innovativeness is also thought to be directly associated with organizational learning. Researchers believe that the creation and sustenance of an organizational capacity for learning is based on, among other characteristics, innovativeness (Argyris and Schön 1978; Bedeian 1986; Fiol and Lyles 1985). Jelinek (1979) found that Texas Instruments was able to create and sustain organizational learning through institutionalizing organizational innovation. In an organization the size of TI (over \$15 million in profit at the time of her study), innovation could not be left to serendipity. Rather, TI systematized its process of innovation into a formal mechanism they called the OST System (Objectives, Strategy, Tactics System). By codifying its process of innovation, TI was able to explicitly and objectively guide organizational members in a pattern of thought that the CEO had informally led people through when the organization was much smaller. "The codification is essential, in rendering the knowledge independent of its inventor . . . It provides an administrative means for accomplishing the same coupling formerly attained by proximity, by close personal supervision, or by good luck"

(Jelinek 1979, p. 149). The integration of this system into the organization was also essential for another reason—the creation of organizational learning. The OST System created a way to institutionalize new knowledge in the organization (Jelinek 1979).

Organizational Boundary Spanning

Organizational boundaries separate the organization from its external environments, that is, the totality of relevant physical and social forces outside its organizational boundaries that may influence the organization (Daft, Sormunen, and Parks 1988; Preble 1978; Tushman and Scanlan 1981). The environment is important because it creates uncertainty for managers (Daft, Sormunen, and Parks 1988). Discussions of organizational external environments tend to emphasize that an organization's environment presents opportunities and threats. Furthermore, information about these opportunities and threats is sought and used by organizations to create and maintain desirable relationships between themselves and their environments (Daft and Huber 1987). An information advantage about environmental opportunities and threats depends on an organization's perception of information flows from the environment that other organizations overlook (Daft, Sormunen, and Parks 1988).

The term boundary spanning is used to describe the process of information flows being communicated across an organization's boundary (Culnan 1983). Boundary spanning consists of the informational and substantive exchanges of information between the organization and its external environment (Hambrick 1981; Tushman and Scanlan 1981). Boundary spanning links and coordinates an organization with key elements in its external environment. It is primarily concerned with the exchange of information for three purposes. The first purpose is to recognize and introduce information into the organization about changes in the environment. (This activity is called environmental scanning.) The second purpose is to disseminate this information to organizational

members. The third purpose is to convey information into the environment that presents the organization favorably (Daft 1992; Tushman and Scanlan 1981).

Environmental Scanning. Environmental scanning is one of the elements comprising the broader construct of boundary spanning (Culnan 1983; Hambrick 1981). (It also will be the boundary spanning dimension of interest in the present study.) Environmental scanning is the first link in the chain of perceptions and actions that allows an organization to adapt to its environment (Daft, Sormunen, and Parks 1988). It is one characteristic that an organization may use to respond effectively to uncertainty and changes in its external environment (Culnan 1983).

Scanning is the activity of acquiring information about the external environment. The concern is with scanning for information in an organization's outside environment, the knowledge of which would assist the organization in making decisions about its future actions (Aguilar 1967). The focus is on the search for and recognition of information external to the organization, and not on the analysis or interpretation of this information (Aguilar 1967). Environmental scanning is the process by which organizations learn of events, trends, or constituents' expectations outside their organizations (Farh, Hoffman, and Hegarty 1984; Hambrick 1981; Preble 1978). Researchers suggest that scanning the environment is linked to open systems theory, because of the idea that organizations exist in dynamic environments where they are dependent on exchanges with those environments (Hambrick 1981; Preble 1978). This open systems perspective provides a mechanism for reducing the acceleration of the uncertainty and complexity of the external environment (Preble 1978). Furthermore, environmental scanning is important to the profitable survival of organizations because organizations scan external events, trends, and constituent expectations that are perceived as vital to organizational performance (Daft, Sormunen, and Parks 1988).

Organizations may attain a strategic information advantage or disadvantage depending on how effectively they scan the environment (Daft, Sormunen, and Parks

1988; Preble 1978). Effective environmental scanning depends on the combination of formal versus informal scanning (Hambrick 1981; Huber and Daft 1987; Kohli and Jaworski 1990; Lenz and Engledow 1986), continuous versus ad hoc scanning (Hambrick 1981; Huber and Daft 1987; Preble 1978), and active versus unsolicited scanning (Aguilar 1967; Farh, Hoffman, and Hegarty 1984; Preble 1978).

Scanning Customer Environments. Lenz and Engledow (1986, p. 69) point out that:

A growing concern for executives, academicians and consultants is what appears to be the increasing volatility of organizational environments. Chronicles of business corporations are replete with instances of executives whose organizations were caught off guard by large-scale environmental shifts.

Lenz and Engledow (1986) go on to explain that the U.S. auto industry is a prime example of an industry that was caught off guard and experienced substantial losses as a consequence of shifts in the external environment. In particular, they identify changing consumer lifestyles and preferences as one of the major shifts that influenced the automakers.

Undoubtedly, one of the external environments is the customer environment (Daft, Sormunen, and Parks 1988). As defined for this research, the information of concern from the customer environment refers to existing and potential needs and preferences of the organization's market,¹² as well as exogenous factors that influence those needs and preferences (Hambrick 1981; Kohli and Jaworski 1990). An important finding from Kohli and Jaworski's (1990) in-depth interviews with sixty-two marketing and non-marketing managers is that environmental scanning of the customer environment does not stop at obtaining customer opinions, but also involves recognizing and gathering information about the forces that impinge on customer needs and preferences. Among other things, environmental scanning of the customer environment is helpful in deciding

¹²Using Kotler's (1994, p. 11) definition of market, this includes "all the potential customers sharing a particular need or want who might be willing and able to engage in exchange to satisfy that need or want."

which goods or services to emphasize to the market, identifying market areas in which to concentrate additional resources, and monitoring particular market segments or individual customers that warrant attention because of their size, growth, innovativeness, or other characteristics (Aaker 1983; Preble 1978).

It has been suggested that because marketing is the boundary function between the organization and its customers, marketing should take the lead role in environmental scanning of its customer environment (Kerin, Mahajan, and Varadarajan 1990).

Nonetheless, Kohli and Jaworski's (1990) field findings suggest that environmental scanning of customer environments probably cannot be the exclusive responsibility of marketing. Rather, mechanisms need to be in place for information acquired by individuals and departments throughout the organization.

Empirical evidence supports the proposition that scanning of the customer environment is conducted within organizations and that organizations view this scanning as important. Aguilar (1967) found that fifty eight percent of all environmental scanning was of a market nature. In other words, the majority of scanning being conducted by organizations was concerned with customers or exogenous factors influencing customers (e.g., competition, pricing, sales negotiations). Furthermore, all the managers studied by Aguilar (1967) scanned more market information than any other type of external environment information. Relatedly, Hambrick (1981) found clear evidence of cross-functional scanning among organizations. More specifically, with the exception of accounting/finance and to a lesser degree marketing, managers scanned environments that may not "logically" correspond to their functional duties. It appears that organizations with more explicit functional boundaries specialize their scanning activities according to functional areas more than those with "fuzzier" functional boundaries (Hambrick 1981).

In a study conducted by Daft, Sormunen, and Parks (1988), it was found that organizations' customer environments were perceived to be important, complex, and changing. This generates a need for organizations to scan customer environments. In

addition, customer environments were found to have the highest level of perceived strategic uncertainty (compared to other types of environments, i.e., competitor, technological, regulatory, economic, sociocultural). Organizations scan environments where the uncertainty is greatest (Daft, Sormunen, and Parks 1988).

Finally, Lenz and Engledow (1986) found some evidence of the importance of organizations' customer environments. In a study of ten leading edge companies, they found that when executives were asked about the structure, scope, and dynamics of their organizations' environments (i.e., all sectors of their external environments) they often made references to elements related to customers, such as demographics and lifestyles.

Environmental scanning, because of its reliance on information gathering, is inextricably linked to information flows and organizational learning. Mintzberg (1980) suggests that managers scan the environment to acquire "current, speculative information of a trigger nature" which traditional information systems were not designed to provide. Huber and Daft (1987) contend that it is information about the organization's environment that constitutes the raw material of organizational information flows. Further, they argue that although the acquisition of information through environmental scanning is often motivated by decision-related opportunities or threats, an organization's boundary spanners also engage in a good deal of scanning to create a "denser or richer information environment" (Huber and Daft 1987, p. 144). From this perspective, organizations search for information not only to fulfill explicit organizational requirements, but also to develop or maintain a better understanding of the organization's external environment (Huber and Daft 1987). Additionally, researchers indicate that environmental scanning enhances information flows within organizations about their external environments (Lenz and Engledow 1986), can improve organizational information processing (Culnan 1983), allows organizations to take proactive stances toward their external environments (Preble 1978), and provides the means for organizations to learn from and adapt to their environments (Hambrick 1981; Huber and

Daft 1987; Preble 1978). Consequently, environmental scanning is associated with organizational learning.

Summary

Conceptual justification exists for the importance of organizations engaging in customer-oriented learning to obtain and disseminate information about customers. Nonetheless, virtually no empirical research has been conducted on the topic of customer-oriented organizational learning. Researchers have suggested that there is a need to explore the relationships between the characteristics of organizations and organizational learning. The preceding review examined four organizational characteristics that may influence organizational learning, and in particular, customer-oriented organizational learning. Specifically, the characteristics of organizational structure, strategy, innovativeness, and boundary spanning were investigated. A brief justification for how each variable is thought to influence customer-oriented organizational learning was previewed. In the next chapter, specific hypotheses for each variable are developed, along with an explanation of the research methodology employed for measurement.

CHAPTER III

RESEARCH HYPOTHESES AND METHODOLOGY

The previous chapter examined organizational learning in general, customer-oriented organizational learning as one type of organizational learning, and the relationship between customer-oriented organizational learning and selected organizational characteristics. Research in the area of organizational learning began in the early 1950s, and yet, this research has remained relatively conceptual. In other words, there has been little or no empirical research in this area. The many conceptualizations, however, have resulted in an abundance of research questions. Many of these questions have come from organizational theorists, while more recently, the marketing discipline has added its issues to the list of questions. A sampling of questions relevant to the present research are: Why do some organizations fail to learn? (Bedeian 1986); What facilitates and constrains organizational learning? (Fahey 1993; Lewin 1993; Sinkula 1994); What is the influence of environmental context on organizational learning? (Bedeian 1986; Fahey 1993; Sinkula 1994); How do we configure organizations to achieve organizational learning? (Day 1993; Deshpandé 1993; Lewin 1993; Staelin 1993); What type of organizational culture fosters organizational learning? (Day 1993; Deshpandé 1993); Is past success an inhibitor to organizational learning? (Day 1993); What are the processes of learning at the boundaries between an organization and its customers? (Fahey 1993); How do organizations learn about customers? (Fahey 1993); What types of reward systems are needed to encourage organizational learning? (Palij 1993); How should organizational learning be measured? (Day 1991; Fahey 1993;

SKM
Time
Learning?

SKM
Time
Learning?

Sinkula 1994; Palić 1993). These questions (and many others not stated here) provide a foundation for an area rich in research possibilities.

In an attempt to provide initial empirical support for the conceptualized relationships between customer-oriented organizational learning and selected organizational characteristics, this study is designed to investigate the research question: What organizational characteristics facilitate customer-oriented organizational learning? To provide a foundation for studying this question, specific hypotheses will be developed in the next section of the manuscript.

Hypotheses

To investigate the research objectives outlined, hypotheses predicting the empirical relationships between customer-oriented organizational learning and a number of predictor variables from the organization's internal environment need to be developed. Before doing this, however, the perspective from which customer-oriented organizational learning will be investigated in the present study needs to be clarified. The basic underlying perspective to organizational learning to be used will be one of knowledge base development. This perspective holds that organizations learn from exchanging and evaluating information gathered from the environment and integrating it into an organizational knowledge base.

Huber (1991) suggests that if evidence of existence, breadth, elaborateness, or thoroughness of organizational learning is found within an organization, then organizational learning is occurring. While it would be ideal to study all four of these attributes, resource constraints dictate that some choice be made to limit the scope of the present study. Consequently, the attributes of existence and breadth will be investigated within this study. Therefore, organizational learning will be assumed to have occurred if the information is merely acquired or both acquired and disseminated throughout the organization by members who believe that the information is potentially useful.

The justification for choosing these attributes is twofold. First, empirical research into organizational learning, and specifically customer-oriented organizational learning, is in its infancy. At this early stage, it is necessary to determine if organizations are acquiring information for learning and transmitting it throughout the organization. The second reason for choosing existence and breadth as indicators of organizational learning is a result of the underlying philosophy of this study. Research in the area of organizational learning has been based on two competing (yet not mutually exclusive) philosophies: systems-structural and interpretive.

The systems-structural philosophy emphasizes that organizational learning is a process for reducing ignorance by bringing information into the organization and distributing it (Daft and Huber 1987). The interpretive view emphasizes that organizational learning focuses on the underlying purpose and meaning given to information by the organization's members (Daft and Huber 1987). Daft and Huber (1987) propose that either philosophy may be appropriate to the study of organizational learning. The systems-structural philosophy has been selected for the present study because of its logistics orientation. The use of the systems-structural approach provides a basis for studying the organizational learning logistical components of information acquisition and information dissemination.

In light of the above discussion, the operational definition of customer-oriented organizational learning to be used in the present study is as follows:

The acquisition or dissemination of customer-oriented information resulting in the development of a knowledge base that reflects new information and insights about customers.

This construct, customer-oriented organizational learning, will be the criterion variable of all the hypotheses to be developed in the following sections of the manuscript. Figure 10 graphically summarizes the proposed model upon which the hypotheses will be based. The purpose of the present study is to empirically test the relationships shown in the diagram.

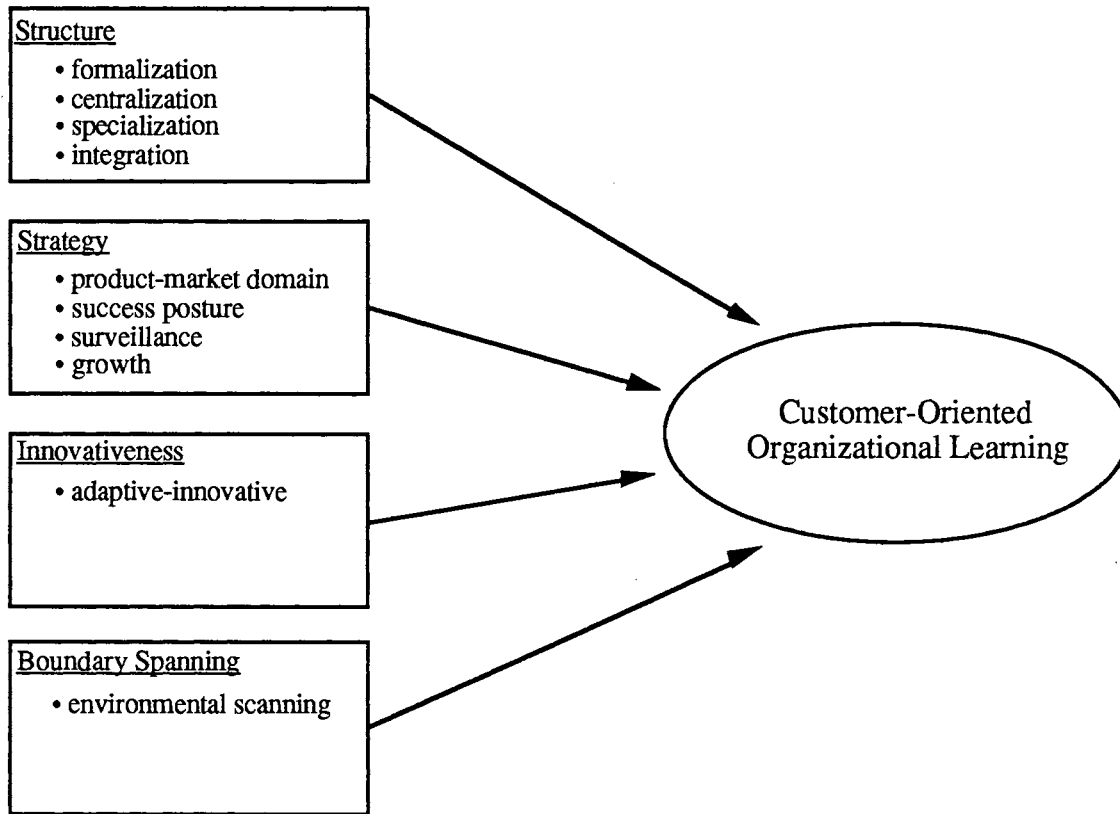


Figure 10. Proposed Model of Relationships Between Customer-Oriented Organizational Learning and Selected Predictor Variables

The previous chapter examined the conceptual and empirical evidence in support of the relationships between customer-oriented organizational learning and the selected predictor variables: organizational structure, strategy, innovativeness, and boundary spanning. Based on the evidence presented, the following hypotheses are offered.

