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ABSTRACT

This symposium on executive and management development consists of three presentations. "The Role of the Chief Learning Officer: Implications for Human Resource Development (HRD) Theory and Practice" (Robin Lackey) reports findings that suggest a need for a clarification of the role of these leaders and have led to the identification of unresolved issues that fundamentally influence their capacity to function optimally. The potential for HRD to assume a more dominant role in the leadership of organizational learning is discussed. "Anticipating Management Development Needs" (Jonathan Winterton) reports on a project designed to identify the key changes and predict the future skill needs of managers in Britain. "Simulation Enhanced Learning (SEL): Case Studies in Leadership Development" (Claudia C. Hill, Steven W. Semler) presents a more active alternative learning strategy, SEL, that combines assessment, role plays, mini-lectures, and simulations to provide an integrated leadership development approach that replicates the dynamics of the organization and meets the necessary conditions for development. Creation and application of SEL in two business organizations is described. All three papers include substantial bibliographies. (YLB)

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The Role of the Chief Learning Officer: Implications for Human Resource Development Theory and Practice

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This study explored the role of learning leaders in organizations, through the use of open ended telephone interviews. Key findings suggest a need for a clarification of the role of these leaders, and have led to the identification of unresolved issues that fundamentally influence their capacity to function optimally. These fundamental issues are described here, and the potential for HRD to assume a more dominant role in the leadership of organizational learning is discussed.

Keywords: Chief Learning Officer, Organizational Learning, Training

Organizations have changed dramatically in recent years, influenced by a number of conditions, including the changing nature of the workforce and of work itself, changing consumer needs and expectations, revolutionary changes in communication infrastructures, and resulting economic and cultural globalization. These conditions have major implications for organizational learning, and the role of the learning leader, as discussed below.

Increased Demand for Organizational Learning

Ulrich, Von Glinow, and Jick (1993) discuss how changes in the nature of the workforce are impacting organizations, and note the recent decline in availability of individuals for jobs requiring increased competence. An aging population, a reduced number of entrants into the workforce, and the decline of quality of education in the United States, are cited as contributing to this decline.

In addition, the nature of work done in organizational settings has changed substantially. In 1880, about nine out of ten workers were involved in making or moving material things, whereas today only one in five do this work. The remaining four of five work with knowledge or in services. (Drucker, 1993). Moreover, the half life of knowledge, or the time it takes for half of a body of knowledge to become obsolete or redundant, has been estimated to be as little as twelve months in highly technological fields (R. N. Christie, personal communication, March 30, 1999). Workers are called upon more than ever to learn continuously.

Thus, the nature of work is becoming increasingly oriented toward knowledge and other intangible assets, while the entering workforce is less equipped with the skills necessary to perform this work. This situation appears even more critical when viewed within the complex context of cultural and economic globalization, and heightened competition in the resulting worldwide markets.

The current speed of cultural, technological, and economic change is reflected in the pace at which organizations must change to remain viable. Organizations that do not learn, and use this learning to facilitate change, will not survive (DiBella & Nevis, 1998; Handy, 1995; Thompson, 1995; Watkins & Marsick, 1993). The nature of this necessary change entails becoming more adept at change itself. While companies could once survive largely based on the products or services they produced, consistent productivity alone is no longer adequate to insure viability. "In a volatile, intensely competitive world, success comes from the capacity to respond and act-- not from characteristics of today's products or markets" (Kanter, 1997, p. 29). Kanter (1997) describes the "change-adept organization." Such organizations "create the capacity for continuous innovation and improvement, for embracing change as an internally desired opportunity before it becomes an externally driven threat, by mobilizing many people in the organization to contribute" (p. 5). Organizations that embrace and anticipate change-- that are change-adept-- stress innovation, collaboration, and learning (Kanter).

The necessity for organizations to change has resulted in "a push toward continuous learning for continuous improvement" (Watkins & Marsick, 1993, p. 4). Learning has become a primary focus at all levels of organizations. In the current climate, organizational learning can no longer be relegated to discretionary attention.

If organizational learning has become a requirement within organizations, who is to lead this paradigm shift, and what are the important components of such leadership? Traditional models of leadership do not address the needs of current or future organizations. Neither existing bodies of knowledge nor previous organizational processes can now be relied upon for prediction or guidance in this fundamentally altered set of circumstances. The solutions of the industrial era no longer work. And leadership

models spawned in the industrial era do not address the needs of organizations functioning in our "post-industrial paradigm" (Rost, 1991). Industrial era models of leadership cannot adequately address the needs of organizations in need of continuous learning and change. "Top-down" approaches to leadership, common in traditional multi-layered, hierarchical organizations, are no longer useful or productive.

New models of leadership are urgently needed, and must be further developed to encompass the need for accelerated learning in organizations. As Bennis (1992) points out, "The organizations of the future will be networks, clusters, cross-functional teams, temporary systems, ad hoc task forces, lattices, modules, matrices, almost anything but pyramids" (p. 5). And he notes, "the ones that succeed will be less hierarchical and have more linkages based on common goals rather than traditional reporting relationships" (p. 5).

Organizations are being transformed, giving way to designs intended to evoke higher levels of participation and responsibility from individuals and teams throughout the organization. Such models seek to make use of knowledge that resides at all levels of organizations. Leadership must be transformed accordingly, in order to make optimum use of this knowledge.

And while recently introduced technology acts as a substantial driver of the nature and pace of change, the presence of technological systems for learning and information sharing has not diminished the need for (human) learning proponents to provide deep learning opportunities. "Technology-based learning systems will take over most of the easy training; deeper penetration will still require the talents of real-live professionals, such as when an organization seeks a commitment to a vision or wants to make its values explicit" (Plott & Humphrey, 1996, p. 48). Thus the need for learning leadership in organizations may be seen to be greater now than at any previous time in history. Questions regarding the optimal source and nature of such leadership have only begun to be articulated, and remain almost entirely uninvestigated.

Purpose of the Study

In examining the status of learning in organizations, Willis (1991) questioned the lack of learning leadership positions within them. "Organizations appear to be a long way from making systemic commitments to learning or to institutionalizing the learning function. The idea of creating a chief learning officer (CLO) can be presumed to be a rarity if it exists at all" (p. 182). She noted that, although organizations routinely expect to employ a chief executive officer (CEO), a chief financial officer (CFO), and a chief operations officer (COO) , there is no "equivalent status, structure, centrality, accountability, or permanence for organizational learning" (p. 183).

Since Willis made these observations, the position of the Chief Learning Officer (CLO) has indeed been created in many organizations. However, prior to this study, the role of the CLO had only begun to be described, generally in the form of single subject case studies or published interview reports. No exploratory research evaluating the scope and organizational impact of the position, from the perspectives of those doing the job, had yet been attempted.

Research Questions

The following research questions provided the focus for this study.

1. How do Chief Learning Officers (CLO's) define their primary responsibilities within their organizations? How do they describe their roles in relation to learning and leading?
2. What level within organizations do CLO's occupy? To what extent and in what ways do CLO's view their organizational positions as supportive of their defined functions?
3. What aspects of organizational infrastructure are seen by CLO's as supporting (vs. impeding) their ability to work effectively?
4. What leadership theories are congruent with the CLO's' role within organizations? How do CLO's describe their own approaches to leadership?

Design and Methods of the Study

The study used a qualitative case study design, and employed open-ended telephone interviewing using a structured interview guide administered by the researcher. In addition, available documents from the participants' organizations, such as organization charts and mission statements, were collected for analysis. This study was designed to yield participants' perspectives on their purposes, ideals, and organizational support and impediments related to their role as Chief Learning Officer. The use of open-ended questions also allowed for the expression of individual perceptions falling outside the direct target areas of the stated questions.

