

Organizational Learning and Crisis Management

Jia Wang
Barry University

The impact of crises on organizations has been stronger than ever. This article explores the role of organizational learning in crisis management, an area that has received little attention from HRD community. Recognizing the dynamics and interconnectedness of crisis management, organizational learning, and organizational change, the article proposes an integrated model of managing crisis through ongoing learning processes. Implications for HRD research and practice are also discussed.

Key words: Crisis management, Organizational learning, Organizational change

Today's organizations are operating in an environment characterized by high uncertainty, risk, and turbulence, for example, natural disasters, terrorist attacks, corporate scandals, major product defect, to name a few. These unanticipated crisis events, small- or large-scale, naturally occurred or human induced, have far-reaching and significant impact on organizations and individuals within (Mitroff, 1988; Pearson & Clair, 1998). To avoid or reduce such impact requires not only effective crisis management practice but also significant learning effort (Lagadec, 1997). Meanwhile, as the environment grows in complexity, it is more apparent that the rate at which organizations learn may become the determining factor in its ability to survive or adapt (Schwandt & Marquardt, 2000). Within such context, constant and continuous learning has become a necessity rather than an option for organizational survival, adaptability, competitiveness, and long-term viability (Barnett & Pratt, 2000; Mitroff, 2005; Ulrich & Jick, 1993).

Problem

Three issues appear to be prominent when organizations face crises. First, crisis management is a relatively new field that has only received research attention in recent years, therefore, there is much to learn about it (Pearson & Mitroff, 1993). Despite the increasing awareness of the effect of a crisis event, most organizations are found not well prepared for its occurrence (Fegley & Victor, 2005; Mitroff, Pearson, & Harrigan, 1996; Pearson, 2002). For organizations that do have disaster readiness plans, they often find themselves at a loss when faced with a real crisis (Lagadec, 1997). This may, in part, explain why organizations tend to deal with crisis events ineffectively. The lack of adequate preparation exposes organizations to environmental threats that may jeopardize organizational sustainability and individual welfare (Barnett & Pratt, 2000).

Second, the frequent occurrence of organizational crises exemplifies the need for Human Resource Development (HRD) in preparing organizations and individuals for crisis situations. However, very little effort has been made in exploring this issue within the HRD community despite the amount of literature available on organizational crisis and crisis management. As a result, HRD professionals may not have a solid understanding of the nature of crises, as well as its impact on individuals and organizations. More importantly, such lack of knowledge about this topic is likely to affect HRD professionals' ability of identifying and designing effective HR/OD interventions, and thus, reduce the potential contribution that HRD may make to organizations' crisis management efforts.

Third, while the importance of organizational learning is well documented, its contribution to effective crisis management has been explored only to a limited extent and primarily by researchers in fields outside of HRD (e.g., Barnett & Pratt, 2000; Roberts & Bea, 2001). The existing efforts are often geared toward improving human resource management (HRM) practice or being integrated into other related initiatives such as managing emergency compensation for displaced workers, coordinating the employee assistance program (EAP), and complying with federal and state safety laws (Kondrasuk, 2005; Lockwood, 2005; Pasek, 2002). Specifically, there lacks systematic inquiry into how the organizational learning approach may enhance and maximize organizations' capacity in identifying, preparing for, preventing, resolving, and recovering from each crisis.

Purpose and Significance

This article aimed to explore how organizational learning contributes to effective crisis management. This primary question was examined based on three assertions. First, crises drive organizational change in one way or another. In

this sense, crisis management is a process of managing change which induces behavioral change and cultural shift. Second, rather than viewing a crisis a threat to organizational survival, stability and development (Hermann, 1963), this article proposes that a crisis be a learning opportunity that can lead to increased organizational adaptation, vitality, and longevity (Barnett & Pratt, 2000; Hedberg, 1981). Third, the greater the uncertainties in the environment, the greater the need for organizational learning.

This study has both practical and theoretical significance to HRD. First, understanding the unique nature and properties of crises helps explain how threatened organizations may attain to short-term adaptation as well as to a long-term process involving organizational learning and renewal. Such understanding is necessary to prepare HRD practitioners for identifying areas in which HRD may take a lead, and providing appropriate interventions that may not only facilitate organizations in going through difficult and challenging times of crisis, but also contribute to the organization's strategic intent. Second, organizational learning is powerful in that it equips organizational members with knowledge and skills required for positive change, and that it also addresses employee depression (Gilley & Bierema, 2001) that may be experienced under crisis conditions. Finally, exploring the role of organizational learning in crisis management presents HRD scholars new research frontiers where they may discover unexplored or underexplored issues that are critical to the organization's ultimate success.