Organizational Structure

In terms of organizational structure, it is hypothesized that:

- H1: Customer-oriented organizational learning will increase with:
- a. less formalization of an organization's structure
 - b. less centralization of an organization's structure
 - c. less specialization of an organization's structure
 - d. more integration of an organization's structure

This hypothesis is supported by research indicating that less formalized, more decentralized, less specialized, and more integrated organizations better facilitate and disseminate information (e.g., Day 1991; Deshpandé and Kohli 1989; Duncan and Weiss 1979; Galbraith 1994). Because the effective flow of information is an essential prerequisite to the active consideration and discussion of organizational learning, it is expected that a greater degree of customer-oriented organizational learning will occur in organizations characterized by these structural configurations. The individual dimensions of organizational structure are thought to have a separate as well as combined influence on customer-oriented organizational learning.

Organizational Strategy

In reference to organizational strategy, it is hypothesized that:

- H2: The greater the organization's strategic focus on market and product development and diversification, the greater the customer-oriented organizational learning.

This hypothesis is supported by research indicating that organizations characterized by Miles and Snow's (1978) prospector strategy employ more cross-functional communication and interdependence, devote more resources to monitoring marketplace (i.e., customer) trends, engage in more new product development, and are dominated by coalitions that possess expertise in marketing and R&D. In contrast, other organizational strategies are dominated by coalitions more concerned with internal operations, focused on a limited set of products and markets, looking for ways to improve production efficiency, or closely monitoring key competitors' actions (Conant, Mokwa,

and Varadarajan 1990; Hambrick 1983; McDaniel and Kolari 1987; Miles and Snow 1978; Miller 1989; Shortell and Zajac 1990; Snow and Hrebiniak 1980).

Organizational Innovativeness

When considering organizational innovativeness, it is hypothesized that:

H3: The greater the innovativeness of the organization, the greater the customer-oriented organizational learning.

This hypothesis is supported by research that indicates that organizational innovativeness is directly associated with information flows and organizational learning. Organizations characterized by a pro-innovativeness bias engage in more information flows than those organizations that do not exhibit pro-innovativeness (Ebadi and Utterback 1984). Therefore, the influence of innovativeness should be considered as a facilitator of organizational learning because the effective flows of information is an essential prerequisite for the discussion of organizational learning. Additionally, support is found that innovativeness helps create and sustain an organization's capacity for learning (Argyris and Schön 1978; Bedeian 1986; Fiol and Lyles 1985; Jelinek 1979; Menon and Varadarajan 1992).

Organizational Boundary Spanning

When considering environmental scanning as a dimension of boundary spanning, it is hypothesized that:

H4: The greater the organization's environmental scanning of customer environments, the greater the customer-oriented organizational learning.

This hypothesis is supported by research indicating that environmental scanning of customer environments is of vital importance to organizations (Aguilar 1967; Daft, Sormunen, and Parks 1988; Kohli and Jaworski 1990; Lenz and Engledow 1986). In addition, it has been found that environmental scanning enhances organizational information flows, organizational information processing, and an organization's ability to

learn (Culnan 1983; Hambrick 1981; Huber and Daft 1987; Lenz and Engledow 1986; Preble 1978).

Research Design

Sinkula (1994) suggests that it is time to move away from ethnographic anthropological methodologies of studying customer-oriented organizational learning. He points out that recent organizational studies, for example, in the areas of corporate culture (Deshpandé, Farley, and Webster 1993), knowledge utilization (Menon and Varadarajan 1992), and market research provider/user relationships (Moorman, Deshpandé, and Zaltman 1993; Moorman, Zaltman, and Deshpandé 1992) have successfully used empirical analyses. Nonetheless, empirical organizational analysis presents some unique research design and methodology issues (e.g., John and Martin 1984; Phillips 1981). In addition to discussing the research approach used in this study, the following sections also address several of these research issues. The first section explains the study and specifically examines the choice of a survey approach, the selection of the particular sample, and the use of key informants. The second section describes the survey instrument and specific scales that were used to measure the criterion variable and the selected predictors. The third section briefly discusses what types of techniques were used to analyze the data.

Field Study

To test the proposed hypotheses a field survey of key informants was conducted to obtain information on marketing activities and organizational characteristics within organizations. The unit of analysis was the business unit as represented by the perceptions of the respondent. While the multiple informant approach may be generally preferable (Phillips 1981), in the face of time and other resource constraints the single

informant approach allowed a larger number of organizations to be surveyed (Conant, Mokwa, and Varadarajan 1990).

Survey Approach. Several approaches are possible to test the proposed hypotheses. Perhaps the ideal way would be to use the institutional approach of collecting archival documents such as organizational charts and operating manuals to construct measures of the predictor variables (Blau and Schoenherr 1971; Child 1972; Hinings and Lee 1971; John and Martin 1984). Institutional measures, however, examine organizational characteristics in terms of how an organization is supposed to operate (Deshpandé 1982). For example, the organization chart reflects structure as it was designed to operate not necessarily as it really operates. In addition, while it would be possible to measure some of the variables using the institutional approach, others would escape measurement. For example, customer-oriented organizational learning—the criterion variable—would be extremely difficult to measure in this manner.

An alternative research method is a survey or questionnaire approach. This involves developing a questionnaire that operationalizes the variables by using multiple items for each of them (John and Martin 1984). This method has been used in a large number of previous studies that have measured several of the variables of interest to this study (e.g., Deshpandé 1982; Deshpandé, Farley, and Webster 1993; Jaworski and Kohli 1993; Miller and Dröge 1986; Slater and Narver 1993, 1994a).

The survey method can be used to obtain manager's perceptions of major theoretical constructs. Because the survey method asks respondents to indicate their perceptions of organizational characteristics and behaviors, it taps the organization as managers see it operating (Deshpandé 1982). For example, in terms of organizational structure, "The questionnaire measures tend to reflect the degree of structure experienced by organizational members in work-related activities on a day-to-day basis and, to the extent that such information is not biased, describe the *emergent* structure" (Sathe 1978, p. 234). Based on this perspective, the survey method was more pertinent to the present

research because of the interest in how managers perceived the organizational influence on customer-oriented organizational learning. Therefore, the survey method of measuring the organizational variables was used in this study.

Sample Selection. To test the hypotheses, a large representative sample was vital. Because of the size requirement, a cross-sectional field study survey method of data collection was employed. The Cahners Publishing Company provided a mailing list of strategic-level managers as the sample frame for the study. The list was chosen from a database of over 5,000,000 names of individuals who subscribe to trade publications, advertise in these publications, or attend or exhibit at various international trade shows. Representative organizations were manufacturers generally engaged in business-to-business marketing. An initial sample size of 1,000 respondents was used. In terms of organizational attributes, selected companies (1) had 100 or more employees; (2) were U.S.-based; and (3) excluded government agencies. To ensure that personnel engaged in marketing activities at the level of manager or above were sought as respondents, individuals were chosen from Cahners' standardized list of "marketing-related" titles.

Data Collection. A three-step data collection process was used. First, each of the 1,000 possible respondents was mailed a cover letter, questionnaire, and postage-paid return form. (See Appendix for samples.) One week later, all potential respondents were mailed a reminder postcard (see Appendix). Four weeks after the reminder postcard, nonrespondents were telephoned and asked to participate. This was an attempt to maximize the response rate. If they agreed, another cover letter, questionnaire, and postage-paid return form were mailed.

From the initial set of 1,000, 61 surveys were returned via the U.S. Post Office as non-deliverable. From the intensive call-back campaign, another 162 surveys were identified as non-deliverable because of wrong address or telephone information or because the person had left the company. This resulted in an effective base of 777. Of

the 777, thirty-three surveys were completed and returned from the first step of the data collection process (i.e., the initial mailing). The second step, the reminder postcard, generated no additional responses. The telephone call-back, however, increased the number of responses by 182. It appears as though the personal contact and direct solicitations helped overcome early inattentiveness to the first mailing. In summary, a total of 215 questionnaires were completed and returned, leading to an effective response rate of 27.7 percent. Table 7 gives the demographic characteristics of the respondents.

TABLE 7
SUMMARY OF DEMOGRAPHIC CHARACTERISTICS OF RESPONDENTS

<u>DEMOGRAPHIC VARIABLE</u>	<u>Mean</u>	<u>Median</u>
Years worked for this company	11	8
Years worked in this industry	18	15
	<u>Percent</u>	
<u>Gender</u>		
Female	9.3	
Male	90.7	
<u>Title Levels</u>		
Manager	38.1	
Director	6.0	
Vice-President or above	20.5	

One objective of the study was to generalize the results across a wide range of products, firms, and industries. Thus the manufacturers in the sample represented a wide

range of industries, as evidenced in Table 8. The number of organizations by size is also given in Table 8.

TABLE 8
SUMMARY OF INDUSTRIES REPRESENTED IN SAMPLE

<u>INDUSTRY</u>	<u>Percent</u>	<u>SIC Codes</u>
Electronic & Electrical Equipment	14.4	36
Industrial Machinery & Equipment	12.6	35
Food & Tobacco Products	11.7	20, 21
Primary & Fabricated Metal Products	9.8	33, 34
Chemical Products	7.9	28
Printing & Publishing	7.4	27
Textile Mill & Apparel Products	6.5	22, 23
Transportation Equipment	5.6	37
Instruments & Related Products	4.7	38
Paper Products	4.7	26
Lumber & Wood Products	2.8	24
Stone, Clay, & Glass Products	2.8	32
Rubber & Plastic Products	2.3	30
Miscellaneous Manufacturing	1.9	39
Furniture & Fixtures	1.4	25
Petroleum & Coal Products	1.4	29
Leather Products	0.5	31
Unreported	1.6	

<u>SIZE</u>	<u>No. of Companies</u>	<u>Percent</u>
100 - 249 employees	102	47.4
250 - 499 employees	52	24.2
500 - 999 employees	27	12.6
1000 or more employees	28	13.0
unreported	6	2.8

An analysis was performed to compare respondent organizations to nonrespondent organizations. One method for performing such an analysis is to use an extrapolation method based on successive mailings of a questionnaire. This method implies that “[p]ersons who respond [to surveys] in later waves are assumed to have responded because of the increased stimulus and are expected to be similar to nonrespondents” (Armstrong and Overton 1977, p. 397). Therefore, using the extrapolation method in the present study allows the comparison of the organizations that responded after the first step of the mailing to those organizations that responded after the telephone stimulus (i.e., third step).¹³ This comparison provides an assessment of nonresponse bias. As Table 9 indicates, there were no significant differences in the variables of the study at the .001 level. Application of the extrapolation method suggests that nonresponse bias is not a major problem in the present study.

TABLE 9
COMPARISON OF
FIRST STEP RESPONDENTS TO THIRD STEP RESPONDENTS
ESTIMATE OF NONRESPONSE BIAS

<u>Variable</u>	<u>Mean</u>		<u>p-value</u>
	<u>first step</u>	<u>third step</u>	
Customer-oriented organizational learning	3.39	3.54	.2257
Structure:			
Formalization	3.35	3.46	.4555
Centralization	2.42	2.27	.3631
Specialization	.61	.59	.7694
Integration	3.07	3.14	.6748
Strategy	3.33	3.49	.2812
Innovativeness	3.54	3.74	.1238
Scanning	3.26	3.42	.2984

¹³As mentioned earlier, the second step of the mailing (i.e., the reminder postcard) generated no additional responses.

Measurement

To meet the research objectives of the present study, an information processing approach to investigating organizational learning was used. As discussed earlier, information processing lays a strong foundation for operationalizing and measuring organizational learning. This is because it is based on the logistics of organizational learning; that is, the acquisition and dissemination of information throughout the organization, along with the modification of behaviors or the range of potential organizational behaviors (Garvin 1993; Huber 1991; Morgan and Ramirez 1983). Creation and development of this range of potential behaviors develops the organization's knowledge base. Additionally, information processing is a systemic approach that allows for the study of organizational variables that facilitate customer-oriented organizational learning. The following sections describe how customer-oriented organizational learning and the selected predictor variables were measured.

Criterion Variable. Organizational learning has typically been measured using observation methodologies (Senge 1990a; Watkins and Marsick 1993) or intervention techniques (Argyris and Schön 1983). As discussed earlier, the present study, in contrast, employs a survey methodology to tap managers' perceptions of how the organization operates.

It is recognized that there are issues concerning the measurement of customer-oriented organizational learning using a questionnaire method because of the systemic nature of organizational learning. Fiol and Lyles (1985) suggest a possible solution for minimizing the measurement problem is to measure activities and skills that represent organizational learning. As a brief review, the following five skills of customer-oriented organizational learning were introduced in a previous chapter:

1. A belief in the fundamental premise that learning about customers is valued by the organization.

2. The commitment of all organizational members to a clear and comprehensive vision that places customers' interests first.
3. The use of cross-functional teams to solve customers' problems, conduct experiments designed to improve customer satisfaction, and quickly and efficiently disseminate customer information throughout the organization.
4. The ability to anticipate and respond to constantly changing customers' needs by reflecting on organizational frames of references regarding customers and unlearning, or discarding, obsolete customer information when new information is available.
5. The capacity to learn from personal success and failure attempts at satisfying customers and from people in analogous organizations or situations about how to improve customer satisfaction.

These five skills can be viewed as the dimensions of customer-oriented organizational learning. Viewing customer-oriented organizational learning as one domain of organizational learning, a multi-item scale was created to measure the construct. It was adapted from prior research on organizational learning. Specifically, the "Learning Orientation" scale developed by Sinkula and Noordewier (1994) was used as a foundation for item development.

Based on a literature review and open-ended discussions with seventeen business practitioners and academics, Sinkula and Noordewier (1994) developed items designed to measure the organizational learning construct. The scale was then tested via a mail questionnaire on 125 key informants drawn from the 1994 American Marketing Association membership roster. Confirmatory factor analysis of the results indicated that organizational learning is a "higher-order" construct that gives rise to the five dimensions discussed above. When necessary for the present study, items from the "Learning Orientation" scale were modified to relate specifically to customer-oriented organizational learning rather than to organizational learning in general. Additionally, as the scale items were adapted, the work of other organizational learning researchers was considered (Kline and Saunders 1993; O'Brien 1993; Pedler, Burgoyne, and Boydell 1991).