Telephone interviews with 14 participants were conducted. Interview sessions were tape-recorded and transcribed verbatim, to enable thorough content analysis of all responses. The use of telephone interviewing presented limitations that impacted the quality of the data collected. For example, audibility of responses was compromised in some cases; in one case, a tape ended prior to the

interview's end, unbeknownst to the researcher. Also, because respondents were generally speaking from their work environments, some interruptions occurred, and the flow of interviews was disrupted.

The population from which the sample was chosen was a group of Chief Learning Officers, or persons filling this role, in organizations of any kind; persons who previously worked in this role for at least one year were considered as appropriate participants as well. Twelve respondents are from the United States, with one respondent from Belgium and one from Ontario, Canada, also participating.

The study included learning leaders from fourteen organizations. Participants were employed in organizations ranging in size from 1,400 to 330,000 employees, and from only one site to being globally distributed. Eleven of the leaders are men, and three are women. Additionally, one woman was a co-participant with the leader to whom she reported. At the time of the interviews, three respondents were no longer in learning leadership positions. In two cases, the position had been eliminated; in the third case, the respondent had retired. In the two cases where the position had been eliminated, one respondent was still professionally involved with the organization but was no longer employed there. The other had been re-positioned elsewhere in the same organization. All three of these respondents were asked to draw from their experience while in their learning leader positions.

Following data collection, content analysis was conducted on the transcribed participants' responses to the interview questions, as well as on documents collected. The analysis was performed using "EZ Text" software, designed and created by the Center for Disease Control (Carey, Wenzel, Reilly, Sheridan, Steinberg, and Harbison, 1998) for the collection, management and analysis of semi-structured qualitative data. Data were analyzed inductively, for emergent themes. All analyzed data were used for the development of grounded theory, first described by Glaser and Strauss (1967), pertaining to learning leadership. Final interpretation of the analyzed data led to preliminary answers to the research questions. Descriptive and prescriptive information has been drawn from the data, describing the elements of organizational learning leadership addressed by the research questions, as well as elements of concern which emerged from participants' responses.

Results and Key Findings

Analyzed results are summarized in data tables, with frequencies of responses, for each of the research questions.

Question One: How do Chief Learning Officers (CLO's) define their primary responsibilities within their organizations? How do they describe their roles in relation to learning and leading? (n=14)	
Primary responsibilities and role descriptions include:	
▪ *designing, modifying or supporting training or learning processes*	10
▪ *creating or modifying either the infrastructure or processes for learning*	5
▪ *developing or planning organizational strategies*	5
▪ *developing or modifying internal systems and structures (beyond training-related)*	5
▪ *supporting the work of others in the organization*	3
▪ *bringing in information from outside & making it available to people in the organization*	
▪ *building or supporting external relationships, public relations*	3
▪ *introducing a new or different perspective into the organization*	3
▪ *working with human resources*	2
▪ *acting as an internal information carrier or connector of people*	2

Key findings that suggest significant implications for Human Resources Development researchers and practitioners are discussed below. These relate to models of leadership, and the role of Human Resources Development (HRD) in Organizational Learning.

Models of Leadership

The approaches to leadership described by these learning leaders mirror several descriptions in the literature of a new model of leadership. Post-industrial, participatory approaches, as described by Rost (1991), are being employed

Question Two: What level within organizations do CLO's occupy? To what extent and in what ways do CLOs view their organizational positions as supportive of their defined functions? What would they like to change? (n=13)	
Descriptions of the positioning of the learning leaders within their organization include:	
The position's level in the organization:	
▪ *is a senior level executive, managing partner or director*	7
▪ *is positioned fairly high in the organization, but not a top executive*	4
▪ *reports directly to the CEO*	2
The position's relationship to the Human Resources function:	
▪ *is part of the Human Resource function*	7
▪ *is not part of Human Resources; no direct linkage*	4
▪ *is not part of, but works very closely with, Human Resources*	2
The learning leaders' recommendation for change in their positioning:	
▪ *did not recommend a change in structure*	5
▪ *recommended that the position should be higher in the organization*	4
▪ *made other recommendations for changes in position*	4
The extent to which their positioning is supportive:	
▪ *the position within the structure of the organization is generally supportive*	10
▪ *the position within the structure of their organization is generally not supportive*	3

Question Three: What aspects of organizational infrastructure are seen by CLO's as supporting (vs. impeding) their ability to work effectively? (n=14)	
Aspects of infrastructure (culture, communications, leadership, systems and structures) described include:	
Relating to organizational culture:	
▪ *there is a culture that values or expects knowledge or learning*	7
▪ *there is culture that is participatory*	5
▪ *there is a culture of excellence, with bright, achievement-oriented people*	5
▪ *the culture includes caring about people (employees and/or customers)*	5
▪ *people want learning to be fast; goals or work are valued more highly*	5
▪ *the organizational culture is changing*	5
▪ *there is resistance to change or a sense of insecurity in the culture*	4
▪ *people use or rely on the organizational values or principles*	2
Relating to organizational communication:	
▪ *there is face to face communication with others in the organization*	10
▪ *there are technologically-networked communications*	10
▪ *paper-based forms of communication are used (newsletters, magazines, etc.)*	8
▪ *the organization is exploring or developing new or expanded technological media for communication or training*	5
▪ *there are systems or processes in place to support the upward flow of communication*	4
▪ *there is an effective infrastructure for communication*	2
▪ *it is difficult for new ideas to surface*	2
▪ *there is an over-reliance on technology for communication*	2
Relating to approaches to leadership:	
▪ *approaches to leadership have recently changed or are currently undergoing change*	5
▪ *the organization is hierarchical or follows a chain of command process*	5
▪ *there is work to develop leadership competencies in everyone; everyone seen as a leader*	
▪ *the CEO and/or top executives support the learning function*	2

by many of these leaders. Kofman and Senge (1995) explain that leadership in learning organizations is necessarily quite different than leadership in traditional, hierarchical organizations. "In essence, the leaders are those building the new organization and its capabilities... " (p. 34). Many of the study's respondents appear to be leaders of this new type. They describe a major emphasis on the professional development of the members of their organizations through on-going learning opportunities and requirements,

addressing such issues as employees' leadership abilities, specific job-related skills and knowledge, personal autonomy, and problem solving ability.

Question Four: What leadership theories are congruent with the CLO's' role within organizations? How do CLO's describe their approaches to leadership? (n =13)	
Leadership theories and approaches to leadership described include:	
▪ *developing autonomy of others, or supporting their freedom to execute ideas*	7
▪ *laying out a vision, working to build a shared vision, or supplying a goal*	6
▪ *using situational leadership theory, situationally based leadership*	3
▪ *working to support and challenge others*	3
▪ *asking questions*	3
▪ *taking a developmental approach*	3
▪ *sharing or interchanging roles and responsibilities*	2
▪ *working in teams or being team-based*	2
▪ *participative or participatory styles*	2
▪ *thinking systemically or taking a systems approach*	2

The relational aspects of this new paradigm of leading, as discussed by Zand (1997), are also described as areas of focus by these respondents. The respondents expressed this idea as they described the importance of face to face communication, an organization that "cares" about people, and the presence of trust, high levels of interaction between themselves and others, and systems for mutual feedback between people at various levels within the organization. Also, in support of learning and leadership development in the members of their organizations, these leaders are working to increase and improve the interpersonal relationships among organization members. They described their efforts to reduce the emphasis on status associated with titles, to create forums where people can speak freely without regard to their level in the organizations, and to reduce the extent to which business units function in separate "silos," by improving communication processes and addressing issues of organizational structure.