Method

The primary method adopted to answer the above research question was literature review and conceptual analysis. Three bodies of literature—crisis management, organizational learning, and organizational change—were searched through the following U.S.-based databases in areas of business/economics and education: ABI/Inform Complete at ProQuest, ERIC at EBSCOhost, PsychInfo, Academic Search Premier, and Business Search Premier. The following key words were used either alone or in combination to generate as many publications as possible: “crisis,” “organizational crisis,” “crisis management,” “disaster management,” “emergency management,” “organizational learning,” “human resource development,” “organizational change,” and “organizational development.” This search generated a large number of publications regarding crisis management, organizational learning, organizational change, respectively, yet very few studies focusing on these subjects together. The literature was selected for review based on its relevancy to the topic under study, and confined to theories and practices of crisis management within organizational settings. Selected scholarly publications were analyzed using qualitative data analysis techniques, specifically, the constant comparative method (Glaser & Strauss, 1967) and coded for major themes.

In subsequent sections, I first provide a review of selective literature which informed the study. The notion of organizational crisis is explored in relation to organizational learning and change. However, the organization change literature is presented briefly since it is not the focus of the study, and only discussed in the context of crises. The literature analysis leads to the development of a new conceptual model. Through this model, I demonstrate how organizational learning can be incorporated in crisis management processes and bring out positive organizational change. Finally, I discuss some implications for practice and directions for future research.

Organizational Crisis

Crises take a variety of forms. Some crises are naturally occurred, e.g., hurricane, earthquake, and fire; some are human induced, e.g., bribery, corruption, major product defect, scandal, and terrorist attack (Mitroff, 1988). Despite a lack of a universal agreement, several characteristics appear to be most frequently noted by researchers in an effort to understand the nature of crises, including (a) being highly ambiguous, unknown (Dutton, 1986; Quarantelli, 1988), and unexpected (Hermann, 1963), (b) having a low probability of occurrence yet high impact on organizations (Hermann, 1963; Nystrom & Starbuck, 1984) and their shareholders (Jackson & Dutton, 1987), (c) offering little time to respond (Pearson & Clair, 1998), and (d) presenting a challenge for decision making that leads to better or worse results (Augilera, 1990). Some researchers also pointed out that naturally occurred and man-made crises are fundamentally different in that organizations have little control over the natural disasters yet can prevent the latter if appropriate systems are in place (Pearson & Mitroff, 1993). For this reason, the public tends to react more negatively to human-induced crises.

Organizational crises have been examined from multiple perspectives, such as psychological, social-political, and technological-structural (Pearson & Clair, 1998). From the psychological point of view, crises are highly uncertain, complex, and emotional events during which people are limited in their information processing capabilities; and crisis arise or spiral out of control because organizational leaders and managers have responded irrationally and enacted errors of bias in their decision making (Stubbart, 1987). This view suggests that individuals play a critical role in organizational crises. From the social-political perspective, a crisis occurs as a result of a

breakdown in collective sense making (Turner, 1976) and role structure (Weick, 1993), or as a failure of followers' belief in leadership and cultural norms (Habermas, 1975; O'Connor, 1987). Consequently, an organization is likely to experience leadership crisis or turnover (Hurst, 1995); organizational members are likely to question the organization's cultural beliefs and call for cultural transformation (Bartunek, 1988). Thus, the organizational leadership and culture needs to be reformed to warrant successful crisis management. From the technological-structural perspective, the cause of a crisis is closely related to technologies that interact with managerial, structural, and other factors of an organization internally and externally (Pauchant & Mitroff, 1992). This article adopts Pearson and Clair's (1998) definition of organizational crisis for its comprehensiveness and multidimensions: "An organizational crisis is a low-probability, high-impact situation that threatens the viability of the organization and is characterized by ambiguity of cause, effect, and means of resolution, as well as by a belief that decisions must be made swiftly" (p. 60).