From this process, nineteen items emerged to represent the five dimensions of customer-oriented organizational learning. Respondents were asked to rate the extent to which each of the statements about organizational practices applies to their business unit. All items were scored on a five-point scale, ranging from “strongly disagree” to “strongly agree.” Representative examples of these nineteen items follow:

- learning axioms: Managers basically agree that our organization’s ability to learn about customers is the key to our competitive advantage.
- shared vision: There is a commonality of purpose in my organization that places customers’ interests first.
- cross-functional teams: Around here, cross-functional teamwork is the common way of working to solve customers’ problems and disseminate customer information rather than the exception to the norm.
- openmindedness: We are not afraid to reflect critically on the shared assumptions we have made about our customers.
- experience sharing: There is a good deal of organizational conversation which keeps alive the lessons learned from history, including both failures and successes associated with improving customer satisfaction.

Traditional scale development analysis was performed on the items, including factor analysis, coefficient alphas, and item-to-total correlations to assess the reliability of the scales. Separate dimension scores for an organization were determined by calculating the mean of the scores across the items of each dimension. An organization’s overall customer-oriented organizational learning score was determined by calculating the mean of the mean scores for each dimension of the multi-item scale. A high customer-oriented organizational learning score indicates an organization employs many of the organizational learning skills identified earlier.

Predictor Variables. The present study adapted existing scales and concepts from previously reported studies for measuring the predictor variables—organizational characteristics that facilitate information flows within organizations and create a customer-oriented learning environment. Data were factor analyzed to examine support for the *a priori* scales. Reliabilities of the scales were estimated by computing their

coefficient alphas and item-to-total correlations. The results of these analyses for each of the predictor variables are discussed in the next chapter.

Organizational Structure. Existing scales from the management literature were used to measure the organizational structure dimensions of formalization, centralization, specialization, and integration. Formalization and centralization were measured using the widely used scales developed by Aiken and Hage (1966; Hage and Aiken 1967). These scales have been used successfully in other marketing studies to assess organizational structure dimensions (e.g., see Deshpandé 1982; Jaworski and Kohli 1993).

The formalization scale consists of the five items displayed in Table 10. These items assess the extent to which jobs in the organization are codified. The five-item centralization scale shown in Table 10 assesses the degree of hierarchical authority within an organization. All formalization and centralization items were scored on an a five-point scale, ranging from “strongly disagree” to “strongly agree.” The formalization items were reverse scored. An organization’s formalization score was determined by calculating the mean of the scores across the five items (after reverse scoring). A high formalization score indicates an organization is highly formalized. Similarly, the centralization score was determined by calculating the mean of the organization’s scores across the five centralization items. A high centralization score indicates an organization is highly centralized.

TABLE 10

ORGANIZATIONAL STRUCTURE
FORMALIZATION AND CENTRALIZATION ITEMS

Formalization:

1. I feel that I am my own boss in most matters.
2. A person can make his own decisions without checking with anybody else.
3. How things are done around here is left up to the person doing the work.
4. People here are allowed to do almost as they please.
5. Most people here make their own rules on the job.

Centralization:

1. There can be little action taken here until a supervisor approves a decision.
 2. A person who wants to make his own decision would be quickly discouraged here.
 3. Even small matters have to be referred to someone higher up for a final answer.
 4. I have to ask my boss before I do almost anything.
 5. Any decision I make has to have my boss' approval.
-

Specialization was measured using the scales of the Aston study (Inkson, Pugh, and Hickson 1970; Pugh and Hickson 1976; Pugh et al. 1963; Pugh et al. 1968). The original scale consists of sixteen items that determine the number of activities in an organization that are performed exclusively by at least one full-time person in the organization. Twelve of the sixteen items were chosen to suit the present study. The original questions were slightly altered to improve the face validity of the items. This limits the comparability to other studies using the original items. The intent, however, was to improve the understandability of the specialization items for the respondents. The twelve items used are shown in Table 11.

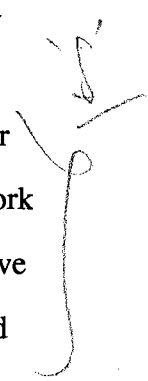
TABLE 11

ORGANIZATIONAL STRUCTURE SPECIALIZATION ITEMS

-
- | | |
|-----|--|
| 1. | advertising and promotion |
| 2. | sales and service |
| 3. | recruitment and employment |
| 4. | personnel development and training |
| 5. | purchasing |
| 6. | plant, store, or office facilities maintenance |
| 7. | accounting and financial controls |
| 8. | production or operations scheduling |
| 9. | sales forecasting |
| 10. | research and development |
| 11. | data processing (MIS) |
| 12. | market research |
-

Respondents were asked to answer “yes” or “no” if the activities are dealt with exclusively by at least one full-time person in the organization. An organization’s specialization score was determined by considering all twelve items. A “yes” answer on any of the items indicates the particular activity is specialized within the organization (i.e., it is exclusively performed by at least one full-time person). An answer of “no” on any activity indicates low specialization of the activity within the organization (i.e., the activity is distributed throughout the organization). “Yes” answers were scored as one; “no” answers were scored as zero. The mean of the twelve activities was calculated to create an overall specialization score. A high specialization score indicates an organization is highly specialized. This variable was treated as interval-scaled for data analysis.

Integration was measured by a six-item scale developed by Miller (1983; Miller and Dröge 1986). The scale is designed to measure the level of coordination among work groups in an organization. The intent is to measure the frequency with which integrative mechanisms are used. The items were scored on a five-point scale, ranging from “used



rarely” to “used frequently.” An organization’s integration score was determined by calculating the mean of the scores across the six items shown in Table 12. A high integration score indicates an organization is highly integrated.

TABLE 12
ORGANIZATIONAL STRUCTURE INTEGRATION ITEMS

Instructions: To assure the compatibility among decisions in one area (e.g., marketing) with those in other areas (e.g., production), to what extent are the following cooperative activities used?

1. Interdepartmental committees which are set up to allow departments to engage in joint decision making.
2. Tasks forces which are temporary bodies set up to facilitate interdepartmental collaboration on a specific project.
3. Liaison personnel whose specific job it is to coordinate the efforts of several departments for purposes of a specific project.

Instructions: To what extent is decision making at top levels in your firm characterized by participative, cross-functional discussions, committees, or teams in which different departments, functions, or divisions get together to decide the following classes of decisions?

4. Product or service decisions concerning production, marketing, and R&D strategies.
 5. Capital budget decisions—the selection and financing of long-term investments.
 6. Long-term strategies (of growth, diversification, etc.) and decisions related to changes in the firm’s operating philosophy.
-

Organizational Strategy. The four most common approaches for identifying and measuring Miles and Snow’s (1978) strategic types have been (1) investigator inference based on all the information available to the researcher; (2) self-typing by organizational

members based on written descriptions of the four strategic types; (3) external assessment based on ratings of individuals external to the organization (e.g., consultants, experts, industry analysts); (4) objective indicators based on information that does not rely on perceptions of individuals (e.g., published product market data) (Snow and Hambrick 1980). Of the four approaches used to operationalize Miles and Snow's strategic typology, the self-typing method has been the most widely used. This method requires that respondents read short paragraph-length descriptions of each of the four ideal strategic types, and then select that *one* description which best characterizes their organization (Conant, Mokwa, and Varadarajan 1990).

The paragraph approach to measuring Miles and Snow's (1978) strategic types has several shortcomings. First, it tends to oversimplify the multi-dimensionality of the ideal types. Second, the tone of the paragraphs could bias the responses. In other words, respondents may tend to choose the paragraph that "sounds good" (Conant, Mokwa, and Varadarajan 1990). To help overcome these problems, Conant, Mokwa, and Varadarajan (1990) propose a multi-item scale for measuring all four strategic types. The scale measures all eleven identified dimensions of Miles and Snow's (1978) typology.

The following adaptations were made to Conant, Mokwa, and Varadarajan's (1990) scale for use in the present study. First, four of the eleven items from the original scale were adapted and employed. Only four of the eleven items were chosen because these four specifically measure the organization's definition of its product market domains (i.e., the entrepreneurial response). As discussed in the previous chapter, the component of Miles and Snow's typology that is of most interest to the marketing discipline is this one. Second, the prospector type was used as an "anchor" for assessing an organization's strategic type. This is justified because the present research is not a test of the Miles and Snow typology. Rather, the concern is with the level of an organization's prospector-like attributes and the relationship of these attributes to customer-oriented organizational learning. This also allows the scale to capture interval-

scale data rather than nominal level data. The four item strategy scale is displayed in Table 13.

These items were scored on a five-point scale, ranging from “strongly disagree” to “strongly agree.” An organization’s strategy score was determined by calculating the mean of the scores across the four items. A high strategy score indicates an organization employs a strategy exhibiting prospect-like attributes.

TABLE 13
ORGANIZATIONAL STRATEGY ITEMS

In comparison to other businesses operating in our business unit’s served market:

1. The products and services which we provide to our customers are best described as products or services which are more innovative, continually changing, and broader in nature throughout the organization and marketplace.
 2. My organization has an image in the marketplace as an organization which has a reputation for being innovative and creative.
 3. The amount of time my business unit spends on monitoring changes and trends in the marketplace can best be described as lengthy: we are continuously monitoring the marketplace.
 4. The changes in sales which we have experienced are due most probably to our practice of aggressively entering into new markets with new types of product or service offerings and programs.
-

Organizational Innovativeness. Organizational innovativeness is exhibited by employing new and often untried processes, methods, and policies, while probably breaking accepted guidelines (Hayward and Everett 1983). Kirton and McCarthy (1985) tested the assumption that individuals have the ability to assess the relative magnitude of

their organizations' adaptiveness-innovativeness climate. Specifically, their argument is that organizational members exhibit their innovativeness tendencies in their actual behaviors. These behaviors are the observable manifestations of the underlying innovativeness style. Their results indicate that individuals are indeed able to make valid assessments of others' innovativeness styles (Kirton and McCarthy 1985). Furthermore, researchers believe that an assessment of the combined innovativeness styles of an organization's members will reflect the organization's culture or belief regarding adaptiveness or innovativeness (Hayward and Everett 1983; Holland 1987; Thomson 1985, reported in Kirton and McCarthy 1988).

Based on this reasoning, the innovation-related norm scale was chosen to measure the collective style of the organization. Specifically, organizational innovativeness was measured using an abbreviated version of Russell and Russell's (1992) innovation-related norm scale. This scale is designed to measure the extent to which innovativeness is valued, accepted, and expected as a response by organizational members to the environment. The innovation-related norm scale consists of thirty-one items that assess the degree to which organizational norms support innovation-related behaviors. Innovativeness was measured using six items from the innovation-related norm scale. The six items were chosen based on their high factor loadings in the Russell and Russell (1992) study. The scale items are shown in Table 14.

TABLE 14
ORGANIZATIONAL INNOVATIVENESS ITEMS

My organization encourages and approves of people who:

1. Attempt to discover original ways of improving organizational products and processes.
 2. Believe that change is a necessary response to a dynamic business environment.
 3. Are creative in finding improved ways of carrying out organizational processes.
 4. Conscientiously carry out change so that a new idea may be given a fair chance.
 5. Evaluate new ideas in terms of how they might be advantageous to your organization.
 6. Evaluate new ideas on the basis of how they might benefit the whole organization, not on the basis of how they might affect you or your work group.
-

The innovativeness items were scored on a five-point scale, ranging from “strongly disagree” to “strongly agree.” A high innovativeness score indicates an organization is highly innovative. An organization’s innovativeness score was determined by calculating the mean of the scores across the six items.

Organizational Boundary Spanning. The element of boundary spanning to be measured in the present study is environmental scanning of customer environments. Jaworski and Kohli’s (1993) measure of market intelligence generation was used. Kohli and Jaworski (1990) contend that this scale is comprised of environmental scanning activities. In addition, it specifically assesses scanning activities associated with the customer environment rather than scanning activities in general. The environmental scanning scale consists of the ten items shown in Table 15.

Each item was scored on a five-point scale, ranging from “strongly disagree” to “strongly agree.” A high scanning score indicates an organization engages in many

environmental scanning activities. An organization's boundary spanning score was determined by calculating the mean of the scores across the ten items.

TABLE 15
ORGANIZATIONAL BOUNDARY SPANNING ITEMS

-
1. We meet with customers at least once a year to find out what products or services they will need in the future.
 2. Individuals from our manufacturing department interact directly with customers to learn how to serve them better.
 3. We do a lot of in-house market research.
 4. We are quick to detect changes in our customers' product preferences.
 5. We poll end users at least once a year to assess the quality of our products and services.
 6. We often talk with or survey those who can influence our end users' purchases (e.g., retailers, distributors).
 7. We collect industry information through informal means (e.g., lunch with industry friends, talks with trade partners).
 8. Intelligence on our competitors is generated independently by several departments.
 9. We are quick to detect fundamental shifts in our industry (e.g., competition, technology, regulation).
 10. We periodically review the likely effect of changes in our business environment (e.g., regulation) on customers.
-

Organizational Context Variables. Several organizational context variables were measured in this study because of their recognized influence on organizational marketing behavior (e.g., Jaworski and Kohli 1993; Narver and Slater 1990; Slater and Narver 1994a). In particular, measures of industry type, organization size, industry

concentration, and environmental uncertainty were gathered as control variables because these variables may influence the proposed relationships, or even result in spurious relationships, between the criterion variable and the predictor variables. Therefore, while hypothesized relationships are not included in the proposed model, the organizational context variables were analyzed for their possible direct and moderating influences on the hypothesized relationships.

Previously reported methods for measuring the four contextual variables were employed in the present study. Industry type was determined by SIC code. This was supplied by Cahners Publishing Company as part of the mailing list information.

Organizational size was measured by the number of employees at the surveyed business unit's location. This is one of the more common methods of measuring organizational size and easier to obtain than, for example, dollar sales volume for a business unit. In addition, sales volume and number of employees have been found to be highly correlated (Smith, Guthrie, and Chen 1989). The number of employees was obtained from Cahners Publishing Company. Organization size was identified as one of the following ranges for each organization:

1. 100 to 249 employees
2. 250 to 499 employees
3. 500 to 999 employees
4. 1,000 employees or more

Industry concentration was measured as the proportion of market share in the organization's primary industry that is accounted for by the four largest firms, including the subject business unit if appropriate (Slater and Narver 1994a, 1994b). Respondents were asked to report this number on a scale from zero to one hundred percent.

Environmental uncertainty was assessed using a scale developed and employed by Miller and Friesen (1982) and successfully used in other studies (e.g., Miller and Dröge 1986). Using a rating scale of "1" to "5," respondents were asked to assess how rapid or intense each of the items in Table 16 is in their principal industry. An organization's environmental uncertainty score was determined by calculating the mean of the scores

across the five items. A high uncertainty score indicates an organization faces high environmental uncertainty.

TABLE 16
ENVIRONMENTAL UNCERTAINTY ITEMS

1.	Our business unit must rarely change its marketing practices to keep up with the market and competitors (1) versus Our business unit must change its marketing practices extremely frequently (e.g., semiannually) (5).
2.	The rate at which products/services are getting obsolete in the industry is very slow (e.g., basic metal like copper) (1) versus The rate of obsolescence is very high as in some fashion goods (5).
3.	Actions of competitors are quite easy to predict (as in some primary industries) (1) versus Actions of competitors are unpredictable (5).
4.	Demands and consumer tastes are fairly easy to forecast (e.g., for milk companies) (1) versus Demand and tastes are almost unpredictable (e.g., high fashion goods) (5).
5.	The production/service technology is not subject to very much change and is well established (e.g., in steel production) (1) versus The modes of production/service change are often and in a major way (e.g., advanced electronic components) (5).

Finally, while not part of the present study, organizational performance was measured for future research purposes. It was measured using a self-report assessment consisting of the two items shown in Table 17 (Conant, Mokwa, and Varadarajan 1990).