However, the findings of this sample reflect that in some cases, these learning leaders do not feel sufficiently empowered within their organizations to affect the degree of change they envision. Several leaders indicated they believe their position within their organizations should be higher, possibly reflecting a desire for greater positional power. It may be that there is an inherent conflict of leadership paradigms in many organizations, wherein one or all of the highest executives and "leaders" espouse the value of situational, developmentally focused, participatory leadership approaches, but the structure and many of the day to day operations of the organization are inherently hierarchically based.

Further, the respondents' descriptions of their own roles, assessed collectively, suggest a level of internal inconsistency within the role itself, as it is currently defined. Roles and responsibilities described by this sample included such things as designing, modifying, or supporting organizational training and learning processes; supporting the work of others; building or supporting external relationships; and introducing new perspectives into their organizations. These selected responsibilities may be seen as fundamentally relational and responsive, rather than directive and pro-active; the responsibilities of the learning leader often include serving and supporting others' needs and/or agendas. In organizations that largely still function in hierarchical ways, the supportive nature of the role of the learning leader, paradoxically, may have implications for the level and types of leadership afforded to learning leaders within organizations. Particularly in cases where the learning leader's approach to leading is less directive than that of his executive counterparts in other areas of the organization, his or her legitimate leadership power may be compromised. The findings of this study may reflect that learning leaders, perhaps more than other leaders within the same organization, seek to "influence" rather than to "drive" change, within environments that are still largely governed by the value of "driving" change and achieving results.

The Role of Human Resources Development in Organizational Learning

The traditional role of HRD includes the development of employees through education, which is a primary focus of the learning leaders in this sample. Most of the respondents in this study indicated that they belong to, or closely work with, Human Resources (HR) or HRD. However, it is clear that the impetus for the creation of the learning leader's position did not originate within HR or HRD. The conceptualization and description of the position of Chief Learning Officer originated in the HRD literature (Willis, 1991); this sample of learning leaders generally did not acknowledge recognition of this fact. It may be that in general, they are unaware of it: few of the respondents in this sample received degrees in the field of Human Resource, and although several had served in previous HR positions, none specified having held previous positions in HRD.

It appears that HR and/or HRD are sometimes viewed by the respondents or others within their organizations as limited in their ability to embrace the larger issues associated with facilitating organizational learning. In addition to the limiting perspectives

of the role of HR/HRD within organizations described by this sample, role confusion occurs among various units. For example, multiple units with overlapping fields of interest and spheres of responsibility related to HRD often exist in the same organization. One corporation may have staff assigned to organizational development, organizational learning, and human resource development; each may have specific areas of responsibility related to learning and employee development. Yet, functional boundaries often prevent deep collaboration. It appears that a new framework for understanding and operationalizing improved individual and organizational learning and performance is urgently needed.

Willis (1991) provides the basis for such a framework; she discusses the potential for a shift in organizations to include an understanding of the role of the HRD function as central to organizational learning.

If HRD is to house the position of the learning leader, a review of the role of HRD professionals is relevant. McLagan (1989) defined a set competencies of HRD professionals that may serve as a foundation to begin to more completely describe the role of the organizational learning leader. She describes the following eleven roles for HRD practitioners: 1) researcher; 2) marketer; 3) organization change agent; 4) needs analyst; 5) program designer; 6) HRD materials developer; 7) instructor/facilitator; 8) individual career development advisor; 9) administrator; 10) evaluator; and 11) HRD manager.

Many of McLagan's (1989) eleven roles have relevance to the role of the learning leader. Research questions within this study addressed how leaders describe major aspects of their responsibilities and how they view their roles, as well as their approaches to leadership. Findings from these questions are juxtaposed with McLagan's roles below. (Findings that fall outside these categories are excluded.)

In reviewing the information above, it is apparent that learning leaders' view of their roles overlaps to some degree with the roles defined by McLagan for HRD practitioners. However, the roles differ in substantial ways, such as in the role of evaluator, which is lacking from findings from the learning leaders regarding their primary responsibilities. Also, while McLagan's role descriptions appear to focus on processes internal to the organization, learning leaders also appear, in some cases, to have responsibilities for relations beyond the organization, such as building or supporting external relationships and public relations, or introducing a new or different perspective into the organization. Linking the organization to the larger community, socially and through knowledge sharing, appears to be part of the role of the learning leader, although many respondents did not report relationships with the larger community as a focus of their organization.

McLagan's roles do not address high level leadership responsibilities, and as such may not be an adequate basis to begin to clarify all of the primary roles for learning leaders. However, some of the HRD practitioner roles are highly relevant and may be considered crucial to the effective practice of learning leaders.

The list of roles provided by respondents can serve as a point of reference for understanding the essential sphere of responsibility of the learning leader. The overlap with HRD roles is great, and suggests that HRD may be the appropriate setting within which the learning leader should be positioned. The findings of this study reflect that HRD has not been a driver of organizational learning. Generally, HRD has not chosen to play a substantial part in establishing the norms, values, systems and structures necessary to facilitate organizational learning. Yet, HRD is well placed within organizations to assume a fundamental role in organizational learning. Has the traditional role of HRD as supportive rather than proactive, in relation to profound organizational change, contributed to HRD being unprepared to assume such a primary role in organizational learning? Further attention from HRD researchers and practitioners is urgently needed.

Conclusion

The findings of the study suggest that the individuals in this sample are dedicated to new approaches to individual, team, and organizational learning, and that development of individuals and the development of organizations are intrinsically linked within the sphere of responsibility held by these leaders.

However, even a working definition of a learning leader appears to be lacking in this sample. Although "knowledge management," per se, was mentioned by very few of the respondents as an area of focus, the majority of them described a focus on supporting learning processes of individuals, teams, and the organization as a whole. While increasing attention is being paid in organizations to supporting and developing such things as "intangible assets" and "knowledge capital," the role of various leaders within organizations in supporting knowledge and learning processes remains unclear.

There seems to be ample evidence of a widespread recognition that it is the people within organizations, including their ability to learn and share knowledge, that are the most fundamental determinant of its potential for success. Yet, organizations are often still structured in ways that do not reflect this recognition: learning leaders are being recruited and hired into organizations that are not designed to support organizational learning as the foundation for organizational success.

McLagan's Role	*Related Responsibilities or Activities Described by Respondents*
Researcher (identifying and testing new information)	▪ *bringing in information from outside, and making it available to people inside the organization*
Marketer (of viewpoints, programs)	▪ *introducing a new or different perspective into the organization* ▪ *acting as an internal information carrier or connector of people*
Organization Change Agent	▪ *laying out vision, or working to build a shared vision or supplying a goal* ▪ *developing or modifying internal systems and structures (beyond those associated with training)* ▪ *developing or planning organizational strategies* ▪ *designing, modifying or supporting training or learning processes* ▪ *creating or modifying either the infrastructure or processes for learning*
Needs Analyst (related to employee performance gaps)	▪ *designing, modifying or supporting training or learning processes*
Program Designer	▪ *designing, modifying or supporting training or learning processes* ▪ *creating or modifying either the infrastructure or processes for learning*
HRD (instructional) Materials Developer	▪ *designing, modifying or supporting training or learning processes*
Instructor/Facilitator	▪ *designing, modifying or supporting training or learning processes*
Individual Career Development Advisor	▪ *supporting the work of others in the organization* ▪ *developing autonomy of others, or supporting their freedom to execute ideas* ▪ *using situational leadership theory, situationally based leadership* ▪ *working to support and challenge others* ▪ *(leading by) asking questions* ▪ *taking a developmental approach*
Administrator (coordinator and supporter of programs and services)	▪ *supporting the work of others in the organization*
Evaluator (of impact of interventions, on individual and organizational effectiveness)	*(No related findings)*
HRD Manager (supporting and linking a group's work with that of the whole organization)	▪ *working with human resources*

Conflicting Organizational Paradigms

Based on these findings, it appears there may be conflicting paradigms within many of these organizations-- not only amongst various individuals at various levels, but also within individuals themselves. One paradigm embodies a "business-centered" worldview; the other embodies a "learning-centered" worldview, as regards the essence of organizational purpose and activities. The tacit assumption that these paradigms are marriageable may be the foundation for the rather schizophrenic approach to organizational learning and change reflected by these findings. Within a business-centered paradigm, learning is valued primarily for its instrumental value; within a learning-centered paradigm, organizations are seen essentially as learning systems. According to Willis (1991), organizations' inability to recognize themselves as learning systems is limiting and problematic. She cautions, "That such limited learning may exact heavy penalties in an organization over the long run is not easily understood, perhaps because organizations do

not think of themselves as learning systems" (p. 182).