Impact of Organizational Crisis

A crisis, regardless of its type or magnitude, has the potential to cause catastrophic or irreparable damage to organizations and individuals (Mitroff, 1988), such as loss of human lives (Pearson & Mitroff, 1993) and significant financial losses (Mitroff, 2002). As Mitroff, Pearson, and Pauchant (1992) pointed out, a crisis not only "affects a system as a whole but also has a threatening effect on its basis assumptions, its subjective sense of self, its 'existential core'" (pp. 244-245). At the individual level, crisis situations may impose severe strain on organizational members' emotional, physical, cognitive, and behavioral capacities (Barnett & Pratt, 2000; Mitroff, 1988), resulting in a heightened sense of vulnerability and impaired sense making (Weick, 1993). At the organizational level, crises can devastate their long-standing reputation and affect a wide arrange of their stakeholders (Pearson & Mitroff, 1993). Additionally, the rigid and defensive reaction organizations may have to crises leads them to "avoid at all cost the double-loop learning opportunity offered by crises" (Mitroff et al., 1992, p. 252). Paradoxically, while crises are often described as threatening, it is also suggested that they may "result in increased organizational vitality and longevity" (Barnett & Pratt, 2000, p. 76).

Managing Organizational Crisis

Organizational crisis management is "a systematic attempt by organizational members with external stakeholders to avert crises or to effectively manage those that do occur" (Pearson & Clair, 1998, p. 61). A number of factors have been identified that contribute to crisis management success or failure. For example, studies found that leaders' perceptions on risk and their ability to deal with it have direct influence on organizational cultural beliefs about the value of and need for crisis management, and potential outcomes from a crisis (Mitroff et al., 1996; Pauchant & Mitroff, 1992). Organizations whose leaders do not perceive organizational vulnerability to crises are unlikely to have plans for crisis preparation and prevention, or react effectively to crisis events (Pearson & Clair, 1998). Meanwhile, the leaders' false perceptions may create a breakdown in collective sense making across the organization; as a result, the shared perceptions on risk and success may not be aligned with the organization's reality (Turner, 1976). A related study confirmed that the culture of an organization is one main determinant on the organizational response to a crisis (Mitroff, 1988). In an attempt to evaluate crisis management outcomes, researchers also offered some guidelines. For example, Pearson and Clair (1998) identified three criteria. First, crisis management efforts are effective when operations are sustained or resumed. Second, organizational and external stakeholder losses are minimized. Third, learning occurs so that lessons can be drawn and applied for future incidents. However, these researchers also recognized the complexities and difficulty of differentiating crisis management success from failure in practice.

Proposing that crises are similar in nature, Mitroff (1988) outlined five basic steps for crisis management. This process model served as one of the three guiding conceptual frameworks for this study. The five steps are signal detection, preparation/prevention, containment/damage limitation, recovery, and learning. Mitroff (1988) further noted that for organizations to manage crises effectively, they must (1) identify the early warning signals long before the occurrence of a crisis, (2) test prevention and preparation mechanisms for any sign of weakness uncovered, (3) test damage-limitation mechanism to prevent further damage; (4) test short- and long-term recovery mechanisms in place, and finally, (5) continuously learn and reassess the crisis management practice for future improvement.

Crisis and Organizational Learning

Environmental factors such as a crisis can stimulate organizational learning (OL) (Dodgson, 1993; Fiol & Lyles, 1985), a strategic intervention that has been increasingly adopted by organizations. The relationship between OL and business performance is well documented in management and HRD literature (e.g., Kuchinke, 1995; Lopez, Peon, & Ordas, 2005). Organizational learning was first defined by Argyris and Schon (1978) as a process of "detection and correction of error" (p. 2). It is a way organizations "build, supplement, and organize knowledge and routines around

their activities and within their cultures and adapt and develop organizational efficiency by improving the use of the broad skills of their workforces (Dodgson, 1993, p. 377). Central to this concept are (a) learning from past experience, (b) knowledge acquisition, (c) organizational change, (d) problem identification, prevention, and resolution, and (e) organization as the unit of analysis (Kuchinke, 1995).

In organizational learning processes, knowledge is acquired collaboratively (McHugh, Groves, & Alker, 1998), transferred to new members, and shared across organizational boundaries of space, time, and hierarchy (Ulrich, Jick, & von Glinow, 1993). In this sense, organizational learning is more than the sum of the parts of individual learning (Dodgson, 1993). It involves activities like describing the changing organizational environment and demands on future performance, analyzing potentials and limits, interpreting past successes or failure, inferring causal connections between actions and outcomes, and critically reflecting on organizational theory in practice (Argyris & Schon, 1996). Organizational learning takes three forms on three hierarchical levels: (a) single loop learning (correcting errors by using feedback), (b) double loop learning (questioning underlying assumptions and core beliefs), and deuteron-learning (learning how to learn, Argyris & Schon, 1978). Productive organizational learning leads to improvement in organizational performance, exploration and reconstruction of values and criteria, and increased organizational capacity (Argyris & Schon, 1996). Bierema (2001) pointed to several important trends in organizational learning, such as the shift from training to learning, the development of the learning organization, linking training to organizational strategy, and capturing intellectual capital.