TABLE 17
ORGANIZATIONAL PERFORMANCE ITEMS

-
1. Relative to your competitors, rate your organization's general profitability.
 2. Relative to your competitors, rate your organization's return on investment (ROI).
-

It has been found that managerial assessments of relative organizational performance are generally consistent with objective performance measures (Dess and Robinson 1984; Venkatraman and Ramanujam 1987). The items were scored on a five-point scale ranging from "much worse" to "much better," with a high score indicating relatively high organizational performance.

A copy of the entire survey instrument can be found in the Appendix to this manuscript.

Data Analysis

This study set out to address the question: What organizational characteristics facilitate customer-oriented organizational learning? As an answer to this question, the present research has two objectives:

1. Develop measures of the customer-oriented organizational learning construct.
2. Empirically examine the conceptualized relationships between selected organizational characteristics and customer-oriented organizational learning.

To meet objective one, a scale has been designed to assess the extent of organizational learning skills associated with improving customer orientation. To meet objective two, hypotheses have been presented that posit specific relationships between an organization's customer-oriented learning skills and its organizational characteristics of structure, strategy, innovativeness, and boundary spanning.

In the next chapter, results of the traditional scale development analysis for the customer-oriented learning measure are reported. In addition, the hypotheses are investigated through the use of simple and multiple regression statistical techniques. Regression analysis allows examination of the relative importance of the various organizational characteristics leading to customer-oriented organizational learning. The data for these analyses consist of the survey results from the field study described earlier. The regression models are designed to test the hypothesized relationships at the construct level. Customer-oriented organizational learning is set as the criterion variable using the mean of the mean scores of the dimensions of the scale. The predictor variables are the operationalized variables of formalization, centralization, specialization, integration, strategy, innovativeness, and environmental scanning. Finally, an examination of the moderating and direct effects of the organizational context variables is performed.

CHAPTER IV

RESEARCH FINDINGS

This chapter recounts the findings from (1) development of the measure of the customer-oriented organizational learning construct and (2) empirical examination of the conceptualized relationships between the selected predictor variables and customer-oriented organizational learning. The research findings are presented in three sections.

The first section describes the reliability assessment of the customer-oriented organizational learning scale and the predictor variables' scales. Descriptive statistics of the study's variables are provided in the second section. In the third section, hypotheses are tested using the final measure of customer-oriented organizational learning as the criterion variable.

Scale Reliabilities

Customer-Oriented Organizational Learning

As explained in the previous chapter, the five *a priori* dimensions of customer-oriented organizational learning were identified as follows:

1. learning axioms
2. shared vision
3. cross-functional teamwork
4. openmindedness
5. experience sharing

In an effort to examine the *a priori* dimensionality of the customer-oriented organizational learning scale, traditional scale development analysis was performed on

the survey responses. For the first step, factor analysis was conducted. The responses to the scale were subjected to a principal components factor analysis with an orthogonal rotation. The latent root criterion (i.e., only eigenvalues greater than 1.0 are considered) indicated a four factor structure; however, “to minimize the number of significant loadings on each row of the factor matrix” (Hair, et al. 1992, p. 240), items with loadings of .40 or higher on two or more factors were eliminated. This resulted in the following items being eliminated from the scale because of inappropriate cross-loadings on two factors:

We are not afraid to reflect critically on the shared assumptions we have made about our customers. (survey item 13)

Personnel in this enterprise realize that the very way they perceive the marketplace (i.e., customers) must be continually questioned. (survey item 14)

We often collectively question our own biases about the way we interpret customer information. (survey item 15)

These are three of the four items comprising the *a priori* dimension of “openmindedness.” The other openmindedness item, “We are always attempting to develop new ways of looking at the customer” (survey item 12) loaded with the “experience sharing” dimension.

A four factor solution was found to be the most interpretable with all remaining factor loadings significant at the .01 significance level (Hair, et al. 1992). This factor structure resulted in sixteen items being retained across the four factors. The retained scale items, factor loadings, and factor descriptions are presented in Table 18.

TABLE 18
 CUSTOMER-ORIENTED ORGANIZATIONAL LEARNING
 FACTOR ANALYSIS LOADINGS

Survey Item	Item Description	Factors			
		1	2	3	4
<i>Factor 1: Experience Sharing</i>					
18	There is a good deal of organizational conversation which keeps alive the lessons learned from history, including both failures and successes associated with improving customer satisfaction.	.84	.17	.16	.14
19	We always monitor analogous organizations' marketplace endeavors (either successes or failures) and widely communicate the lessons learned.	.81	.15	.12	.20
16	We always audit our unsuccessful marketplace endeavors and communicate the lessons learned widely.	.73	.26	.23	.25
17	We are good at learning from our mistakes associated with improving customer satisfaction.	.66	.46	.18	.10
12	We are always attempting to develop new ways of looking at the customer.	.53	.26	.28	.24
<i>Factor 2: Shared Vision</i>					
5	There is a commonality of purpose in my organization that places customers' interests first.	.21	.81	.22	.09
6	There is total agreement in our organizational vision across all levels, functions, and divisions that customers' interests should be placed first.	.27	.78	.23	.13
7	All employees are committed to the goals of this organization that place customers' interests first.	.26	.69	.18	.36
8	Employees view themselves as partners in charting the direction of the organization toward placing customers' interests first.	.29	.62	.32	.32
<i>Factor 3: Learning Axioms</i>					
1	Managers basically agree that our organization's ability to learn about customers is the key to our competitive advantage.	.13	.09	.82	.14
2	The basic values of this organization include learning about customers as a key to improvement.	.14	.24	.81	.13
3	The sense around here is that employee learning associated with learning about customers is an investment, not an expense.	.19	.18	.79	.09
4	Learning about customers in my organization is seen as a key commodity necessary to guarantee organizational survival.	.26	.37	.66	.15
<i>Factor 4: Cross-functional Teamwork</i>					
10	Individuals in teams designed to improve customer satisfaction are not defensive about their particular functional specialty.	.17	.05	.17	.83
11	Around here, cross-functional teamwork is the common way of working to solve customers' problems and disseminate customer information rather than an exception to the norm.	.30	.35	.08	.71
9	Cross-functional teamwork to improve customer satisfaction is a common practice here.	.25	.45	.22	.61
Eigenvalue		7.67	1.53	1.10	.96
Percent Variance Explained		48.0	9.6	6.9	6.0
Cumulative Variance Explained		48.0	57.6	64.5	70.5

The first factor, a measure of sharing throughout the organization successful and unsuccessful experiences associated with improving customer satisfaction, accounted for 48.0% of the variance. The second factor, measuring the degree of shared vision concentrated on placing customers' interests first, accounted for another 9.6% of the variance. The third factor, a measure of the organization's fundamental belief in the value of learning about customers, accounted for another 6.9% of the variance. The final factor, a measure of cross-functional teamwork within the organization focused on improving customer satisfaction, accounted for an additional 6.0% of the variance. In total, this four factor solution explained 70.5% of the variance.

Previously, customer-oriented organizational learning was explained as having five dimensions. The revised factor structure, however, resulted in only four dimensions. In fact, this new factor structure discarded three of the four openmindedness questions (see explanation, p. 153). After careful examination, it appears that the experience sharing and openmindedness *a priori* dimensions were tapping the same element of customer-oriented organizational learning. Therefore, the experience sharing dimension was slightly redefined to include an aspect of openmindedness.

One measure of internal consistency of a scale is coefficient alpha (Peter 1979). Coefficient alpha for the sixteen items of the customer-oriented organizational learning scale was .94, indicating that the scale has a high level of internal consistency, or reliability. Coefficient alphas and the item-to-total correlations for each dimension are displayed in Table 19. The relatively high correlations (ranging from .54 to .75) indicate that the items are part of the domain of the customer-oriented organizational learning construct; however, the correlations are not too high as to indicate redundancy of the items.

TABLE 19
 COEFFICIENT ALPHAS AND ITEM-TO-TOTAL CORRELATIONS
 FOR DIMENSIONS OF
 CUSTOMER-ORIENTED ORGANIZATIONAL LEARNING

Survey Item	Item Description	Item-to-Total Correlation
<i>Factor 1: Experience Sharing: Coefficient alpha = .87</i>		
18	There is a good deal of organizational conversation which keeps alive the lessons learned from history, including both failures and successes associated with improving customer satisfaction.	.75
19	We always monitor analogous organizations' marketplace endeavors (either successes or failures) and widely communicate the lessons learned.	.71
16	We always audit our unsuccessful marketplace endeavors and communicate the lessons learned widely.	.75
17	We are good at learning from our mistakes associated with improving customer satisfaction.	.70
12	We are always attempting to develop new ways of looking at the customer.	.58
<i>Factor 2: Shared Vision: Coefficient alpha = .86</i>		
5	There is a commonality of purpose in my organization that places customers' interests first.	.64
6	There is total agreement in our organizational vision across all levels, functions, and divisions that customers' interests should be placed first.	.74
7	All employees are committed to the goals of this organization that place customers' interests first.	.73
8	Employees view themselves as partners in charting the direction of the organization toward placing customers' interests first.	.71
<i>Factor 3: Learning Axioms: Coefficient alpha = .85</i>		
1	Managers basically agree that our organization's ability to learn about customers is the key to our competitive advantage.	.67
2	The basic values of this organization include learning about customers as a key to improvement.	.75
3	The sense around here is that employee learning associated with learning about customers is an investment, not an expense.	.67
4	Learning about customers in my organization is seen as a key commodity necessary to guarantee organizational survival.	.69
<i>Factor 4: Cross-functional Teamwork: Coefficient alpha = .79</i>		
10	Individuals in teams designed to improve customer satisfaction are not defensive about their particular functional specialty.	.54
11	Around here, cross-functional teamwork is the common way of working to solve customers' problems and disseminate customer information rather than an exception to the norm.	.69
9	Cross-functional teamwork to improve customer satisfaction is a common practice here.	.66

Predictor Variables

The present study adapted existing scales and concepts from previously reported studies for measuring the predictor variables. Data were factor analyzed and support for the *a priori* scales was found. Reliabilities of the scales were estimated by computing their coefficient alphas and item-to-total correlations. The alphas and correlations for each of the predictor variables are shown in Tables 20 through 23 in the corresponding sections below.

Organizational Structure. The organizational structure dimensions of formalization, centralization, specialization, and integration were measured using existing scales from the management literature. Coefficient alphas and item-to-total correlations from the present study for the formalization, centralization, and integration scales are displayed in Table 20.^{14,15} The relatively high coefficient alphas and item-to-total correlations indicate reliability of the existing scales.

¹⁴Survey item 20, "I feel that I am my own boss in most matters," was eliminated from further analyses because of a low item-to-total correlation.

¹⁵Because of the binary nature of the raw data from the twelve specialization items, coefficient alphas and item-to-total correlations were not calculated for the specialization scale.

TABLE 20

ORGANIZATIONAL STRUCTURE SCALES :
 FORMALIZATION, CENTRALIZATION, AND INTEGRATION
 COEFFICIENT ALPHAS AND ITEM-TO-TOTAL CORRELATIONS

Formalization: Coefficient alpha = .77

	<u>Item-to-Total Correlation</u>
1. A person can make his own decisions without checking with anybody else.	.43
2. How things are done around here is left up to the person doing the work.	.66
3. People here are allowed to do almost as they please.	.62
4. Most people here make their own rules on the job.	.58

Centralization: Coefficient alpha = .86

1. There can be little action taken here until a supervisor approves a decision.	.62
2. A person who wants to make his own decision would be quickly discouraged here.	.56
3. Even small matters have to be referred to someone higher up for a final answer.	.75
4. I have to ask my boss before I do almost anything.	.75
5. Any decision I make has to have my boss' approval.	.73

Integration: Coefficient alpha = .80

1. Interdepartmental committees which are set up to allow departments to engage in joint decision making.	.56
2. Task forces which are temporary bodies set up to facilitate interdepartmental collaboration on a specific project.	.55
3. Liaison personnel whose specific job it is to coordinate the efforts of several departments for purposes of a specific project.	.49
4. Product or service decisions concerning production, marketing, and R&D strategies.	.64
5. Capital budget decisions—the selection and financing of long-term investments.	.50
6. Long-term strategies (of growth, diversification, etc.) and decisions related to changes in the firm's operating philosophy.	.63

Organizational Strategy. Organizational strategy was measured using four items designed to measure an organization's prospector-like attributes in defining its product market domain. These items were adapted from an existing scale from the strategy literature. The coefficient alpha for the strategy scale and item-to-total correlations from the present study are displayed in Table 21. The relatively high coefficient alpha and item-to-total correlations indicate reliability of the adapted scale.

TABLE 21
ORGANIZATIONAL STRATEGY SCALE
COEFFICIENT ALPHA AND ITEM-TO-TOTAL CORRELATIONS

<i>Strategy:</i> Coefficient alpha = .78	<u>Item-to-Total Correlation</u>
1. The products and services which we provide to our customers are best described as products or services which are more innovative, continually changing, and broader in nature throughout the organization and marketplace.	.60
2. My organization has an image in the marketplace as an organization which has a reputation for being innovative and creative.	.66
3. The amount of time my business unit spends on monitoring changes and trends in the marketplace can best be described as lengthy: we are continuously monitoring the marketplace.	.50
4. The changes in sales which we have experienced are due most probably to our practice of aggressively entering into new markets with new types of product or service offerings and programs.	.61

Organizational Innovativeness. Organizational innovativeness was measured using six items from the innovation-related norm scale. This existing scale is designed to measure the extent to which innovativeness is accepted and encouraged by the

organization. The innovativeness scale's coefficient alpha and item-to-total correlations from the present study are displayed in Table 22. The relatively high coefficient alpha and item-to-total correlations indicate reliability of the existing scale.

TABLE 22
 ORGANIZATIONAL INNOVATIVENESS SCALE
 COEFFICIENT ALPHA AND ITEM-TO-TOTAL CORRELATIONS

<i>Innovativeness</i> : Coefficient alpha = .90	<u>Item-to-Total Correlation</u>
1. Attempt to discover original ways of improving organizational products and processes.	.69
2. Believe that change is a necessary response to a dynamic business environment.	.63
3. Are creative in finding improved ways of carrying out organizational processes.	.74
4. Conscientiously carry out change so that a new idea may be given a fair chance.	.80
5. Evaluate new ideas in terms of how they might be advantageous to your organization.	.81
6. Evaluate new ideas on the basis of how they might benefit the whole organization, not on the basis of how they might affect you or your work group.	.74

Organizational Boundary Spanning. Organizational boundary spanning was measured using an existing scale that measures an organization's activities associated with scanning their customer environment. The coefficient alpha for the environmental scanning scale and item-to-total correlations from the present study are displayed in Table

23. The relatively high coefficient alpha and item-to-total correlations indicate reliability of the existing scale.

TABLE 23
 ORGANIZATIONAL ENVIRONMENTAL SCANNING SCALE
 COEFFICIENT ALPHA AND ITEM-TO-TOTAL CORRELATIONS

<i>Environmental Scanning</i> : Coefficient alpha = .86	<u>Item-to-Total Correlation</u>
1. We meet with customers at least once a year to find out what products or services they will need in the future.	.49
2. Individuals from our manufacturing department interact directly with customers to learn how to serve them better.	.50
3. We do a lot of in-house market research.	.64
4. We are quick to detect changes in our customers' product preferences.	.69
5. We poll end users at least once a year to assess the quality of our products and services.	.60
6. We often talk with or survey those who can influence our end users' purchases (e.g., retailers, distributors).	.68
7. We collect industry information through informal means (e.g., lunch with industry friends, talks with trade partners).	.46
8. Intelligence on our competitors is generated independently by several departments.	.49
9. We are quick to detect fundamental shifts in our industry (e.g., competition, technology, regulation).	.56
10. We periodically review the likely effect of changes in our business environment (e.g., regulation) on customers.	.62

Descriptive Statistics

Customer-Oriented Organizational Learning

The composite score for customer-oriented organizational learning (COOL) is the mean of the mean scores for its four dimensions. The dimension sub-scales (C1, C2, C3, C4) are the mean summates of the items making up the particular dimensions. The individual items comprising each dimension's scale are first summed and then divided by the number of items in that particular scale. The means of the individual dimensions' scales are then summed and divided by four (i.e., the number of dimensions) to obtain the composite score (COOL). Scale items for the customer-oriented organizational learning measure were designed with five points. Higher values represent higher levels of the composite construct (COOL) and each of the dimensions (C1, C2, C3, C4). Table 24 summarizes the number of items, mean scores, standard deviations, ranges, and minimum and maximum values for the customer-oriented organizational learning construct and each of its dimensions.