In the collective organizational climate described by these leaders, learning may be insufficiently understood in terms of an appreciation of and adherence to a viable theory of adult learning. As described by this sample, expectations for optimal learning opportunities include that they should be fast, "just in time," interactive, collaborative, relational, technologically enhanced, responsive, and pro-active. Information should be made available to support the agendas of others, and it should be self-directed. The unresolved contradiction inherent in the attempted union of two conflicting paradigms certainly warrants further investigation. The ability of the learning leader to effectively carry out her or his role in such an environment is likely to be significantly compromised. It appears that organizations that do not view themselves fundamentally as learning systems, will not serve as supportive settings in which to conduct the range of activities associated with this role.

Implications for Human Resources Development

Within this sample, the impetus for enhancing organizational learning has generally not originated within HR/HRD. A number of respondents in this study alluded to perceptions-- either their own or those of other organization members-- of HR/HRD as either not being well-acquainted with business issues, and/or not holding sufficient status in their organizations to drive organizational learning. A number of questions arise that suggest future investigation. Are the perceived limitations of HRD well founded, in terms of its potential for expansion to include the role of leading organizational learning? To what extent is HRD able to undertake and successfully achieve initiatives to broaden its role in organizations, to influence not only explicit processes of learning but also organizational functioning in other areas? Are there possible benefits to closer alliances between the functions of organizational development and training departments within organizations? Future research will be necessary to investigate these questions.

It is apparent that developing and filling a learning leader position within an organization, if not accompanied by systemic support for deep change, is unlikely to lead to the transformation of the process of organizational change. Although progress has been made in the understanding of what is needed to enable deep, continuous learning to occur, much more work needs to be done. As Willis (1991) states, "The recovery of personal and collective self-efficacy in organizations is surely a first-order task" (p. 185). This explorative study served to highlight areas of focus for future consideration and investigation, to inform and enhance the efforts of those HRD professionals committed to the development of true learning cultures in organizations.

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Anticipating Management Development Needs

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The increasingly turbulent environment in which organisations and managers are operating challenges the relevance of existing management development. This paper reports on a project designed to identify the key changes and predict the future skill needs of managers in Britain. The project involved researching changes in the external environment and inside organisations, drawing inferences from this analysis concerning the competences and competencies managers would need for the future and eliciting the views of leading HRD experts.

Keywords: Management Development, Competence, Skills Foresighting

The importance of linking management development with organisational strategy has been acknowledged in recent HRD literature (Hussey 1996; Michael 1993) especially where development is used to support strategic change (Marsh 1986; Pate and Nielson 1987) and restructuring (Oram and Wellins 1995) or where strategic development is seen as the key to competitive advantage (McClelland 1994; Shröder 1989). At the same time, the increasing turbulence of the modern environment, emphasised for over a decade by leading management writers as well as academic commentators necessitates ever more management development and makes it vital for development to support strategy.

The problem is that the uncertainties and discontinuous changes have become so great that there is a risk of management development focusing on skills needed yesterday and today rather than those for tomorrow. Senior management have discovered the need for organisational strategy to be flexible and emergent, but has the HRD profession kept pace or is management development getting left behind? Can we anticipate management development needs to ensure that managers are prepared for the uncertain future?

In the UK, where historically managers have typically been inadequately trained and poorly qualified in comparison with the US, Germany and Japan, few companies integrated development into their strategic planning process (Miller 1991). There is some evidence that the situation improved during the 1990s, with an increase in the volume of development linked to organisational strategy (Harbridge Consulting Group 1993; Winterton and Winterton 1999). However, in a major review of management development in the UK, the Taylor Report (Institute of Management 1994) noted that managers expected to consolidate the evolving practices they had already begun to implement in the 1990s, a philosophical approach which the authors felt inappropriate for Millennium thinking, given the 'chaotic and ambiguous world painted for us by the opinion formers'.

In order to address this problem, the UK Department for Education and Employment (DfEE) commissioned a review of the future skills needs of managers (FSNM). The main aim of the FSNM project was to identify and evaluate the nature of changes affecting managers and to interpret the impact these will have on the skills that managers need for the future. The FSNM project re-visited the issues that the Ashridge study addressed for the Taylor Working Party (Institute of Management 1994), along with wider environmental changes, drawing upon the extensive literature that has emerged in the intervening years and analysing the implications for managers' skills in the light of recent management competence frameworks.

Theoretical Framework

The analytical framework used to situate changes both in the external environment and within organisations was derived from the model developed by Winterton and Taplin (1997) to analyse contemporary industrial restructuring. Using this framework, a conventional PEST (political - economic - social - technical) approach was taken to the external changes, while key changes within organisations were also considered, including organisational restructuring, involvement and participation, new forms of work organisation, knowledge organisation and technological innovation.

For analysing future skill needs and difficulties, two further theoretical frameworks were employed. In relation to skills difficulties, the approach used by Johnson and Winterton (1999) for the *Skills Task Force*

Research Group, was adopted in which skill *shortages* - 'a genuine shortage in the accessible labour market of the type of skill being sought and which leads to a difficulty in recruitment', were distinguished from skill *gaps* - 'where a deficiency in the skills of existing employees or new recruits reduces business performance rather than being manifested in a current recruitment difficulty'.

The FSNM project was concerned with both skill shortages and skill gaps for managers, but was more *qualitative and predictive*, focusing on the nature of the skills that managers will need in the future, given the changes predicted in organisations and in the external environment in which they operate. Management skills were defined in terms of both *competences* and *competencies*, where *competence* relates to the specific demands of the job in question whilst *competency* refers to the personal and behavioural characteristics needed to perform competently.

In exploring skill needs of managers, the FSNM project used the 'holistic model of professional competence' offered by Cheetham and Chivers (1996; 1998), distinguishing five dimensions:

- Cognitive or knowledge-based competences, including underpinning theory and concepts relevant to an area of activity, as well as informal tacit knowledge gained experientially. Knowledge (know-that) underpinned by holistic understanding (know-why), is distinguished from competence (know-how).
- Functional competences, those things that 'a person who works in a given occupational area should be able to do ... [and] able to demonstrate' (ED and NCVQ 1991).
- Personal or behavioural competency, as used in the USA, as a 'relatively enduring characteristic of a person causally related to effective or superior performance in a job' (Spencer 1995: 144).
- Ethical competencies, 'the possession of appropriate personal and professional values and the ability to make sound judgements based upon these in work-related situations' (Cheetham and Chivers 1996: 24).
- Meta-competencies, concerned with the ability to cope with uncertainty, as well as with learning and reflection (Nordhaug 1993).