From the process perspective, Huber (1991) described four constructs in organizational learning—knowledge acquisition, information distribution, information interpretation, and organizational memory. Pinpointing the importance of knowledge that rises above mere information, Nevis, DiBella, and Gould (1997) proposed a model containing three generic stages: knowledge acquisition, knowledge sharing or dissemination and knowledge utilization. Similarly, Schwandt and Marquardt (2000) developed an organizational learning systems model, in which a learning system is defined as “a system of actions, actors, symbols and processes that enables an organization to transform information into valued knowledge which in turn increases its long-run adaptive capacity” (p. 61). Specifically, organizational learning process is supported by four subsystems: (1) environmental interface, (2) action/reflection, (3) dissemination and diffusion, and (4) meaning and memory subsystem. The environmental interface subsystem represents the adaptation function and contains actions aimed at allowing or disallowing information to enter the learning system. The Action/Reflection subsystem, representing the Goal Attainment function, refers to actions taken to satisfy learning needs of the learning system, such as evaluations, critical thinking, decision-making, problem solving. This subsystem deals with the production of knowledge that will contribute to the organizational survival. The Dissemination and Diffusion subsystem represents the Integration function, involving actions directed at enhancing the movement of information and knowledge. The final subsystem, Meaning and Memory, represents the Pattern Maintenance function. For organizations to maintain a high capacity to learn, all the subsystems have to be functioning at the same time but not necessarily at the same capacity. This model served as a second conceptual framework for this study for two reasons. First, this model embraces the concept of the dependency of change on the capacity of the organization to learn as an entity, rather than merely as the sum of the individual learning of its members. Second, unlike many other models, this model captures the dynamic and non-linear nature of organizational learning.

Crisis and Organizational Change

Crises often drive organizational change, for better or worse (Augilera, 1990; Barnett & Pratt, 2000). Experiencing a crisis tends to change the way people think and challenges their beliefs and perceptions about the social and physical environment, as well as the adequacy of existing organizational structures and procedures that are designed to cope with the environment (Stern, 1997). Further, crisis experience is normally accompanied by strong feelings of tension, a sense of loss, incompetence, and desperation, which may lead to conflict and resistance to change (Bartunek & Moch, 1994) or paradoxically, trigger change (Schein, 1993), for example, resulting in more rigorous thinking and critical reflection (Stern, 1997). Given that, effective management of crises becomes even more important to the organization's long-term benefit. This process involves constantly learning from and assessing the present state, determining the future state, and planning ways to reach the desired state through implementation of well developed plans (Goodstein & Burke, 1991).

A number of models have been constructed to describe the change process. This article drew Lewin's (1947) concepts of unfreezing, movement, and refreezing as a means to examining crisis management process. This model was useful in guiding the analytical thinking and help map out the relationship between crisis management and change in a broad picture. It was also adopted because it captures the essence of change process in a simple way, despite the linear relationship it represents. According to Lewin (1947), unfreezing involves reducing those forces