While the means of the composite score and each of the dimensions' scores are fairly consistent, it is worth notice that the mean score for learning axioms (C3) is the highest (3.95). This would be expected, as a fundamental belief in the value of learning about customers (i.e., learning axioms), while a separate dimension, would tend to permeate all the other dimensions.

TABLE 24
 DESCRIPTIVE STATISTICS
 FOR CUSTOMER-ORIENTED ORGANIZATIONAL LEARNING

	<u>No. of</u> <u>Items</u>	<u>Mean</u> <u>Scores</u>	<u>s.d.</u>	<u>Range</u>	<u>Min.</u>	<u>Max.</u>
Customer-oriented organizational learning (COOL)	16	3.51	.66	3.45	1.55	5.00
Experience Sharing (C1)	5	3.26	.81	3.80	1.20	5.00
Shared Vision (C2)	4	3.45	.82	3.50	1.50	5.00
Learning Axioms (C3)	4	3.95	.70	4.00	1.00	5.00
Cross-functional Teamwork (C4)	3	3.39	.82	4.00	1.00	5.00

Handwritten notes:
 (C1)
 (C2)
 (C3)
 (C4)

Examination of the frequency distribution for the customer-oriented organizational learning scale (COOL) displays some evidence of skewness toward the higher levels. Figure 11 graphically illustrates the frequency distribution of the responses to the customer-oriented organizational learning scale. The mathematical midpoint of the scale is 3.0; however, 77.7% of the responses fall above this midpoint. The median of the frequency distribution of the responses is 3.6 on the five-point scale. This skewness is possibly attributable to a positive bias resulting from the respondents when rating their organizations. An additional explanation might provide support for the study's findings, as respondents in organizations characterized by low-levels of customer-oriented organizational learning would be expected to self-select out of the study. In other words, organizations' decisions not to participate would be indicative of organizations exhibiting lower levels of customer-oriented organizational learning. As a result, the participating organizations would exhibit the skewed levels of customer-oriented organizational learning seen in Figure 11 because only organizations that are interested in organizational learning responded. Nonetheless, the frequency of responses are adequately distributed to provide variance across the sample to test the hypotheses.

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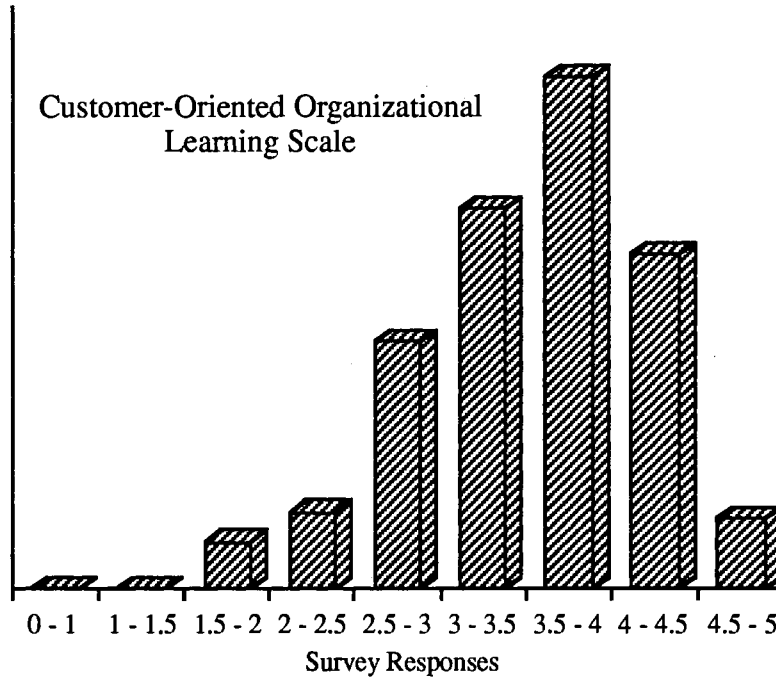


Figure 11. Frequency Distribution of Survey Responses to Customer-Oriented Organizational Learning Scale

Predictor Variables

The composite scores for the predictor variables are the mean summates of the items making up each of the scales. The individual items comprising the measures of formalization (FORM), centralization (CENT), specialization (SPEC), integration (INT), strategy (STRAT), innovativeness (INOV), and environmental scanning (SCAN) are first summed for the particular scale, and then divided by the number of items in that scale. Scale items for the predictor variables were designed with five points. Higher values represent higher levels of each of the variables. Table 25 summarizes the number of items, mean scores, standard deviations, ranges, and minimum and maximum values for each of the predictor variables.

For the most part, the mean scores of these measures are close to the 3.0 mathematical midpoint of the scales. There are, however, some slight irregularities to examine. The key departures from a mean score of 3.0 are in the centralization and innovativeness variables. The mean scores of these variables indicate that the surveyed organizations are relatively decentralized and relatively innovative. An additional explanation is needed for the specialization variable. As described in the measurement section (Chapter 3), specialization was measured on a “yes” / “no” scale. Therefore, when the mean composite score for specialization was computed, its maximum score was 1.0 and its minimum score was 0.0, with 0.5 being the mathematical midpoint. Similar to the other predictor variables, the mean score for specialization was close to its midpoint. Finally, the dispersion of the responses to these predictor variables was adequately distributed to provide variance across the sample to allow examination of the hypothesized relationships.

TABLE 25
DESCRIPTIVE STATISTICS
FOR PREDICTOR VARIABLES

	<u>No. of</u> <u>Items</u>	<u>Mean</u> <u>Scores</u>	<u>s.d.</u>	<u>Range</u>	<u>Min.</u>	<u>Max.</u>
Formalization (FORM)	4	3.44	.76	3.75	1.25	5.00
Centralization (CENT)	5	2.29	.78	4.00	1.00	5.00
Specialization (SPEC)	12	.60	.30	1.00	0.00	1.00
Integration (INT)	6	3.13	.90	4.00	1.00	5.00
Strategy (STRAT)	4	3.47	.81	3.75	1.25	5.00
Innovativeness (INOV)	6	3.71	.70	4.00	1.00	5.00
Environmental Scanning (SCAN)	10	3.40	.68	3.60	1.40	5.00

Correlation Analysis

Table 26 is a correlation matrix of the criterion variable, its dimensions, the predictor variables, and the organizational context variables. In general, the results of the correlation analysis support the findings of the hypotheses tests to be discussed later. As illustrated in Table 26, there are relatively high correlations between customer-oriented organizational learning (COOL) and its dimensions (C1, C2, C3, C4), as well as moderate correlations between COOL, C1, C2, C3, C4 and the predictor and context variables. These correlations will be discussed later under hypotheses testing.

TABLE 26

CORRELATION MATRIX OF
CRITERION, PREDICTOR, AND CONTEXT VARIABLES

		<i>COOL</i>	<i>C1</i>	<i>C2</i>	<i>C3</i>	<i>C4</i>	<i>FORM</i>	<i>CENT</i>	<i>SPEC</i>	<i>INT</i>	<i>STRAT</i>	<i>INOV</i>	<i>SCAN</i>	<i>UNC</i>
<i>COOL</i>	Customer-Oriented Organizational Learning	-												
<i>C1</i>	Experience Sharing	85 a	-											
<i>C2</i>	Shared Vision	88 a	66 a	-										
<i>C3</i>	Learning Axioms	78 a	55 a	60 a	-									
<i>C4</i>	Cross-functional Teams	83 a	60 a	65 a	50 a	-								
<i>FORM</i>	Formalization	-05	-04	-03	-01	-07	-							
<i>CENT</i>	Centralization	-15 b	-13 c	-10	-11	-18 a	29 a	-						
<i>SPEC</i>	Specialization	-02	01	-02	03	-03	10	08	-					
<i>INT</i>	Integration	41 a	39 a	23 a	31 a	42 a	-03	-17 b	25 a	-				
<i>STRAT</i>	Strategy	46 a	46 a	41 a	27 a	38 a	-07	-17 b	01	40 a	-			
<i>INOV</i>	Innovativeness	63 a	61 a	52 a	42 a	54 a	-05	-31 a	-06	47 a	58 a	-		
<i>SCAN</i>	Environmental Scanning	60 a	61 a	40 a	43 a	54 a	-02	-18 a	21 a	54 a	56 a	56 a	-	
<i>UNC</i>	Environmental Uncertainty	17 b	18 a	15 b	11	13 c	-01	-05	02	23 a	39 a	27 a	21 a	-
<i>MS</i>	Industry Concentration	01	05	-04	08	-04	-01	15 b	05	03	-04	-02	-02	04

a $p < .01$; b $p < .05$; c $p < .10$

Hypotheses Testing

For the present study, four hypotheses were developed in the previous chapter. All the hypotheses are tested using either simple or multiple regression. The criterion variable for each of the hypotheses is the customer-oriented organizational learning measure, the COOL scale. Higher scores on the COOL scale typify higher levels of customer-oriented organizational learning. The results of testing these hypotheses are presented in this section.

Hypothesis 1: Organizational Structure

In terms of organizational structure, it was hypothesized that:

- H1: Customer-oriented organizational learning will increase with:
- a. less formalization of an organization's structure
 - b. less centralization of an organization's structure
 - c. less specialization of an organization's structure
 - d. more integration of an organization's structure

Stated in the form of the alternative hypothesis, this hypothesis postulates that less formalized, more decentralized, less specialized, and more integrated organizational structures will generate higher levels of customer-oriented organizational learning. The results of the regression analysis testing this first hypothesis are displayed in Table 27. The measures of organizational structure (i.e., the FORM, CENT, SPEC, and INT scales) are the predictor variables. As specified earlier, higher scores on the FORM, CENT, SPEC, and INT scales represent organizations characterized by more formalization, more centralization, more specialization, and more integration.

As illustrated in Table 27, this study finds partial support for the conceptualized relationship between organizational structure and customer-oriented organizational learning (Hypothesis 1), as exemplified by the statistically significant relationship ($F = 11.53, p < .0001$) of the model. The R^2 value for this relationship indicates explained variance in the customer-oriented organizational learning variable (COOL) of 18.2% by the structure variables.

Only partial support is found, however, because the null hypothesis cannot be rejected for parts a, b, and c of Hypothesis 1. In other words, there appears to be no statistically significant relationship between the organizational structure variables of formalization, centralization, and specialization and the criterion variable, customer-oriented organizational learning. The formalization and specialization results are further confirmed by the simple correlations between FORM and COOL and between SPEC and COOL. There is a modest contradiction in the findings for the centralization variable, because the simple correlation between CENT and COOL is statistically significant ($r = -.15, p < .025$). Nonetheless, the variance in customer-oriented organizational learning (COOL) explained by the organizational structure variables appears to be explained by the integration (INT) variable ($r = .41, p < .0001$).

Although Hypothesis 1 examined all four dimensions of organizational structure, it is not unexpected that integration would be the structure variable accounting for the variance in customer-oriented organizational learning. Integration is a measure of coordination and cooperation across the organization. It would be anticipated that cooperative effort would be an underpinning of organizational learning. The direction of the relationship between INT and COOL, as noted by the sign of the parameter estimate, is positive as expected. These findings provide partial support for Hypothesis 1.

TABLE 27
 MULTIPLE REGRESSION ANALYSIS OF
 ORGANIZATIONAL STRUCTURE VARIABLES
 WITH CUSTOMER-ORIENTED ORGANIZATIONAL LEARNING

Variable	Expected H1. Sign	Parameter Estimate	Standard Error	t	Prob. t
Constant		2.80	.264	10.62	.0001
Formalization (FORM)	-	.01	.058	.14	.8893
Centralization (CENT)	-	-.07	.057	-1.20	.2319
Specialization (SPEC)	-	-.21	.145	-1.48	.1395
Integration (INT)	+	.31	.048	6.31	.0001
Model F	=	11.53			
Prob. F	=	.0001			
R ²	=	.182			
Adjusted R ²	=	.166			

Hypothesis 2: Organizational Strategy

In reference to organizational strategy, it was hypothesized that:

H2: The greater the organization's strategic focus on market and product development and diversification, the greater the customer-oriented organizational learning.

This hypothesis postulates that organizations characterized by prospector-like attributes will generate higher levels of customer-oriented organizational learning. The results of the regression analysis testing this second hypothesis are displayed in Table 28.

Organizational strategy (i.e., the STRAT scale) is the predictor variable. As specified earlier, higher scores on the STRAT scale typify organizations employing prospector-like strategies.

As illustrated in Table 28, this study finds support for the conceptualized relationship between organizational strategy and customer-oriented organizational learning (Hypothesis 2). The relationship between the constructs is statistically significant ($F = 56.39, p < .0001$), as shown by the model. The R^2 value for this relationship indicates explained variance in the customer-oriented organizational learning variable (COOL) of 21.1% by the strategy variable. In addition, the direction of the relationship between STRAT and COOL, as noted by the sign of the parameter estimate, is positive as expected. These findings provide support for Hypothesis 2.

TABLE 28
SIMPLE REGRESSION ANALYSIS OF
ORGANIZATIONAL STRATEGY VARIABLE
WITH CUSTOMER-ORIENTED ORGANIZATIONAL LEARNING

Variable	Expected H2. Sign	Parameter Estimate	Standard Error	t	Prob. t
Constant		2.22	.176	12.55	.0001
Strategy (STRAT)	+	.37	.049	7.51	.0001
Model F	=	56.39			
Prob. F	=	.0001			
R^2	=	.211			
Adjusted R^2	=	.207			

Hypothesis 3: Organizational Innovativeness

When considering organizational innovativeness, it was hypothesized that:

H3: The greater the innovativeness of the organization, the greater the customer-oriented organizational learning.

This hypothesis, stated in the alternative hypothesis form, posits that more innovative organizations will generate higher levels of customer-oriented organizational learning. The results of the regression analysis testing this third hypothesis are displayed in Table 29. The measure of organizational innovativeness (i.e., the INOV scale) is the predictor variable. As specified earlier, higher scores on the INOV scale represent organizations supporting and encouraging greater innovativeness by organizational members.

As illustrated in Table 29, this study finds support for the conceptualized relationship between organizational innovativeness and customer-oriented organizational learning (Hypothesis 3), as signified by the statistically significant relationship ($F = 137.53, p < .0001$) of the model. The R^2 value for this relationship indicates that organizational innovativeness explains 39.5% of the variance in the customer-oriented organizational learning variable (COOL). In addition, the direction of the relationship between INOV and COOL, as noted by the sign of the parameter estimate, is positive as expected. These findings provide support for Hypothesis 3.