Research Questions or Propositions

The project steering group at the DfEE posed four broad questions:

- How will political, economic, social and technological trends impact upon the future managerial role?
- What are the key competences (skills, knowledge and understanding within the work context) and competencies (attributes of an individual related to effective or superior performance in a job) that future managers will require?
- What areas of training and development will managers need to operate effectively in the new environment, and what aspects may become obsolete for managers as a result of these trends?
- How must the UK supply of management development adapt to meet these needs?

This paper focuses on the first two questions and reports especially on the future skills that managers will need in order to cope with the emerging trends.

Methodology

The study was undertaken in three parts: a review of the relevant literature to identify key trends and issues; an analysis of the implications of these trends for the skills managers will need in the future; and consultation with leading experts to validate the analysis and identify key policy issues.

Literature Review. A systematic and comprehensive review of the literature was concerned with identifying contemporary changes that will affect the management role, future projections of these areas of change and trends in management development. The review addressed both academic and practitioner literature, including recent work of management 'gurus', to provide coherent theoretical underpinning for emergent trends and practices. The literature review was undertaken as a meta analysis, tracing distinct themes through a variety of different sources and summarising conclusions in relation to each theme to produce an overall synthesis of the arguments. This approach was adopted to maximise the validity and reliability of the conclusions.

Analysis of themes.- The review of contemporary changes was initially structured around the themes highlighted in the restructuring model referred to earlier and other themes emerged in the course of the meta analysis. Future projections in relation to the themes were treated as scenarios for consideration. The effect of each of these aspects of change on managerial roles and skills was then reviewed, drawing especially upon the literature linking emerging management theory and practice with the changes.

New management ideas were analysed, especially where these appeared to be influential and the authors had attained 'guru' status according to secondary analyses, while emerging management practice was considered in relation to innovative and successful leaders in business. Recent empirical work on management development was another focus of the literature review. Systematic collation of the findings of these studies further informed understanding of the future skills needs of managers.

Consultation exercise. A checklist was developed from the main messages arising from the literature review and the key themes emerging from the analysis, and this was used to guide discussions with leading experts in the UK, USA and France. The consultation checklist, which was circulated to the experts in advance of the discussions, summarised the key themes emerging from the literature review and posed a number of questions focusing on the management development implications of trends identified over the next ten years or so.

The checklist provided a framework to ensure that a consistent set of issues was addressed across the range of experts. The main purpose of the consultations was to test reactions to the emerging conclusions, identify any areas of fundamental disagreement and obtain feedback on the key priorities from acknowledged experts in the relevant areas. The results summarised below represent the study team's interpretation of the messages arising from the literature review and the feedback from the consultation exercise. In the interests of brevity sources are not identified; full details may be found in the official report (Winterton *et al* 2000).

Results and Findings

In all sectors of the UK economy, organisations are confronted with chaos and ambiguity due to rapid and profound changes in the external environment. These changes, along with consequent internal changes in organisations are creating new challenges for managers. The study offers a comprehensive overview and analysis of these changes and their implications for management skills and management development. The results are summarised in three parts dealing, respectively, with changes in the external environment, changes predicted in organisations and the nature of the skills that managers will need in the future as a consequence.

The Challenge of the External Environment

The future is, by definition, in part a product of the past and present so will be characterised by a combination of continuity, continuous change, and discontinuous change. Experts agreed that the future would be radically different from the present, not only because of the *pace* of change, but especially because of the *discontinuous* nature of key changes. The PEST analysis revealed the following key issues.

Political. Changes in the political environment have had a major impact upon organisations since the 1980s. In the UK, the major changes have involved de-regulation of markets and efforts to stimulate entrepreneurial activity. In the foreseeable future, further product market de-regulation can be anticipated as a means of stimulating competitiveness, which will demand that more attention is paid to entrepreneurship and adaptability, two pillars of the European *Employment Strategy*, which will increasingly influence the employment framework in which organisations are operating. The 1992 Programme of the European Community included measures designed to reinforce competition and to deregulate product markets, with the aim of increasing the competitiveness of Europe's enterprises in the global economy. The Social Chapter was developed to reduce the risk of 'social dumping' and now that the UK has adopted this, it is likely that European initiatives to stimulate employment will include an extension of labour market regulation. It is similarly inevitable that European regulation in relation to protection of the natural environment will increase in the future, as environmental issues become increasingly important to business. Managers will need to have a better understanding of the environmental and social responsibilities of organisations in the future and will need to develop competence in recognising the environmental consequences of their organisations' actions.

Economic. The major economic change affecting the environment in which organisations and managers operate is restructuring, driven largely by globalisation and internationalisation, which has led to a significant increase in the number of small firms and a global shift in relations between the world's major trading blocks. The restructuring that began in the 1980s in response to the economic crises of the 1970s continued throughout the 1990s, becoming ever more dramatic.

The global restructuring of production systems has been accompanied by the emergence of supply and distribution networks based on subcontracting, franchising and strategic alliances. These economic changes,

coupled with the political initiatives in the UK designed to stimulate entrepreneurial activity, have led to a growth in the relative importance of small and medium sized enterprises (SMEs) in the UK economy. In the future, the importance of SMEs in the economy will continue to increase and managers, even in larger organisations, will need to develop skills associated with networks and working with SMEs.

Social. Among the major social trends of relevance to this study are demographic changes, movements in the gender composition of the labour force and the growth of atypical work.

Part-time employment is currently growing at a slightly faster rate than full-time employment, a trend that is expected to continue for the immediate future. All forms of 'atypical' work, including home working, casual and temporary working, sub-contracting and self-employment, have grown since the 1980s. The trends of increasing female participation in the labour market and the growth of atypical work are both expected to continue into the next decade making gender issues of paramount importance. Both the increasing proportion of managers and administrators in the workforce and the increasing proportion of women in these posts are trends that are expected to continue in the coming decade, leading to HR policies and practices to retain highly talented mid-career women managers.

Technological. The convergence of information and communications technologies with the integration of computing, telecommunications and audio-visual technologies is facilitating the emergence of the 'Information Society' and 'Knowledge Based Organisations'.

The development of flexible microelectronics-based innovations was widely seen during the 1980s either as the driving force of change or at least as a facilitator of change in the production paradigm. Technological advances are expected to continue to accelerate in the future, with microprocessors becoming incorporated in more everyday objects. The use of computers and mobile telephones will continue to increase and as the cost of greater processing power falls, more of the population will access the new technologies.

The Changing Organisation

Profound changes are taking place within organisations, partly in response to the changes in the external environment. The key trends are considered below in relation to organisational restructuring, empowerment, new forms of work organisation and the adoption of new technologies.

Organisational restructuring in large part reflects the changing external environment to which managers have to respond. De-layering, involving the removal of tiers of middle management, is part of a wider set of changes in organisation structures that began during the 1980s, promoted by the development of business process re-engineering. Although further BPR, downsizing and de-layering can be expected in sectors that have been relatively insulated from global competition, such changes are generally waning. Nevertheless, the legacy of past downsizing means that managers must adopt different ways of working with teams and will be unable to rely on hierarchical command and control approaches.

The growing importance of SMEs and the emergence of extensive networks of supply-chain linkages, accompanied by developments in ICT, have facilitated flexible firm strategies. Outsourcing and flexible organisations will continue to grow in importance as rapidly changing markets demand ever greater responsiveness and adaptability, but managers will need to focus on retaining core competence within the organisation.

Empowerment has become essential as traditional company structures are replaced by horizontal structures of cross-functional core process teams. Employees are empowered as a result of initiatives to build involvement, participation, team working and autonomy.