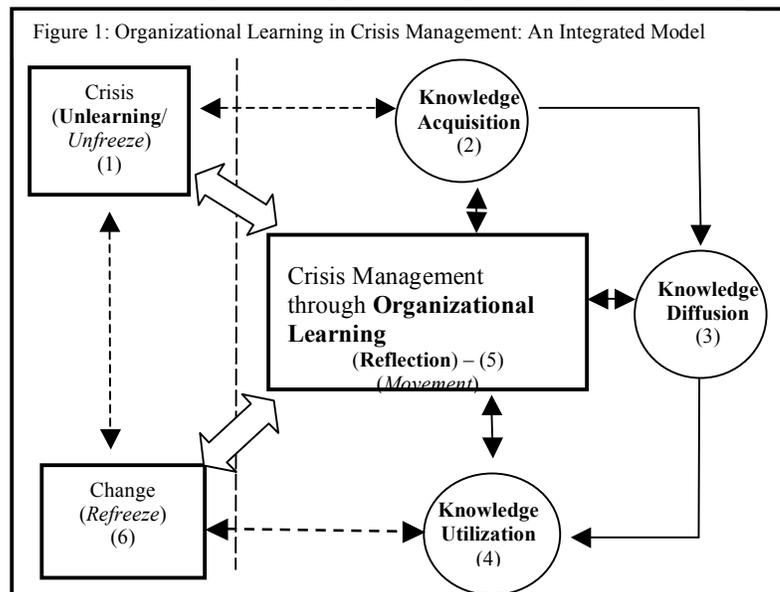
maintaining the organization's behavior at its present level. By introducing information that shows discrepancies between behaviors desired by organizational members and those currently exhibited, organizational members can be motivated to engage in change activities. The moving step shifts the organizational and individual behaviors to a new level by intervening in organizational structures and processes. At the refreezing stage, organizations become stabilized by institutionalizing change into practices and through the use of supporting mechanism.

Managing Organizational Crisis through Organizational Learning: An Integrated Model

The above discussion points to several issues. First, the paradoxical nature of crises presents both threat and opportunities for organizations. When managed appropriately, crises can lead to organizational flexibility and future improvement. Second, managing crisis is a process of change which involves unlearning, relearning, and learning at individual, group, and organizational levels. In many instances, crises can trigger and speed up learning processes. Third, while the role of learning is well recognized in crisis management, it appears to be promoted primarily during and after a crisis. Finally, while the relationship of organizational crisis, learning, and change is identified in the literature to a varied degree, the dynamics and interconnectedness among them is not adequately explored or clearly articulated. This section presents an integrated model towards that direction.

Figure 1 conceptualizes the role of organizational learning in crisis management and their relationship to change. All the boxes and circles are numbered for the convenience of discussion. They do not indicate any sequence of the components in the model. From the systems perspective, organizations are subject to environmental changes such as crises under study. Unfortunately, as ample research evidence showed, many organizations either do not recognize a crisis, or have the false assumption that it will never happen to them (Pearson & Clair, 1998; Stern, 1997). Such reality and mentality calls for unlearning as the first step to learning (McGill & Slocum, 1993), which can also be understood as the process of "unfreezing" as depicted in Box (1). Applying Hedberg's (1981) conceptualization to a crisis situation, unlearning is a process of disconfirming an organization's existing beliefs about environmental threats, connections between a crisis event and organizational and individual responses to it, and connections between responses. The goal is to form new understanding and making new connections. This unlearning process, parallel to the unfreezing step in change, is also indicative of double loop learning (Argyris & Schon, 1996). Although an uneasy task, unlearning tends to take place more easily in crisis situations where organizational decision makers are forced to re-examine and re-establish value and belief systems, as well as realign organizational strategies which they might avoid under other circumstances (Stern, 1997). This process may be also facilitated by organizational members due to their intrinsic curiosity and desire for experiment (McGill & Slocum, 1993). With changed mindset, newly formed beliefs, and a more accurate assessment of external and internal reality, the organization now is likely to create a culture that will stimulate and encourage organizational learning (Barnett & Pratt, 2000; McGill & Slocum, 1993; Pearson & Clair, 1998). In the context of crises, organizational members tend to be more actively engaged in information search for crisis solutions. Consequently, knowledge acquisition (Circle 2) and diffusion (Circle 3) processes may speed up; feedback may be more rapidly forthcoming than in many other types of problem situations (Stern, 1997). These, together, will result in actions and strategies for resolving the crisis (Circle 4). In order for organizations to make right decisions, take effective actions, learn from the crisis management experience, and be more prepared for next crisis, critical reflection in and on action (Box 5) (Schon, 1983; Schwandt & Marquardt, 2000) is crucial and should become an ongoing process.