TABLE 29
 SIMPLE REGRESSION ANALYSIS OF
 ORGANIZATIONAL INNOVATIVENESS VARIABLE
 WITH CUSTOMER-ORIENTED ORGANIZATIONAL LEARNING

Variable	Expected H3. Sign	Parameter Estimate	Standard Error	t	Prob. t
Constant		1.33	.189	7.03	.0001
Innovativeness (INOV)	+	.59	.050	11.73	.0001
Model F	=	137.53			
Prob. F	=	.0001			
R ²	=	.395			
Adjusted R ²	=	.392			

Hypothesis 4: Organizational Boundary Spanning

When considering environmental scanning as a dimension of boundary spanning, it was hypothesized that:

H4: The greater the organization's environmental scanning of customer environments, the greater the customer-oriented organizational learning.

Stated in the form of the alternative, this hypothesis postulates that greater levels of environmental scanning of customer environments will generate higher levels of customer-oriented organizational learning. The results of the regression analysis testing this fourth hypothesis are displayed in Table 30. Environmental scanning (i.e., the SCAN scale) is the predictor variable. As specified earlier, higher scores on the SCAN scale represent organizations engaging in more scanning of customer environments.

As illustrated in Table 30, this study finds support for the conceptualized relationship between environmental scanning and customer-oriented organizational

learning (Hypothesis 4). This is indicated by the statistically significant relationship ($F = 118.01, p < .0001$) of the model. The R^2 value for this relationship indicates explained variance in the customer-oriented organizational learning variable (COOL) of 35.8% by the scanning variable. Furthermore, the direction of the relationship between SCAN and COOL, as noted by the sign of the parameter estimate, is positive as expected. This provides support for Hypothesis 4.

TABLE 30
SIMPLE REGRESSION ANALYSIS OF
ORGANIZATIONAL ENVIRONMENTAL SCANNING VARIABLE
WITH CUSTOMER-ORIENTED ORGANIZATIONAL LEARNING

Variable	Expected H4. Sign	Parameter Estimate	Standard Error	t	Prob. t
Constant		1.53	.185	8.29	.0001
Environmental Scanning (SCAN)	+	.58	.053	10.86	.0001
Model F	=	118.01			
Prob. F	=	.0001			
R^2	=	.358			
Adjusted R^2	=	.355			

Multivariate Analysis

The results of the hypotheses testing indicate support for each of the hypotheses when tested as univariate relationships. Each of the variables possesses explanatory

power in predicting customer-oriented organizational learning. It was decided, however, that because of the moderately strong intercorrelations among the significant variables (i.e., integration, strategy, innovativeness, and scanning) further examination of the relationships from a multivariate view should be performed.

A review of the predictor variables leads to the expectation that some are intercorrelated (e.g., see Jaworski and Kohli 1993; Russell and Russell 1992). For example, developing an integrated structure creates a lateral mechanism for ensuring the acquisition and transmission of information throughout an organization. In conjunction, for effective environmental scanning to occur, all departments within the organization are involved in scanning customer environments, or, as measured in the field survey, that information is gathered by several departments in the organization. As an organization desires to obtain greater amounts of information, it adopts integrative mechanisms (Galbraith 1973, 1994). This implies that an integrated structure would create an atmosphere conducive to effective environmental scanning.

Empirical support for this example can also be found by examining the correlations between integration and environmental scanning, as noted in the correlation matrix ($r = .54, p < .0001$). This is one of the highest correlations between predictor variables in this study. The correlation between integration and environmental scanning implies an interdependency. Thus, it seems logical from a conceptual and an empirical basis that an integrated structure and effective scanning of customer environments would be necessary complements in an organization. Therefore, it is possible that either variable (i.e., integration or scanning) may reduce the explanatory value of the other.

Likewise, an example of interdependency among predictor variables exists for organizational strategy and innovativeness. When considering innovativeness, the concern in the present study has been with the overall innovativeness bias that an organization possesses. This includes displaying process innovativeness (i.e., how quick an organization is in adopting new processes, business methods, and policies), as well as

product innovativeness (i.e., how quick to market an organization is with new products). Related to this is the measure of organizational strategy as the level of an organization's prospector-like attributes (i.e., continually searching for and exploiting new opportunities in the marketplace [Miles and Snow 1978]). In other words, the strategy measure is a measure of innovativeness in the marketplace (i.e., product innovativeness). More specifically, the field survey asked the respondents to assess the innovativeness of their business unit's products and services, their business unit's reputation for being innovative, and the aggressiveness with which their business unit enters new markets. The conceptualization of these constructs implies that organizational innovativeness captures the total effort of innovativeness in an organization, including the level of prospector attributes embodied in its strategy. This implies that an organization driven by an overall innovativeness bias would be much more likely to define their marketplace strategy from a prospector approach. Thus an overall innovativeness bias and the development of a prospector strategy would be necessary complements in an organization.

Similar to the earlier explanation, empirical support for this example can also be found by examining the correlations between innovativeness and strategy ($r = .58$, $p < .0001$). This is the highest correlation between predictor variables in this study. The correlation between these predictor variables further implies an interdependency between innovativeness and strategy. These findings, along with the conceptualized association between innovativeness and strategy, infers the possibility that either variable may reduce the explanatory value of the other.

Based on the examples of the integration and scanning associations and the innovativeness and strategy associations, additional analysis was conducted in an attempt to increase the level of explanation of the customer-oriented organizational learning construct and to examine the conceptualized relationships from a multivariate view. A regression model was run with customer-oriented organizational learning as the criterion

variable and all variables that were significant in the previous hypotheses tests as the predictor variables (i.e., integration (INT), strategy (STRAT), innovativeness (INOV), and scanning (SCAN)). Results of the analysis are provided in Table 31.

TABLE 31
 MULTIPLE REGRESSION ANALYSIS OF
 ORGANIZATIONAL PREDICTOR VARIABLES
 WITH CUSTOMER-ORIENTED ORGANIZATIONAL LEARNING

Variable	Expected Sign	Parameter Estimate	Standard Error	t	Prob. t
Constant		.85	.195	4.34	.0001
Integration (INT)	+	.02	.045	.46	.6494
Strategy (STRAT)	+	.01	.053	.27	.7855
Innovativeness (INOV)	+	.37	.063	5.98	.0001
Scanning (SCAN)	+	.34	.067	5.04	.0001
Model F	=	48.01			
Prob. F	=	.0001			
R ²	=	.482			
Adjusted R ²	=	.472			

As illustrated in Table 31, this analysis generally supports the conceptualized relationships. The model is statistically significant at the .0001 level ($F = 48.01$), and the R^2 value of 48% is non-trivial. The R^2 value is higher than any of the individual hypothesis' R^2 values. The variance in customer-oriented organizational learning (COOL), however, is explained primarily by innovativeness and environmental scanning, with integration and strategy not being significant in the model. Additional examination

of the partial correlations of integration ($r = .03, p < .6287$) and strategy ($r = .02, p < .7559$) indicates that for all levels of innovativeness and scanning, neither integration nor strategy significantly influences COOL. The directionalities of the relationships of INOV and SCAN with COOL are positive. To further test this, another regression model was run without integration and strategy. The model R^2 was only slightly below that of the full model (i.e., $R^2 = .481$). Of the four variables, innovativeness and environmental scanning were the only significant predictors of customer-oriented organizational learning. It appears that the integration and strategy variables add no additional explanatory value to the model. This seems to indicate that the associations of integration and strategy with customer-oriented organizational learning are spurious. When considered in a multivariate context, for hypothesis 1d and hypothesis 2, the null hypothesis should not have been rejected.

An alternative explanation of these multivariate results makes these findings not entirely surprising. As discussed earlier in this section, it was expected that some of the predictor variables are interdependent, and hence, covary with each other. Integration and strategy may not directly add to the explanatory power because of their interdependencies with environmental scanning and innovativeness. This does not mean that they are not, in some way, a part of the atmosphere that fosters a customer-oriented organizational learning environment.

As explained earlier, integration and environmental scanning are highly correlated, suggesting that effective environmental scanning and an integrated structure are related. In addition, examining the correlations of integration and scanning with the dimensions of customer-oriented organizational learning suggests a similar pattern. The highest correlations for integration and environmental scanning are found with the experience sharing ($r_{INT} = .39, p < .0001; r_{SCAN} = .61, p < .0001$) and cross-functional teamwork ($r_{INT} = .42, p < .0001; r_{SCAN} = .54, p < .0001$) dimensions. The consistent pattern of correlations suggests that the same dimensions of customer-oriented

organizational learning (i.e., experience sharing and teamwork) are of the same relative importance to integration and scanning.

Similarly, innovativeness and strategy are highly correlated suggesting that the encouragement of innovative behaviors in organizational members is related to a marketplace strategy based on prospector attributes. Further, examining the correlations of innovativeness and strategy with the dimensions of customer-oriented organizational learning finds that the two predictor variables are most highly correlated with experience sharing ($r_{\text{INOV}} = .61, p < .0001$; $r_{\text{STRAT}} = .46, p < .0001$). This consistent finding suggests that, when compared to the other customer-oriented organizational learning dimensions, experience sharing is of the same relative importance to both innovativeness and strategy.

The relatively high correlations between predictor variables, taken with the consistent relative importance of customer-oriented organizational learning dimensions, leads to the explanation that integration and strategy may be captured with the measures of the other variables (i.e., scanning and innovativeness). In other words, an effective lateral operation (i.e., integrated structure) is illustrated when an organization effectively scans its environment. In like manner, if an organization is innovative, its strategy will manifest this characteristic. Furthermore, by definition (Miles and Snow 1978), a highly innovative organization would not employ an analyzer, defender, or reactor strategy. This explanation recognizes that it is still appropriate to view structure and strategy as important elements in the development of customer-oriented organizational learning. Based on the conceptualization of the predictor variables' relationships to customer-oriented organizational learning and to each other, this explanation is justifiable.

Organizational Context Variables

As discussed in the previous chapter, data was collected for the organizational context variables of environmental uncertainty, industry concentration, organization size,

and industry type. These variables were not included as part of the proposed model; therefore, they were not part of the current research program. They were, however, analyzed for their possible influence on the hypothesized relationships. The results of this analysis did not change the findings of the reported hypotheses testing. Therefore, the results are not reported here.

Summary of Research Findings

The empirical results of this study find support for the hypothesized relationships between customer-oriented organizational learning and the organizational characteristics of structure, strategy, innovativeness, and boundary spanning. This begins to provide answers to the study's original research question: What are the organizational characteristics that facilitate customer-oriented organizational learning? As hypothesized, organizations characterized by an integrated organizational structure, a prospector-like strategy, higher levels of organizational innovativeness, and greater amounts of scanning of customer environments generate higher levels of customer-oriented organizational learning.

CHAPTER V

DISCUSSION

The discussion of this study follows in five parts. First, an overview of the supporting literature is presented. Next, the research findings are reviewed. Third, the implications for theory and practice are developed. Fourth, the limitations of the study are investigated. Finally, recommendations for future research are presented.

Overview of Supporting Literature

The driving force behind this study was the recognition that a focus on customer orientation and a commitment to organizational learning are the keys to maintaining initial successes of quality management initiatives. Furthermore, linking the concepts of customer orientation and organizational learning provides a basis for:

- investigating the association between marketing management and organizational behavior as called for by marketing scholars (see Parasuraman and Deshpandé 1984)
- understanding organizational learning as a key to customers' needs (e.g., Day 1991)

Based on these ideas, the study specifically addressed the following research question: What organizational characteristics facilitate customer-oriented organizational learning? To answer this question, the concept of customer-oriented organizational learning was introduced and its association with organizational characteristics was examined.

Customer-Oriented Organizational Learning

From an information processing perspective, organizational learning encompasses the acquisition, dissemination, interpretation, and storage of information within the

organization that results in the modification of the potential range of behaviors to reflect new knowledge and insights (Garvin 1993; Huber 1991). Organizations that are market driven (i.e., responsive to customers' needs) engage in organizational learning in a customer information context (Day 1991). In other words, they acquire, disseminate, interpret, and store relevant information about customers. Existing research has identified five skills, or dimensions, that exemplify organizational learning. Adapting these to a marketing perspective, these dimensions are described as:

1. *Learning Axioms.* A belief in the fundamental premise that learning about customers is valued by the organization.
2. *Shared Vision.* The commitment of all organizational members to a clear and comprehensive vision that places customers' interests first.
3. *Cross-functional Teams.* The use of cross-functional teams to solve customers' problems, conduct experiments designed to improve customer satisfaction, and quickly and efficiently disseminate customer information throughout the organization.
4. *Openmindedness.* The ability to anticipate and respond to constantly changing customers' needs by reflecting on organizational frames of references regarding customers and unlearning, or discarding, obsolete customer information when new information is available.
5. *Experience Sharing.* The capacity to learn from personal success and failure attempts at satisfying customers and from people in analogous organizations or situations about how to improve customer satisfaction.

Researchers have determined that one way to differentiate organizations that engage in customer-oriented organizational learning from those that do not is to look for the existence of these skills in organizations. Consequently, an organization would be engaging in customer-oriented organizational learning if the organization concentrated on the development of the organizational learning skills of learning axioms, shared vision, cross-functional teams, openmindedness, and experience sharing on improving customer orientation within the organization.

Organizational Characteristics Associated With Customer-Oriented Organizational Learning

The identification of the presence or absence of customer-oriented organizational learning skills does not address the research question of the present study: What organizational characteristics facilitate customer-oriented organizational learning? Therefore, the present research drew on the organizational theory and organizational behavior literatures to suggest a key set of specific internal organizational characteristics that may facilitate or hinder customer-oriented organizational learning. The selected characteristics are organizational structure (i.e., formalization, centralization, specialization, and integration), strategy (i.e., entrepreneurial response), innovativeness, and boundary spanning (i.e., environmental scanning).

Summary of Findings

Investigation of the posited relationships between customer-oriented organizational learning and the selected organizational characteristics rests on the ability to meet two research objectives:

1. The development of measures of the customer-oriented organizational learning construct.
2. The empirical examination of the conceptualized relationships between selected organizational characteristics and customer-oriented organizational learning.

To accomplish the first objective, the development of a measure of the customer-oriented organizational learning construct, the following operational definition of customer-oriented organizational learning was developed:

The acquisition or dissemination of customer-oriented information resulting in the development of a knowledge base that reflects new information and insights about customers.

It was justified that acquisition or dissemination of customer-oriented information is sufficient for customer-oriented organizational learning to have occurred. With this definition as a foundation, a nineteen-item scale (primarily based on the work of Sinkula

and Noordewier [1994]) was developed to measure the five dimensions of customer-oriented organizational learning. In addition, scales designed to measure the organizational characteristics believed to be antecedents to customer-oriented organizational learning were identified from previous research. A questionnaire containing the customer-oriented organizational learning scale, the organizational characteristics scales, and other questions pertaining to organizational context and individual demographics was mailed to 1,000 strategic level managers. An effective response rate of 27.7 percent was the result.

The empirical analysis of the field survey responses resulted in a slightly modified customer-oriented organizational learning scale. Specifically, from this process four dimensions of customer-oriented organizational learning emerged:

1. experience sharing (slightly modified from original scale)
2. shared vision (not modified from original scale)
3. learning axioms (not modified from original scale)
4. cross-functional teams (not modified from original scale)

Openmindedness was eliminated as a learning dimension. The findings revealed a high level of internal consistency (i.e., reliability) in the customer-oriented organizational learning scale. This study, with the findings of Sinkula and Noordewier (1994), provides initial evidence that the scale does possess construct validity.

The other scales used in the study were also subjected to reliability testing prior to hypotheses testing. These scales have been extensively used in previous marketing or management studies. As expected, support for each of the scales was found. This ensured that the hypotheses tests were not misinterpreted by the use of unreliable or invalid scales.

The second objective of this study was to empirically examine the conceptualized relationships between the selected organizational characteristics and customer-oriented organizational learning. Hypotheses were developed for each of the conceptualized

relationships between customer-oriented organizational learning and the selected organizational characteristics: structure, strategy, innovativeness, and boundary spanning.