The old adversarial patterns of industrial relations have been replaced by collaboration and partnership between unions and employers. Employee involvement is therefore expected to increase in the future and to evolve along the lines of the European social partnership model. The future will demand greater team working, more autonomous working and devolution of responsibility; managers will need to acquire appropriate facilitation and coaching skills to develop the full potential of others.

New forms of work organisation are emerging because globalisation and market segmentation both demand and facilitate fundamental change in the dominant production paradigm.

Further market fragmentation is anticipated in the future, demanding faster response and greater adaptability, which can best be achieved by adopting some form of flexible specialisation. Teams of workers who

are forever changing and evolving to take advantage of core competence will replace traditional organisations. New forms of work organisation, combining multi-skilling with autonomous work groups, will form a major part of the European trade unions' agenda for training and development in the future, and managers will need to develop the competences required to manage such work groups.

Technological innovation is transforming the nature of work. The IT revolution and especially the integration of ICT will have a major impact on the future environment in which managers work, and in the next decade new technologies are expected to permeate almost every business practice.

Managers' concerns over the new technologies involve changes both inside and outside the boundary of the organisation. One of the results of the ICT revolution on the organisation will be that the new communication flows will be horizontal rather than vertical, which will undermine the traditional role of management. Globalisation and specialisation demand co-operation and communication between enterprises and the effective use of ICT will reduce spatial boundaries and the problems of trans-national operation.

Knowledge organisation is assuming increasing importance and in the new global competitive landscape of the next century, firms will compete primarily on the basis of knowledge and intellectual capital.

Sustained competitive advantage is increasingly seen as deriving from a firm's internal resources if these can add value; are unique or rare; and non-substitutable. The key management challenge of the 21st Century will be harnessing the productivity of the knowledge worker; 'leveraging knowledge' will become the primary source of competitive advantage, essentially maximising the return on core competence.

The Competences and Competencies of Managers

The implications of the above changes for the future skill needs of managers were assessed against the set of competences and competencies in the Cheetham and Chivers model outlined in the theoretical section. The results are discussed in relation to the five categories: knowledge/cognitive competence; functional/ occupational competences; personal competency; values/ethical competency; and meta-competencies.

Knowledge or cognitive competence will become increasingly important, as managers will need 'a knowledge-based technical speciality' in addition to more generic management competences. For example, globalisation is making new demands for strategic leadership and will require managers to be able to see and act beyond local boundaries. In addition to the need for greater international awareness, UK managers will especially need to develop a European perspective, including knowledge of other languages and cultures.

Functional competences will continue to underpin management performance. To exercise strategic control, top managers must be able to acquire deep understanding of the competitive conditions and dynamics of each of the units for which they are responsible. Changes in the external environment and inside organisations will require managers to adopt a group-oriented view of leadership. To manage employee empowerment, managers need to reject the transactional type of leadership in favour of a transforming leadership style that satisfies the higher needs in people. The increasing number of SMEs in the UK has important implications for the skills required by SME owner/managers as well as for managers in large enterprises who are increasingly interacting with SMEs.

Personal competencies that managers need will evolve as work organisation becomes increasingly focused on team-working and self-directed teams, where facilitation skills are of paramount importance. In the future there will be a far greater diversity of organisational types, and a more complex variety of roles within them. Network organisations rely on partner relationships, which requires new competencies of managers in developing and maintaining collaboration. To function in a more fluid work environment, managers will need competencies such as self-reliance, responsibility, self-monitoring, the ability to learn from experience and a desire to learn new skills. Managers must be able to identify opportunities and to become leaders who inspire, energise and polarise individuals and teams in line with an organisational vision.

Ethical competencies are becoming increasingly important because the 'new social contract', the end of loyalty and commitment between the organisation and employee, means that managers must establish trust in the employment relationship. Greater cultural awareness and sensitivity, and not simply knowledge of other cultures, will be essential for managers to communicate effectively. Managers will need the competencies to deal honestly with all stakeholders and to face the ethical and moral issues of the next century. For example, managers will need

to develop more convincing policies for sustainable development. Moreover, in place of the old leadership style, leaders must develop more subtle and indirect forms of influence to be effective.

Meta-competencies may ultimately prove to be the key differentiators between adequacy and excellence in management performance. The rapid rate of organisational change means that the essential management skills for the future are learning, innovation, managing change and flexibility. Managers will need to be comfortable with paradox, with uncertainty and with contradiction in the world around them in order to develop flexible responses to the changing external environment. The major challenges for managers will not be technical or rational in nature and will depend on instinct and judgement. The competencies that managers will need in order to cope with and implement change centre on learning, since sustainable competitive advantage derives from the ability to adapt and learn faster than the competition.

Conclusions and Recommendations

The key purpose of the study was to make policy recommendations for improving the provision of management development in the UK to deliver the skills that mangers will need in the future. Given the time and resource limitations of the study, it is important to test the validity and reliability of the findings so recommendations were also made for further research. Each is outlined below.

Policy Recommendations

Ten specific policy recommendations were made to the DfEE:

- A cross-departmental statement of management development policy and priorities, including a Charter of Opportunity that describes what training and development managers should expect from companies.
- Encourage the commitment of significantly more time to management development: in the short term seek to establish a norm of 10 days per year, rather than 2 or 3 days.
- Within the next decade, government should seek to encourage acceptance that 20 per cent of working time (one day per week) should be spent on management development activities.
- Communicate the message that it is a personal responsibility for the individual to take charge of their own development and encourage companies to implement their own CPD systems.
- Explore the scope for Learning and Skills Councils to act as vehicles to articulate management development needs, interface with the training and education markets and disseminate good practice messages, particularly to small businesses.
- Encourage greater targeting of SMEs, especially at the low-skill end of this sector, with greater emphasis on experiential learning.
- Encourage recognition amongst providers of the need to incorporate different modes of learning beyond achieving qualifications, particularly experiential learning.
- Encourage greater focus on people management skills.
- Encourage the development of activities that focus on the development of vision and help firms to implement the necessary change.
- Encourage greater focus on managing change and increasing enterprise.

Recommendations for Further Research

The FSNM project provided an overview of the main influences that will affect the role of managers in the future, and demonstrated the value of such broad scenario analyses for predicting future skill needs. Given the scope of the enquiry and the time available, it was of necessity tentative and exploratory in nature. Further research, employing a variety of different methodologies, is needed to examine the validity and reliability of the findings and to update the analysis. In particular, three specific approaches were recommended.

Discussion Forum. The consultation exercise proved invaluable as a validation technique, exposing the findings from the literature review to a range of experts in the UK, USA and France. The exercise could be more fruitful if organised as a discussion forum at the AHRD, with a group of experts having the opportunity of interacting together, rather than responding to a consultation schedule.

Case Studies of the Future Management Role. It is evident that there are a few leading-edge organisations

in the world where managers are already experiencing much of the altered work role predicted for the future. A series of in-depth case studies exploring how managers work in such organisations, the competences and competencies they need, and how these are acquired, would make it possible to consider the future skill needs of managers in context. We are proposing to coordinate such a study from Toulouse.

Benchmarking Study of Business Schools. Academic provision of management education in the UK has been criticised on a number of grounds, especially in relation to its low volume by international comparisons. A benchmarking study would provide an opportunity for systematic evaluation of the quality and volume of UK management education against international standards.

Contribution to New Knowledge in HRD

The FSNM study has broadly made two contributions to new knowledge in HRD: first in relation to the theoretical framework of management competence and competency and second in relation to forecasting future skill requirements and HRD needs. Each is briefly discussed below.