In organization reality, a crisis will bring about change (Box 6) with or without organizational learning. Both situations are illustrated using a long vertical dotted line. Without conscious organizational learning efforts, a crisis will still unfreeze the status quo (Box 1), force the organization to take actions (Box 5), and move into the refreezing



Both situations are illustrated using a long vertical dotted line. Without conscious organizational learning efforts, a crisis will still unfreeze the status quo (Box 1), force the organization to take actions (Box 5), and move into the refreezing

stage (Box 6). This situation, however, may more than likely lead to rigid or reactive responses on the organizational part as noted in the literature (e.g., Barnett & Pratt, 2000). In this case, change may not be desired. With adequate preparations, as illustrated to the right side of the vertical dotted line, organizations become more alert to crisis signals (Pearson & Mitroff, 1993) and more active in knowledge acquisition and development of contingency plans. Such practice prior to a real crisis may be considered as “fire drills” to the organization with “what-if” solutions. So when a crisis does occur, the organization is likely to be more flexible and effective in responding to the situation using the knowledge accumulated and action plans formulated (Pearson & Clair, 1998). To ensure a desired crisis management outcome though, organizations must engage in ongoing unlearning and learning processes (Barnett & Pratt, 2000; Hedberg, 1981), actively share knowledge through communications (Pearson & Clair, 1998), and promote double-loop and deuteron learning at all levels and among all members of organizations.

This model enhances our current knowledge in several aspects. First, unlike many models in crisis management treating learning as a separate phase (e.g., Mitroff, 1988; Pearson & Mitroff, 1993), this model highlights the prevailing role and importance of learning in every stage of the crisis management process. Second, this model situates organizational learning in the unstable and crisis-prone context that reflects the organizational reality. With the utilization of the vertical dotted line, this model shows different change results that may be generated with or without embracing organizational learning. By articulating such differences, it also justifies the contribution of organizational learning to organizational effectiveness. Next, this model captures the dynamics among crisis management, organizational learning and change. It clearly displays the non-linear and interconnected nature among these three. Finally, this model emphasizes the need for critical reflection as an ongoing practice in CM.

Implications for Practice and Directions for Future Research

Implications for Practice

Exploring organizational learning in crisis management has practical implications. While organizational learning has proved to be useful in enhancing organizational effectiveness (Bierema, 2001; Kichinke, 1995), it does not always bring about desirable outcomes. Therefore, it is crucial that HRD practitioners understand how to promote learning strategically so that the desired outcomes will occur.

First, it is important to create organizational learning culture that not only encourages risk taking and acceptance to failure (McGill & Slocum, 1993), but incorporates the principles and practices of the learning organization (Senge, 1990), action learning (Marquardt, 1999), and critical reflection (Argyris & Schon, 1996). This enables organizations to foresee and prevent crises (Lagadec, 1997) and learn from such experiences (Stern, 1997). Second, HRD practitioners must take advantage of HRD interventions, e.g., educate and train organizational leaders, managers and stakeholders. As Mahoney (1996) argued, preparing an organization in advance by training on crisis management is better than paying a high cost in the future. Furthermore, it can speed up organizations’ recovery from crisis events (Carroll & Buchholtz, 2003). The training programs may also help leaders adjust their mentality and recognize the need for and benefit of crisis management (Pauchant & Mitroff, 1992). Without leadership support and the stimulating cultural environment, crisis management efforts are unlikely to be effective (Pearson & Clair, 1998). Lastly, while learning is a powerful process, it is not without limitations. The individual attention and lack of strategic focus (Gilley & Bierema, 2001) may affect the effectiveness of learning-based HRD interventions in addressing organization-wide issues like crises. Thus, HRD practitioners should critically adopt learning-based interventions. When organizational learning is selected as an approach to organizational effectiveness, practitioners must ensure that learning is promoted at all levels and aligned with the overall strategic intent (Lockwood, 2005).

Directions for Future Research

In light of the foregoing discussions, additional research is needed in the following areas. First of all, the proposed model is derived from a conceptual analysis of existing literature. Hence, its usefulness and validity need to be further examined and empirically tested. Second, while the new model provides a strategy for improving organizational capability of managing crisis, it does not offer step-by-step how-to’s regarding specific crisis situations. Empirical data needs to be collected through multiple research methods to develop concrete management process based on the conceptual framework. For instance, it may be useful to conduct studies on how organizational leaders may transform their energy into learning that increases the likelihood of successful outcomes of crisis management. Next, crisis management, while explored in many fields, has not received much attention in HRD. This article is only one effort in tapping this territory from the HRD perspective. More systematic inquiry, both conceptually and empirically, is needed to unfold areas where HRD may play a critical role. Research in this direction may not only further justify HRD functions in organizations, but more importantly, generate new knowledge that may assist HRD and crisis management professionals in effectively handling crises which ultimately improve organizational adaptation and reinforces learning. Finally, research may be needed to understand individual

differences in responding to crisis situations. Findings in this area may assist HRD practitioners in identifying and developing appropriate HRD interventions that can help employees overcome feelings such as stress, fear, anxiety, frustration, and desperation resulted from crises.