Hypothesis 1 suggested that organizational structure and customer-oriented organizational learning are associated. Specifically, it stated that less formalized, centralized, and specialized and more integrated organizations exhibit greater degrees of customer-oriented organizational learning. Partial support was found for this hypothesis. A positive relationship was found between customer-oriented organizational learning and the integration dimension of organizational structure. The other structural dimensions (i.e., formalization, centralization, specialization) were not significantly related to customer-oriented organizational learning. This suggests that the higher the level of coordination among work groups (i.e., integration) in the organization, the greater the amounts of customer-oriented organizational learning; however, the amount of job codification (i.e., formalization), hierarchical authority (i.e., centralization), and distribution of tasks (i.e., specialization) within the organization do not influence customer-oriented organizational learning.

In retrospect, the overriding influence of integration in explaining the variance in customer-oriented organizational learning is not entirely unexpected. Integration is a measure of cooperative effort which would be expected to be an antecedent of customer-oriented organizational learning. This would be particularly true of the cross-functional teamwork, experience sharing, and shared vision dimensions of customer-oriented organizational learning. The existence of these three dimensions implies some level of cooperation and coordination (i.e., integration) underlying customer-oriented organizational learning.

The lack of significant relationships between customer-oriented organizational learning and the other structural dimensions (i.e., formalization, centralization, specialization) deserves mention. While it was argued that formalization restricts

information flows within the organization, it appears that the use of explicitly defined roles and procedures within an organization does not hinder nor facilitate customer-oriented organizational learning. It may be that while formalization restricts information flows within the organization, it also increases coordination among members. Similarly, the division of labor within the organization is not related to customer-oriented organizational learning. It appears that the advantages and disadvantages of specialization offset each other in facilitating or hindering customer-oriented organizational learning. In other words, specialization may simultaneously increase efficiency of information processing and create obstacles to information processing, which results in no influence on customer-oriented organizational learning.

In contrast to the explanation for formalization and specialization, the nonsignificant findings for centralization are more difficult to explain. It was argued that centralized structures decrease the information processing capabilities of organizations. Organizational learning, which is based on information flows, is enhanced by structures that diffuse decision making. The findings of the present study, however, suggest that for customer-oriented organizational learning to occur it does not matter if decision making authority is delegated downward in the organization or concentrated at higher levels of authority. One possible explanation for this lies in a modest contradiction of the results. While the hypothesized relationship between customer-oriented organizational learning and centralization was not found in the regression analysis, there was a statistically significant correlation between the two variables. Therefore, this relationship warrants additional investigation.

Hypothesis 2 stated that organizations with a strategic focus on market and product development and diversification would generate higher levels of customer-oriented organizational learning. In other words, organizations characterized by prospector-like attributes, especially in their entrepreneurial response, will generate greater customer-oriented organizational learning. Support was found for Hypothesis 2.

This implies that organizations that engage in relatively high customer-oriented organizational learning are those that experiment in the marketplace and obtain feedback from customers (Miles and Snow 1978), consider marketing activities specifically associated with customers to be critical components of their marketing strategies (McDaniel and Kolari 1987), invest heavily in developing marketing competencies (Hambrick 1983; Snow and Hrebiniak 1980), and frequently monitor their markets (Miller 1989). Consequently, the data indicate that companies employing a prospector strategy provide a foundation upon which to build customer-oriented organizational learning.

According to Hypothesis 3, more innovative organizations generate higher levels of customer-oriented organizational learning. The hypothesis was supported. Because a pro-innovativeness bias encourages the active exchange of ideas and increased information flows within an organization (Menon and Varadarajan 1992), customer-oriented organizational learning increases. Consequently, the finding suggests that organizations valuing, accepting, and expecting workers to employ new and untried processes, methods, and policies will engage in relatively greater amounts of customer-oriented organizational learning.

The final hypothesis (Hypothesis 4) posited that greater levels of environmental scanning of customer environments generates higher levels of customer-oriented organizational learning. Support for this hypothesis was found. Environmental scanning enhances information flows within organizations (Lenz and Engledow 1986), improves organizational information processing (Culnan 1983), and allows organizations to take a proactive stance toward external environments (Preble 1978). It provides a means for organizations to learn from and adapt to their environments (Hambrick 1981; Huber and Daft 1987). Consequently, this finding indicates that scanning of external customer environments provides a basis from which customer-oriented organizational learning will evolve.

In an additional multivariate analysis, the amount of explained variance in customer-oriented organizational learning substantially increased with the collective influence of the four characteristics found in the hypotheses testing to be related to customer-oriented organizational learning. Nonetheless, not all four variables added to the explained variance in customer-oriented organizational learning. Integration and strategy were not significant predictors in the combined model, while innovativeness and environmental scanning were. It was argued that the interdependencies among the predictors led to this result.

In summary, specific tests of the present study's hypotheses resulted in statistically significant relationships between each of the predictor variables and customer-oriented organizational learning. In particular, the organizational structure dimension of integration, organizational strategy, organizational innovativeness, and environmental scanning were all found to be positively related to customer-oriented organizational learning. In other words, the present study finds organizations that use cooperative mechanisms in their structures, engage in prospector strategies, support innovation-related behaviors in their members, and span their boundary through environmental scanning of their customer environments are more likely to exhibit customer-oriented organizational learning. When tested in a multivariate form, neither integration nor strategy was found statistically significant; however, as discussed in Chapter 4, this is likely related to the time sequence of the relationships. Because this study was cross-sectional, the issues of antecedents and consequences cannot be evaluated.

Implications

The findings from this study make contributions to the field of marketing for both theory and practice. These contributions are discussed in the following sections.

Theoretical Implications

From the theoretical perspective, the present study:

1. Extends existing research in the areas of customer-orientation and organizational learning.
2. Empirically tests conceptual relationships linking marketing activities and organizational characteristics.
3. Integrates organizational theory and organizational behavior research with the marketing discipline to advance an internal perspective of marketing management.

Customer orientation is the operationalization of the marketing concept. It focuses on satisfying customers in order to gain long-term profitability. To do this, organizations must learn about their customers. This research extends research in the area of customer orientation by identifying the dimensions of organizational learning that apply to customer orientation. Furthermore, it extends research in the organizational learning realm by isolating one type, that is, customer-oriented organizational learning.

The second theoretical implication stems from the empirical tests of the conceptual relationships linking customer-oriented organizational learning and the selected organizational characteristics. The development and testing of the conceptual model of customer-oriented organizational learning adds to the growing theoretical foundation describing the antecedents to a customer (or market) orientation (see Jaworski and Kohli 1993).

Finally, an internal perspective of marketing management is advanced through the integration of organizational theory and organizational behavior research with the marketing discipline. Specifically, the rich background of the organizational learning literature provided a theoretical foundation for examining the fundamentals of organizational behavior in a market-driven organization. Far too often, researchers have taken a demand-side perspective to the study of marketing, while ignoring the organizational behavior view of marketing management (Parasuraman and Deshpandé

1984). The present research examined marketing management from an organizational behavior perspective.

Managerial Implications

Clearly the findings of the present study have implications for practitioners. From the practical perspective, the present research specifically examines how business units can build learning organizations. First, the development of the customer-oriented organizational learning scale provides practitioners with a tool for assessing the level of customer-oriented organizational learning within their organizations. The customer-oriented organizational learning scale developed for the present study is an easy to administer tool that businesses could use to identify the overall level of customer-oriented organizational learning, along with the level of experience sharing, shared vision, learning axioms, and cross-functional teamwork.

Relatedly, the operationalization of the skills associated with customer-oriented organizational learning is useful for deciding how to build a learning organization. Managers can determine the overt behaviors associated with incorporating experience sharing, shared vision, learning axioms, and cross-functional teamwork within their business unit. Specific coaching methods and reward systems could then be developed to encourage and support those behaviors in the organization's members.

Another managerial implication stems from the identification of organizational characteristics that facilitate customer-oriented organizational learning. Based on the knowledge of the organizational characteristics that facilitate customer-oriented organizational learning, organizations can implement change to create an environment that fosters customer-oriented organizational learning. This study provides specific evidence that a more integrated structure, a more prospector-like strategy, a more innovative climate, and more scanning of customer environments facilitates customer-oriented organizational learning. Therefore, managers who want to generate higher levels

of customer-oriented organizational learning should set goals to embrace integrated structures, prospector strategies, innovation-related norms, and customer-oriented scanning activities in their business units.

Limitations

The present study has several limitations. First, while a response rate of 27.7 percent is acceptable in organizational research, it is questionable whether the findings of this study are generalizable to the business population at-large. The possibility exists that organizations with relatively high levels of customer-oriented organizational learning self-selected to join the study. This self-selection bias was, to some degree, minimized because of the telephone call-back campaign used to increase the response rate. A comparison of respondents requiring a telephone stimulus to participate to those who did not, indicated that nonresponse bias was not a problem in the study. This suggests there was no difference between those organizations that (self) selected to participate and those that needed additional prodding. In addition, the generalizability of the study was bolstered by the inclusion of various companies of different sizes across a wide range of products and industries.

A second limitation of the study is the use of organizational members as key informants for the organizations. Time and resource constraints dictated the use of the key informant approach to allow a relatively large number of organizations to be surveyed. This may have presented some problems because managers' insights into cross-functional activities may have been limited. Nonetheless, the respondents had relatively long tenures with their companies (i.e., $\bar{X} = 11$ years). This tenure should help overcome some of the problems associated with this limitation of the study.

Another limitation is the validity of the customer-oriented organizational learning scale. From the present study it is difficult to determine with certainty that the scale truly measured the construct it was intended to measure, customer-oriented organizational

learning. The scale did exhibit a relatively high level of reliability. In addition, the traditional scale purification techniques used in the study resulted in empirical evidence consistent with the theories and concepts presented by Sinkula and Noordewier (1994). Therefore, while some concern over this limitation does exist, the analysis does provide some level of confidence in the construct validity of the customer-oriented organizational learning scale.

A fourth limitation is the causal ordering of the variables. Although there is abundant justification for the ordering suggested, other models may be plausible. For example, it may be that an integrated organizational structure leads to higher levels of customer-oriented organizational learning, which in turn results in more innovativeness in the organization. The present study is not designed to examine different causal orderings of the variables. This suggests that different methodologies (e.g., longitudinal research) or different data analysis techniques (e.g., path analysis) could have been used to examine the relationships.

A final limitation relates to the complexity of the proposed and tested model used in the present study. The present study was an initial attempt at empirical analysis of customer-oriented organizational learning. Therefore, the model, by design, was relatively simple. This, however, limits the complexity of the findings. In other words, the present study merely investigated the associations between customer-oriented organizational learning and the selected organizational characteristics. Nothing beyond these associations can be asserted from the research. The findings, however, are of value to the marketing discipline as this initial attempt provides a basis for future research.

Future Research

The present study provides a foundation for several recommendations for future research. Future research should concentrate on further investigation of the relationships tested in the present study. For example, the relationship between customer-oriented

organizational learning and organizational structure warrants further examination. While integration was found to be related to customer-oriented organizational learning, the other structural dimensions were not. Future research could use different methods to measure the nonsignificant structure variables to further investigate these relationships.

As discussed in the limitations section, future research should concentrate on investigating a more complex model of customer-oriented organizational learning. First, an investigation of the causal ordering of variables is in order. Such a methodology would allow going beyond mere association and build further support for the posited antecedent relationships from the selected organizational characteristics to customer-oriented organizational learning. Additionally, this may help sort out the contradictions found in the multivariate analysis. Next, other organizational variables should be added to the model. The present study concentrated on a set of key predictor variables identified from the organizational theory and organizational behavior literatures. The antecedent and consequent effects of additional organizational characteristics, such as organizational culture, organizational performance, and marketing mix strategies, should be investigated. Finally, the organization context variables used in the present study deserve further attention. This should include more extensive analysis of the variables used (i.e., environmental uncertainty, industry type, industry concentration, and organization size), as well as the addition of other context variables (e.g., organizational life cycle, level of globalization).

Additional research needs to be conducted to further test the validity of the customer-oriented organizational learning scale and refine the measure. To do this, the scale should be used in other settings besides manufacturing. For example, retail establishments, intermediary distributors, and service providers all provide ample arenas for studying customer-oriented organizational learning. Additional testing of the scale will help establish its validity and help determine the exact dimensions of customer-oriented organizational learning.

Another avenue for future research is related to the underlying perspective of the present study. As described in Chapter 3, the present research employed a systems-structural approach to the study of customer-oriented organizational learning. This provided a basis for studying the organizational learning logistical components of information acquisition and dissemination. Nonetheless, future research should investigate customer-oriented organizational learning from the interpretive perspective. In other words, the underlying purpose and meaning given to information by the organization's members as part of learning should be examined. Related to this would be the use of more informants in each organization rather than relying on one key informant's assessment.

Future research could investigate customer-oriented organizational learning at other levels in the organization. The present study examined the proposed model at the business unit level. Customer-oriented organizational learning could be investigated (1) at the work group level and compared across work groups within the organization, (2) separately at the corporate level, (3) for a corporation across its SBUs, or (4) within joint ventures.

Finally, the relationship between customer-oriented organizational learning and integrated communication within the organization should be investigated. As discussed in the literature review, organizational communication is fundamental to customer-oriented organizational learning. The present study, however, did not specifically address integrated communication within the organization as part of customer-oriented organizational learning. Future research should include the examination of social networks, information systems, and telecommunication linkages as they influence or are influenced by customer-oriented organizational learning. For example, a beneficial research question might be: how does an organization build an information system to support customer-oriented organizational learning?

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APPENDIX

SURVEY INSTRUMENT AND REMINDER POSTCARD

Oklahoma State University

COLLEGE OF BUSINESS ADMINISTRATION

201 Business
Stillwater, Oklahoma 74078-0555
405-744-5064, FAX 405-744-5180

How good is your organization at learning? If you are like most people, you probably do not know. By simply completing and returning the following questionnaire, you can discover your "learning organization" score. A team of researchers from Oklahoma State University and Wichita State University will provide you with this free, confidential assessment.

Most managers agree that organizations have to constantly adapt to changes in the economy. Recently, *Fortune* magazine stated that the major ingredients for dealing with the new economy are "the intangible assets of skill, knowledge, and information." In fact, it is estimated that three-fourths of value-added in companies derives from knowledge. This implies that the value of your knowledge assets far exceeds the value of your balance sheet assets.

The term "*learning organization*" has been used to describe companies that know how to successfully develop and sustain knowledge assets. Until recently, researchers have not studied the capabilities of companies as "learning organizations." To begin to remedy this, our research team is now studying these capabilities as a key to improving organizational performance.

The enclosed questionnaire should take you approximately 15 minutes to complete. All replies will be handled confidentially. Neither you nor your company will be identified in any presentation of the data. After completing the questionnaire, please fold, staple, and drop it in the mail (no postage required). In appreciation for your cooperation, a summary report of the results, along with your organization's learning score, will be provided to you. To request your free assessment, enclose a separate sheet of paper or your business card with the completed questionnaire.

Thank you for your time and assistance. Your participation is vital to the success of this project and the summary results will be of value to you.

Sincerely,

Cindy Claycomb
Principal Researcher and
Assistant Professor of Marketing & Entrepreneurship

INSTRUCTIONS

- Your responses to this questionnaire should be based on your business unit. A business unit is defined as a division or subsidiary of a larger corporation that is operated independently. In this questionnaire, the word "organization" is used interchangeably with business unit.
- You may require the input of other individuals to complete the entire questionnaire; however, if a particular question does not apply to your situation, skip it and go on. Please return the questionnaire even if you have not completed all the questions.
- There are no right or wrong answers. Please answer the questions as they apply to your business unit and not how you would like them to apply.