Theoretical Framework of Competence and Competency

Developing a clearer theoretical framework within which to structure discussion of management skills is important because of the abundant terminological inconsistency and conceptual confusion in the literature addressing management competence and competency. The issue needs to be taken up further within the AHRD because US and European usage of the terms differs significantly.

The AACSB promoted the competency approach in US Business Schools (Albanese 1989), whereas, as the Cannon Report noted (IoM 1994: 48, 51) MCI has had less influence on UK Business Schools. Academics resist a competence-based approach because it lacks sufficient theoretical underpinning, but also because they seldom have significant experience to demonstrate their own competence in a practical setting (Brown 1993: 31). Academic provision of business education needs to become more closely aligned with the competence-based approach in order to maximise the synergy between formal education and experiential learning and clarifying the different contributions to the development of holistic professional competence.

The framework employed in the FSNM project has already proved useful in two specific contexts. First, it has been used to analyse management development needs in Scottish visitor attractions, as described by McCracken and Watson in another paper at the AHRD. Second, it is being used to analyse cultural differences in the competencies of project managers working for Airbus in Toulouse.

Forecasting Future Skill Needs

Predicting future skill and development needs from changes in the external and internal environment is of wider significance for advancing theory in HRD and for improving HRD practice. The pace of change makes linking management development with organisational strategy both more necessary and more problematic. By focusing on the trajectories of change and assessing their implications for the competences and competencies that managers will need, there is scope for anticipating management development needs.

The rapidity and discontinuous nature of the changes noted above inevitably poses a challenge to forecasting, but makes it more valuable in averting unnecessary or irrelevant management development. As the pace of change increases, skills foresighting must become a regular part of the design of HRD in general and not confined to management development. There is an important role for the AHRD in providing the research underpinning the advancement of theory to give a lead to HRD professionals in becoming more focused on the future.

The methods developed in the FSNM project for forecasting future skill needs have been applied in two other projects. The first was concerned with implementing the Management Standards in the Inland Revenue, where the competences and competencies needed for the future were identified from strategic changes. The second project involves undertaking a *Skills Foresight* for the UK clothing sector, in which the drivers of change identified from a similar analysis are interpreted with the help of focus groups of employers.

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Simulation Enhanced Learning: Case Studies in Leadership Development

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While HRD practitioners strive to use more active learning strategies, the standard approach for developing strategic leadership competencies has largely remained the domain of traditional lecture driven events. This paper presents an alternative, Simulation-Enhanced Learning, that combines assessment, role-plays, mini-lectures, and simulations to provide an integrated leadership development approach that replicates the dynamics of the organization and meets the necessary conditions for development. The creation and application of SEL in two business organizations is described.

Keywords: Leadership Development, Simulation, Competency

The greatest constraint for many organizations is the ability to attract, retain, engage, and develop talent (Chambers, Foulon, Handfield-Jones, Hankin, and Michaels, 1998). At the same time, the practical impact of near continuous change and complexity has meant that people in organizations must constantly learn and adapt. To survive in the turbulence that accompanies rapid change, organizations, their workforces, and their leaders must develop the capacity to learn continuously (Watkins & Marsick, 1993). In this context, the only effective development efforts are ones that increase participants' ability to act successfully in unique, ambiguous or divergent situations (Argyris & Schon, 1996). Yet, many organizations are finding it increasingly difficult to produce the necessary meaningful learning using traditional training methods. In order for development to make a consistent contribution in organizations, a real break from the school-based educational philosophy of "learning through listening" must take place to be replaced by a recognition of the active, self-regulated nature of meaningful learning (Shuell, T. J. 1990).

The world is complex, the development of leadership talent is complex and we are not treating it as such when we approach it with educational methods that assume that a given set of skills are requisite and unchanging. Learning to lead involves dealing with complexity, taking risks, and collaborating with others to bring a myriad of talents to bear on critical issues (Dentico, 1998). The catalyst for development must be the leader and his or her ability to profit from experience (McCall, Lombardo, Morrison, 1989). So, what is the role of the organization in orchestrating development? The role may be to enhance diverse opportunities for individuals to garner meaningful learning from experience, on the job, in the day to day challenges of work and in planned learning activities.

Transfer of Learning and Simulation

Research tells us that learning activities that recreate work situations foster better transfer of learning (Swanson & Holton, 1999). Industry examples of the use of simulations are plentiful. Aviation, civil emergency preparedness, business management, and medicine all use realistic scenarios to teach or improve complex skills. When the cost of failure is high and when the performance arena uncertain, simulations are likely to be useful. It thus seems logical that one thing organizations can do to increase learning transfer and performance in the face of ambiguity is to employ educational interventions that are more like the learner's on-the-job experience—simulations.

Educational simulations are simplified versions of the reality that learners interact with on a daily basis. They capture the essential dynamics of a workplace in a way that allows learners to explore different approaches and experience different outcomes. Simulations have long been used by social scientists to study social phenomena (Goldspink, 2000). Recent trends have been toward the use of complex computer-based simulations created to model workplace dynamics and teach leaders how organizations work. However, regardless of advances in computational technology and application of sophisticated artificial intelligence software, computer based simulations are limited to simplified systems that can only marginally represent reality. "What is distinctive about

human social systems is that they are comprised of agents (humans) who have the capacity for language and who are reflexive or self-aware. Computer aided simulation design has yet to come to terms with this complexity theoretically or methodologically" (Goldspink, 2000). Human interaction is the true field test and development arena for leadership talent. The focus of this paper will be on the dynamic of learning created in social simulations featuring human actors.

Necessary Conditions for Development

Personnel Decisions International (PDI) research on organizational environments that foster development identified five basic conditions that must be present for development to occur. These are called the "Necessary Conditions for Development" by the authors of the PDI study (Peterson & Hicks, 1999). According to Peterson and Hicks, there are five essential conditions necessary for systemic and strategic development of both people and organizations. Those conditions include insight into development needs, motivation to change, opportunity to acquire and practice new skills and accountability for follow through (see Table 1). A deficit in any of these conditions limits the ability of the individual or organization to develop. These conditions served as requirements for development programs created at PDI during the period of time this study was conducted.

Necessary Conditions for Development
1. Insight. Do people know what to develop?
2. Motivation: Are people willing to invest the time and energy it takes to develop themselves?
3. Capability: Do people know how to acquire the new capabilities they need?
4. Real World Practice: Do people have opportunities to try their new skills at work?
5. Accountability: Do people internalize their new capabilities to actually improve performance and results?

Table 1. Necessary Conditions for Development. (Peterson & Hicks, 1999).

Statement of the Problem

The standard approach for developing leadership capabilities in organizations has been to identify needed leadership competencies or skills and then to provide learners with awareness and skill building activities to prompt a change in behavior around those separate competencies (Dubois, 1993). Management education as a practice has also focused attention on the need to use active, experiential learning techniques (Zemke & Zemke, 1984). Typically, these activities occur mostly in classroom settings. This model of leadership education was developed and perfected in a stable and more predictable age (Lynham 1999; McLagan & Nel, 1996) and is proving to be less than adequate in an age of what Peter Vaill calls "white-water change" (1989). To live up to its potential to become a truly strategic tool (Conger & Xin, 2000) a new model of leadership education must be formulated.

The issues that the authors identified when they were exploring this problem within their client organizations revolved around the following questions:

1. Would the use of simulations be an effective way to enhance traditional classroom-based leadership development programs?
2. How could simulations feasibly portray the complexity of strategic business issues in ways that are engaging and effective for the learners?
3. How could such simulations be developed and integrated into classroom-based leadership development programs in such a way as to meet the practical needs of training designers, facilitators, learners and program sponsors?

This paper describes the authors' exploration of these questions in the development and implementation of two unique leadership development programs featuring a strategy named Simulation-Enhanced Learning (SEL).