Conclusion

This article explored the critical role of organizational learning in crisis management. Because effective organizational learning and effective crisis management practices are intrinsically linked, this article proposed that promoting organizational learning before, during, and after crises will most likely put organizations in a better position when a crisis does occur. Integrating concepts from crisis management, organizational learning, and organizational change, this article further proposed a conceptual model to demonstrate how organizations may prepare for and respond to the threats through continuous learning processes. While this article presented a broad overview at a conceptual level, it calls for further inquiry and a thorough understanding of crisis management, an important yet not adequately explored area by HRD scholars. With increased knowledge, HRD practitioners may take a more active leadership role in facilitating organizational learning and change. Meanwhile, with increased learning capability and agility, organizations may also increase its chance of success and move from being crisis-prone to become crisis-prepared.

References

- Argyris, C., & Schon, D. A. (1978). *Organizational learning: A theory of action perspective*. Reading, MA: Addison-Wesley.
- Argyris, C., & Schon, D. A. (1996). *Organizational learning II: Theory, method, and practice*. Reading, MA: Addison-Wesley.
- Augilera, D. C. (1990). *Crisis intervention: Theory and methodology* (6th ed.). St. Louis: Mosby.
- Barnett, C. K., & Pratt, M. G. (2000). From threat-rigidity to flexibility: Toward a learning model of autogenic crisis on organizations. *Journal of Organizational Change Management*, 13(1), 74-88.
- Bartunek, J. M. (1988). The dynamics of personal and organizational reframing. In R. E. Quinn & K. S. Cameron (Eds.), *Paradox and transformation: Towards a theory of change in organization and management* (pp. 137-162). Cambridge, MA: Ballinger.
- Bartunek, J. M., & Moch, M. K. (1994). Third-order organizational change and Western mystical tradition. *Journal of Organizational Change Management*, 7(1), 24-41.
- Bierema, L. L. (2001). Practice of organizational learning. In J. W. Gilley, P. Dean, & L. Bierema (Eds.), *Philosophy and practice of organizational learning, performance, and change* (pp. 41-66). Cambridge, MA: Perseus.
- Carroll, A. B & Buchholtz, K. (2003). *Business and society: Ethics and stakeholder management* (1st ed.). Cincinnati: Southwestern College Publishing.
- Dodgson, M. (1993). Organizational learning: A review of some literatures. *Organization Studies*, 14(3), 375-394.
- Dutton, J. (1986). The processing of crisis and non-crisis strategic issues. *Journal of Management Studies*, 23, 501-517.
- Fegley, S. & Victor, J. (2005). *2005 Disaster Preparedness Survey Report*. SHRM Research: Virginia.
- Gilley, J. W., & Bierema, L. L. (2001). Strengths and weaknesses of organizational learning, performance, and change. In J. W. Gilley, P. Dean and L. Bierema (Eds.), *Philosophy and practice of organizational learning, performance, and change* (pp. 191-216).
- Gilley, J. W. & Maycunich, A. (2003). *Strategically integrated HRD: Partnering to maximize organizational performance*. Cambridge, MA: Perseus Publishing.
- Glaser, B., & Strauss, A. (1967). *The discovery of grounded theory: Strategies of qualitative research*. London: Wiedenfeld and Nicholson.
- Goodstein, L. D., & Burke, W. W. (1991). Creating successful organizational change. In W. L. French, C. H. Bell, & R. A. Zawacki (Eds.), *Organizational development and transformation: Managing effective change* (pp. 388-398). Boston, MA: Irwin McGraw-Hill.
- Habermas, J. (1975). *Legitimation crisis*. Boston: Beacon Press.
- Hedberg, B. L. T. (1981). How organizations learn and unlearn. In P. C. Nystrom & W. H. Starbuck (Eds.), *Handbook of organizational design* (Vol. 1, pp. 3-27). New York, NY: Oxford University Press.
- Hermann, C. F. (1963). Some consequences of crisis which limit the viability of organizations. *Administrative Science Quarterly*, 8, 343-358.