A. ORGANIZATIONAL PRACTICES

Rate the extent to which you agree with each statement as it applies to your business unit:

	<u>Strongly</u> <u>Disagree</u>	<u>Disagree</u>	<u>Neutral</u>	<u>Agree</u>	<u>Strongly</u> <u>Agree</u>
1. Managers basically agree that our organization's ability to learn about customers is the key to our competitive advantage	1	2	3	4	5
2. The basic values of this organization include learning about customers as a key to improvement.....	1	2	3	4	5
3. The sense around here is that employee learning associated with learning about customers is an investment, not an expense	1	2	3	4	5
4. Learning about customers in my organization is seen as a key commodity necessary to guarantee organizational survival	1	2	3	4	5
5. There is a commonality of purpose in my organization that places customers' interests first.....	1	2	3	4	5
6. There is total agreement in our organizational vision across all levels, functions, and divisions that customers' interests should be placed first	1	2	3	4	5
7. All employees are committed to the goals of this organization that place customers' interests first	1	2	3	4	5
8. Employees view themselves as partners in charting the direction of the organization toward placing customers' interests first	1	2	3	4	5
9. Cross-functional teamwork to improve customer satisfaction is a common practice here.....	1	2	3	4	5
10. Individuals in teams designed to improve customer satisfaction are not defensive about their particular functional specialty.....	1	2	3	4	5
11. Around here, cross-functional teamwork is the common way of working to solve customers' problems and disseminate customer information rather than an exception to the norm	1	2	3	4	5
12. We are always attempting to develop new ways of looking at the customer	1	2	3	4	5
13. We are not afraid to reflect critically on the shared assumptions we have made about our customers.....	1	2	3	4	5
14. Personnel in this enterprise realize that the very way they perceive the marketplace (i.e., customers) must be continually questioned	1	2	3	4	5

	<u>Strongly Disagree</u>	<u>Disagree</u>	<u>Neutral</u>	<u>Agree</u>	<u>Strongly Agree</u>
15. We often collectively question our own biases about the way we interpret customer information	1	2	3	4	5
16. We always audit our unsuccessful marketplace endeavors and communicate the lessons learned widely	1	2	3	4	5
17. We are good at learning from our mistakes associated with improving customer satisfaction.....	1	2	3	4	5
18. There is a good deal of organizational conversation which keeps alive the lessons learned from history, including both failures and successes associated with improving customer satisfaction	1	2	3	4	5
19. We always monitor analogous organizations' marketplace endeavors (either successes or failures) and widely communicate the lessons learned.....	1	2	3	4	5

B. ORGANIZATIONAL DECISION MAKING

Rate the extent to which you agree with each statement as it applies to your business unit:

	<u>Strongly Disagree</u>	<u>Disagree</u>	<u>Neutral</u>	<u>Agree</u>	<u>Strongly Agree</u>
20. I feel that I am my own boss in most matters	1	2	3	4	5
21. A person can make his own decisions without checking with anybody else	1	2	3	4	5
22. How things are done around here is left up to the person doing the work	1	2	3	4	5
23. People here are allowed to do almost as they please	1	2	3	4	5
24. Most people here make their own rules on the job.....	1	2	3	4	5
25. There can be little action taken here until a supervisor approves a decision.....	1	2	3	4	5
26. A person who wants to make his own decision would be quickly discouraged here.....	1	2	3	4	5
27. Even small matters have to be referred to someone higher up for a final answer	1	2	3	4	5
28. I have to ask my boss before I do almost anything	1	2	3	4	5
29. Any decision I make has to have my boss' approval.....	1	2	3	4	5

C. ORGANIZATIONAL RESPONSIBILITY

Which of the following activities are dealt with exclusively by at least one full-time person in the business unit?

	<u>yes</u>	<u>no</u>		<u>yes</u>	<u>no</u>
30. advertising and promotion	[]	[]	31. sales and service	[]	[]
32. plant, store, or office facilities maintenance	[]	[]	33. personnel development and training	[]	[]
34. recruitment and employment.....	[]	[]	35. purchasing	[]	[]
36. accounting and financial controls....	[]	[]	37. production or operations scheduling	[]	[]
38. sales forecasting	[]	[]	39. research and development	[]	[]
40. data processing (MIS)	[]	[]	41. market research	[]	[]

D. ORGANIZATIONAL COOPERATION

To assure the compatibility among decisions in one area (e.g., marketing) with those in other areas (e.g., production), to what extent are the following cooperative activities used?

	<u>Used rarely</u>			<u>Used frequently</u>	
42. Interdepartmental committees which are set up to allow departments to engage in joint decision making	1	2	3	4	5
43. Tasks forces which are temporary bodies set up to facilitate interdepartmental collaboration on a specific project	1	2	3	4	5
44. Liaison personnel whose specific job it is to coordinate the efforts of several departments for purposes of a specific project	1	2	3	4	5

To what extent is decision making at top levels in your firm characterized by participative, cross-functional discussions, committees, or teams in which different departments, functions, or divisions get together to decide the following classes of decisions?

	<u>Used rarely</u>			<u>Used frequently</u>	
45. Product or service decisions concerning production, marketing, and R&D strategies.....	1	2	3	4	5
46. Capital budget decisions—the selection and financing of long-term investments.....	1	2	3	4	5
47. Long-term strategies (of growth, diversification, etc.) and decisions related to changes in the firm's operating philosophy	1	2	3	4	5

E. ORGANIZATIONAL STRATEGY

Rate the extent to which you agree with each statement as it applies to your business unit:

<i>In comparison to other businesses operating in our business unit's served market:</i>	<u>Strongly Disagree</u>	<u>Disagree</u>	<u>Neutral</u>	<u>Agree</u>	<u>Strongly Agree</u>
48. The products and services which we provide to our customers are best described as products or services which are more innovative, continually changing, and broader in nature throughout the organization and marketplace	1	2	3	4	5
49. My organization has an image in the marketplace as an organization which has a reputation for being innovative and creative	1	2	3	4	5
50. The amount of time my business unit spends on monitoring changes and trends in the marketplace can best be described as lengthy: we are continuously monitoring the marketplace	1	2	3	4	5
51. The changes in sales which we have experienced are due most probably to our practice of aggressively entering into new markets with new types of product or service offerings and programs	1	2	3	4	5

F. ORGANIZATIONAL INNOVATIVENESS

Rate the extent to which you agree with each statement as it applies to your business unit:

	<u>Strongly</u> <u>Disagree</u>	<u>Disagree</u>	<u>Neutral</u>	<u>Agree</u>	<u>Strongly</u> <u>Agree</u>
<i>My organization encourages and approves of people who:</i>					
52. Attempt to discover original ways of improving organizational products and processes	1	2	3	4	5
53. Believe that change is a necessary response to a dynamic business environment	1	2	3	4	5
54. Are creative in finding improved ways of carrying out organizational processes.....	1	2	3	4	5
55. Conscientiously carry out change so that a new idea may be given a fair chance	1	2	3	4	5
56. Evaluate new ideas in terms of how they might be advantageous to your organization	1	2	3	4	5
57. Evaluate new ideas on the basis of how they might benefit the whole organization, not on the basis of how they might affect you or your work group	1	2	3	4	5

G. ORGANIZATIONAL SCANNING

Rate the extent to which you agree with each statement as it applies to your business unit:

	<u>Strongly</u> <u>Disagree</u>	<u>Disagree</u>	<u>Neutral</u>	<u>Agree</u>	<u>Strongly</u> <u>Agree</u>
58. We meet with customers at least once a year to find out what products or services they will need in the future	1	2	3	4	5
59. Individuals from our manufacturing department interact directly with customers to learn how to serve them better	1	2	3	4	5
60. We do a lot of in-house market research	1	2	3	4	5
61. We are quick to detect changes in our customers' product preferences	1	2	3	4	5
62. We poll end users at least once a year to assess the quality of our products and services	1	2	3	4	5
63. We often talk with or survey those who can influence our end users' purchases (e.g., retailers, distributors).....	1	2	3	4	5
64. We collect industry information through informal means (e.g., lunch with industry friends, talks with trade partners)	1	2	3	4	5
65. Intelligence on our competitors is generated independently by several departments	1	2	3	4	5
66. We are quick to detect fundamental shifts in our industry (e.g., competition, technology, regulation).....	1	2	3	4	5
67. We periodically review the likely effect of changes in our business environment (e.g., regulation) on customers.....	1	2	3	4	5

H. ENVIRONMENTAL FACTORS

Answer the following questions for the industry that accounts for the largest percentage of your sales (in other words, your principal industry). How *rapid* or *intense* is each of the following in your main industry? *Circle* the number for each item that best approximates the actual conditions in it.

- | | | | |
|-----|---|-------------------|---|
| 68. | Our business unit must rarely change its marketing practices to keep up with the market and competitors. | 1 2 3 4 5 | Our business unit must change its marketing practices extremely frequently (e.g., semiannually). |
| 69. | The rate at which products/services are getting obsolete in the industry is very slow (e.g., basic metal like copper). | 1 2 3 4 5 | The rate of obsolescence is very high as in some fashion goods. |
| 70. | Actions of competitors are quite easy to predict (as in some primary industries). | 1 2 3 4 5 | Actions of competitors are unpredictable. |
| 71. | Demands and consumer tastes are fairly easy to forecast (e.g., for milk companies). | 1 2 3 4 5 | Demand and tastes are almost unpredictable (e.g., high fashion goods). |
| 72. | The production/service technology is not subject to very much change and is well established (e.g., in steel production). | 1 2 3 4 5 | The modes of production/service change are often and in a major way (e.g., advanced electronic components). |

I. ORGANIZATIONAL PERFORMANCE

Rate each statement as it applies to your business unit:

- | <i>Relative to your competitors, rate your organization's:</i> | <u>Much</u>
<u>Worse</u> | <u>Slightly</u>
<u>Worse</u> | <u>Same</u> | <u>Slightly</u>
<u>Better</u> | <u>Much</u>
<u>Better</u> |
|--|-----------------------------|---------------------------------|-------------|----------------------------------|------------------------------|
| 73. General profitability | 1 | 2 | 3 | 4 | 5 |
| 74. Return on investment (ROI) | 1 | 2 | 3 | 4 | 5 |
| 75. On a scale from 0% to 100%, what is the combined market share of the <u>four largest firms</u> in the primary industry for your business unit. | | | | | _____ % |

J. GENERAL INFORMATION

Please complete the following personal information:

- | | |
|---|--|
| 76. Number of years with present company: _____ | 77. Number of years in industry: _____ |
| 78. Gender: Female _____ Male _____ | |

THANK YOU VERY MUCH FOR YOUR COOPERATION

REMINDER POSTCARD

TO DO: TODAY!!!!

*COMPLETE LEARNING
ORGANIZATION
ASSESSMENT
QUESTIONNAIRE*

If you have not completed the questionnaire you received in the mail for a *free, confidential* learning organization assessment, please take the time to complete it today.

Our project cannot succeed without your participation.
(If you have misplaced your questionnaire or have a question,
call 316-788-5880.)

For those of you who have already taken the time to complete
and return your questionnaire —

THANK YOU!

2
VITA

Vincentia Ann Claycomb
Candidate for the Degree of
Doctor of Philosophy

Thesis: ORGANIZATIONAL FACILITATORS OF CUSTOMER-ORIENTED
ORGANIZATIONAL LEARNING

Major Field: Business Administration

Biographical:

Personal Data: Born in Wichita, Kansas, on February 18, 1957, the daughter of William Mathias and Sandra Sue Bugner. Married August 1, 1980, to Charles Edward Claycomb.

Education: Graduated from Bishop Carroll High School, Wichita, Kansas in May, 1975; received Bachelor of Business Administration degree from Wichita State University, Wichita, Kansas in December 1979; received Master of Business Administration degree from Wichita State University, Wichita, Kansas in May, 1991; completed the requirements for the Doctor of Philosophy degree at Oklahoma State University, Stillwater, Oklahoma, in July, 1995.

Professional Experience: Staff Accountant, Boeing Computer Services, Wichita, Kansas, 1980 to 1982; various positions at Pizza Hut, Inc., Wichita, Kansas, including the following: Financial Systems Analyst, 1982 to 1983; Personnel Systems Analyst, 1983 to 1985; Information Center Consultant, 1985 to 1986; Senior Financial Analyst, 1986 to 1987; Manager, Budget Analysis, 1987 to 1989; Manager, Finance Customer Service Center, 1989 to 1990; Manager, Accounts Payable, 1990 to 1991.

Honors and Professional Organizations: Beta Gamma Sigma; American Marketing Association Consortium Fellow; American Marketing Association; Academy of Marketing Science.

OKLAHOMA STATE UNIVERSITY
INSTITUTIONAL REVIEW BOARD
HUMAN SUBJECTS REVIEW

Date: 04-13-95

IRB#: BU-95-012

Proposal Title: ORGANIZATIONAL FACILITATORS OF CUSTOMER-ORIENTED
ORGANIZATIONAL LEARNING

Principal Investigator(s): Stephen J. Miller, Vincentia A. Claycomb

Reviewed and Processed as: Exempt

Approval Status Recommended by Reviewer(s): Approved

APPROVAL STATUS SUBJECT TO REVIEW BY FULL INSTITUTIONAL REVIEW BOARD AT
NEXT MEETING.

APPROVAL STATUS PERIOD VALID FOR ONE CALENDAR YEAR AFTER WHICH A
CONTINUATION OR RENEWAL REQUEST IS REQUIRED TO BE SUBMITTED FOR BOARD
APPROVAL.

ANY MODIFICATIONS TO APPROVED PROJECT MUST ALSO BE SUBMITTED FOR
APPROVAL.

Comments, Modifications/Conditions for Approval or Reasons for Deferral or Disapproval
are as follows:

Provisions received and approved.

Signature:



Chair of Institutional Review Board

Date: April 14, 1995

OKLAHOMA STATE UNIVERSITY
INSTITUTIONAL REVIEW BOARD
HUMAN SUBJECTS REVIEW

Date: 12-01-94

IRB#: BU-95-012

Proposal Title: ORGANIZATIONAL FACILITATORS OF CUSTOMER-ORIENTED ORGANIZATIONAL LEARNING

Principal Investigator(s): Stephen J. Miller, Vincentia A. Claycomb

Reviewed and Processed as: Exempt

Approval Status Recommended by Reviewer(s): Approved with Provisions

APPROVAL STATUS SUBJECT TO REVIEW BY FULL INSTITUTIONAL REVIEW BOARD AT NEXT MEETING.

APPROVAL STATUS PERIOD VALID FOR ONE CALENDAR YEAR AFTER WHICH A CONTINUATION OR RENEWAL REQUEST IS REQUIRED TO BE SUBMITTED FOR BOARD APPROVAL.
ANY MODIFICATIONS TO APPROVED PROJECT MUST ALSO BE SUBMITTED FOR APPROVAL.

Comments, Modifications/Conditions for Approval or Reasons for Deferral or Disapproval are as follows:

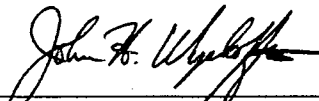
PROVISIONS REQUESTED:

In order to ensure that the instrument contains no identifiers to link the subject to the research, it is suggested that the researcher instruct participants to attach a business card or a separate sheet of paper with the instrument, rather than filling in their names on the instrument itself. The paper or card can then be separated from the instrument by the researcher upon receipt from the subject to ensure no links exist between the subject and the research.

DO NOT PROCEED WITH THIS STUDY PRIOR TO RECEIVING FINAL APPROVAL.
Please submit your response to Jennifer Moore, IRB Executive Secretary, 005 LSE, x45700.

If you have any strong disagreements with the reviewer's recommendations, you may respond in writing to the executive secretary or request a meeting with the full IRB to discuss the recommendations.

Signature:



Chair of Institutional Review Board

Date: December 5, 1994