- Huber, G. (1991). Organizational learning: The contributing processes and the literatures. *Organization Science*, 2(1), 88-115.
- Hurst, D. K. (1995). *Crisis and renewal*. Boston: Harvard Business School Press.
- Kuchinke, K. P. (1995). Managing learning for performance. *Human Resource Development Quarterly*, 6(3), 306-316.
- Kondrasuk, J. N. (2004). The effects of 9/11 and terrorism on human resource management: Recovery, reconsideration and renewal. *Employee Responsibilities and Rights Journal*, 16(1), 25-35.
- Lagadec, P. (1997). Learning processes for crisis management in complex organizations. *Journal of Contingencies and Crisis Management*, 5(1), 24-31.
- Lockwood, N. R. (2005). Crisis management in today's business environment: HR's strategic role. *HR Magazine*, 50(12), A1-10.
- Lopez, S. P., Peon, J. M. M., & Ordas, C. J. V. (2005). Human resource practices, organizational learning and business performance. *Human Resource Development International*, 8(2), 147-164.
- Marquardt, M. J. (1999). *Action learning in action: Transforming problems and people for world-class organizational learning*. Palo Alto, CA: Davies-Black Publishing.
- McGill, M. E., & Slocum, J. W. (1993). Unlearning the organization. *Organizational Dynamics*, 22, 67-79.
- McHugh, D., Groves, D., & Alker, A. (1998). Managing learning: What do we learn from a learning organization. *The Learning Organization*, 5(5), 209-220.
- Mitroff, I. I. (1988). Crisis management: Cutting through the confusion. *Sloan Management Review*, 29(2), 15-20.
- Mitroff, I. I. (2002). Crisis Learning: The Lessons of Failure. *The Futurist*, 36(5), 19-21.
- Mitroff, I. I. (2005). *Why some companies emerge stronger and better from a crisis*. AMACOM: New York.
- Mitroff, I. I., Pearson, C., & Pauchant, T. C. (1992). Crisis management and strategic management: Similarities, differences, and challenges. *Advances in Strategic Management*, 8, 235-260.
- Nevis, R., DiBella, A., & Gould, A. (1997). *Understanding organizations as learning systems*. Cambridge, MA: The Society for Organizational Learning.
- Nystrom, P. C., & Starbuck, W. (1984). To avoid organizational crises, unlearn. *Organizational Dynamics*, 12, 53-65.
- O'Connor, J. (1987). *The meaning of crisis*. New York: Basil Blackwell.
- Pasek, J. I. (2002). Crisis management for HR. *HR Magazine*, 47(8), 111-115.
- Pauchant, T., & Mitroff, I. (1992). *Transforming the crisis-prone organization*. San Francisco: Jossey-Bass.
- Pearson, C. M. (2002). A blueprint for crisis management. *Ivey Business Journal*, 69-73.
- Pearson, C. M., & Clair, J. (1998). Reframing crisis management. *The Academy of Management Review*, 23(1), 59-76.
- Pearson, C. M., & Mitroff, I. I. (1993). From crisis prone to crisis prepared: A framework for crisis management. *Academy of Management Executive*, 7(1), 48-59.
- Quarantelli, E. L. (1988). Disaster crisis management: A summary of research findings. *Journal of Management Studies*, 25, 373-385.
- Roberts, K., & Bea, R. (2001). Must accidents happen? Lessons from highly reliable organizations. *Academy of Management Executive*, 15(3), 70-79.
- Schein, E. H. (1993). How can organizations learn faster? The challenge of entering the green room. *Sloan Management Review*, Winter, 85-92.
- Schon, D. A. (1983). *The reflective practitioner: How professionals think in action*. New York, NY: Basic Books.
- Schwandt, D. R., & Marquardt, M. J. (2000). *Organizational learning: From world-class theories to global best practices*. Boca Raton, FL: St. Lucie Press.
- Senge, P. M. (1990). The leader's new work: Building learning organizations. *Sloan Management Review*, Fall, 7-23.
- Stern, E. (1997). Crisis and learning: A conceptual balance sheet. *Journal of Contingencies and Crisis Management*, 5(2), 69-86.
- Stubbart, C. (1987). Improving the quality of crisis thinking. *Columbia Journal of World Business*, 22(Spring), 89-99.
- Turner, B. (1976). The organizational and interorganizational development of disasters. *Administrative Science Quarterly*, 21, 378-397.
- Ulrich, D., Jick, T., & von Glinow, M. (1993). High-impact learning: Building and diffusing learning capability. *Organizational Dynamics*, 22, 52-66.
- Weick, K. E. (1993). The collapse of sensemaking in organizations: The Mann Gulch disaster. *Administrative Science Quarterly*, 38, 628-652.