Method

The approach used by the authors in developing a simulation-enhanced learning (SEL) strategy followed a simple action research perspective (Argyris & Schon, 1996). As such, the principal purpose of the activity was to help the client individuals and organizations reach their learning goals. The study itself was secondary to this primary goal, but planned from the outset as a method of enhancing the authors' understanding of how simulations could enhance

leadership development interventions. The process of intervening, reflecting on the intervention, and reflecting upon the reflection process contributed to the learning the researchers gained.

As practitioner inquirers, the authors understood that they were not objective, but rather biased participants in the formulation of theories of action (Argyris & Schon, 1996). Also, because this was an exploratory study conducted as part of a learning intervention, the researchers decided to document the results of their experiences as cases (Yin, 1994.)

With this understanding in mind, the goals of the reflection were to attempt to identify where the intended actions had seemed to produce a pattern of desirable results, and where surprises occurred. In addition, reflection upon the process of reflection itself surfaced possible biases. Among these was the likelihood that the researchers tended to pursue and justify the use of simulations because of personal motives (as noted, creation of new processes, application of creativity, desire to do something new, desire to enhance credibility). The authors acknowledge that this bias affected the selection of methods, application of the SEL approach, and description of the results. However, this bias should be recognized as appropriate to the simplified action research method as the researchers were simultaneously participants and researchers (Herron, 1996).

The researchers were consultants external to the client organizations in both cases. They had been contracted to provide customized leadership training that would help each organization address its unique strategic situations and leadership development skill gaps. During the training design and development process, the researchers were able to involve program sponsors in the action-reflection process around the use of simulations within their respective leadership development programs.

Designers and sponsors of these leadership development programs were initially interested in addressing the needs of leaders within two organizations who were facing increasing complexity with apparently insufficient skill. As the intervention designs progressed, each client indicated a receptivity to using simulations to enhance the learning experiences. At that point, the researchers concluded that a sound approach to developing and using simulations for leadership development might be a useful tool. The examination of the SEL approach and the development of the process model underlying these interventions became part of the authors' goals for the experience. The researchers and participating organizational sponsors considered collecting empirical evaluation data about the relative effectiveness of the SEL approach, but elected not to pursue this for varying reasons. However, as an exploration of the Simulation-Enhanced Learning approach itself, the authors report two case examples that demonstrate its application.

Case: Developing an Approach to Simulation-Enhanced Learning

"Executive education is undergoing a gradual but radical transformation. Programs operating today must be far more innovative, learner-centered, and relevant to immediate company needs than ever before" (Conger & Xin, 2000). This was certainly the standard called for by Rockwell Automation and Anheuser Busch, two organizations with strong traditions in the area of innovative leadership development. In late 1998, each organization set out to create new leadership development programs in partnership with Personnel Decisions International, an international human resources consulting firm. In these two separate projects, the similar goal was to craft leadership development experiences that were directly linked to organizational challenges and strategic business initiatives. The result was a design methodology and learning technique labeled Simulation-Enhanced Learning (SEL). Simulation-Enhanced Learning programs are an integrated blend of assessment, coaching, focused lecture presentations, case-study discussions, experiential activities, action learning, and large-scale business simulations. As the approach to designing both leadership development programs was generated at the same time, and in collaboration, this is documented first. The specific application to the two organizations' unique needs follows.

At the outset, the development teams recognized three challenges. These challenges rose from the needs expressed by the program sponsors and the Personnel Decisions International (PDI) training and development standards. Each leadership development program designed through this process needed to:

1. Present learners with business challenges to build strategic competencies. Learners must be able to apply the skills effectively in their own workplaces.
2. Use learning strategies in such a way as to satisfy the "Necessary Conditions for Development," a research-based PDI model for development.
3. Increase the transfer of learning by employing methods that help participants "learn by doing."

Using a common approach to meeting these objectives seemed to offer the most efficient use of consulting time for both client organizations and the researchers. This prompted the researchers to pool efforts to develop an intervention approach that would address the objectives.

The decision to pursue simulation as a learning strategy came about as the researchers were asked to address a variety of needs in each organization that cut across simple and straightforward competency lines. As Peter Vaill (1989) had observed, the reduction of leadership to competencies was useful in identifying the skills to address, but not for crafting naturalistic development experiences to strengthen leadership ability. The long history of work that PDI had done in using simulations for management assessment centers suggested that competencies could be observed and practiced in pseudo-realistic ways for individuals. One researcher's experience with military and gaming simulations suggested that simulation could be useful for integrating competency-based learning in a group setting, as well.

As the researchers explored the concept of using simulations with the client organizations, the reaction of the sponsoring teams was very positive. They particularly appreciated the way that the simulation would bring their specific business challenges and conditions into the development program. Discussions of the learning strategy also highlighted the ways in which the simulation-enhanced program would address the "learning by doing" and "present business challenges" objectives, and provide firm support for the necessary conditions for development. The only serious question from both client organizations was whether the researchers would be able to deliver on the timeline and budget initially specified for the interventions. After these questions were addressed and the scope of the simulation and the rest of the program negotiated, both Anheuser Busch and Rockwell Automation decided to proceed with the Simulation-Enhanced Learning approach.

Challenge 1: Present Learners With Business Challenges To Build Strategic Competencies

Each team followed a slightly modified version of the traditional instructional design process as described in Figure 1. Designers began by analyzing organizational goals and constraints (steps 1&2). The analysis yielded information that allowed the design teams to identify the implications for talent and begin constructing realistic business challenges.

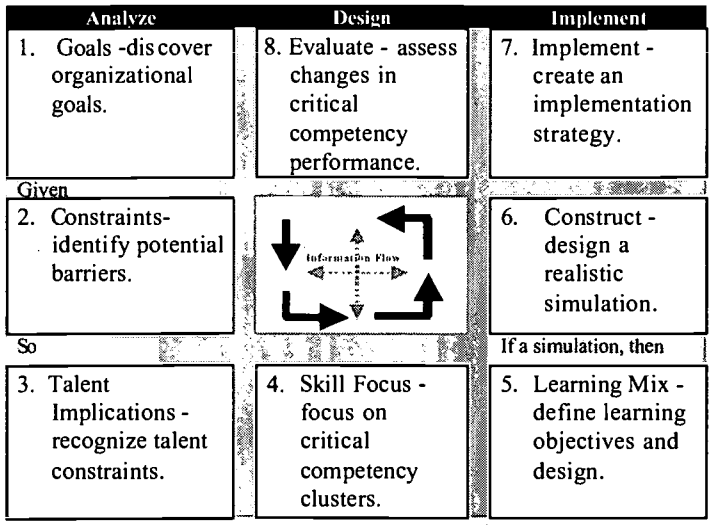

Figure 1 : Design process for Simulation-Enhanced Learning

The design teams were assisted in identifying talent constraints by the availability of custom competency models and job analyses. While the competency models provided a useful starting place, they were also somewhat limiting. In practice, competency models are frequently used in selection, assessment and performance measurement. Translating those competencies into meaningful objectives for leadership development however, has been challenging and often not very successful. One reason for this was described by Peter Vaill as, "Competency lists cannot describe how people experience their work life." Therefore, competency models sometimes remain an interesting exercise in categorization and do not become critical drivers of individual leadership development. So, if competency models don't drive development then what does? According to Peterson & Hicks (1999) development occurs when the necessary conditions for development are met.

When experience drives insight, motivation and learning, accountability, competencies can then become touchstones for progress. If the programs the researchers were designing was to present learners with realistic business challenges, then the competency focus and learning content needed to be similarly realistic and relevant. Through the situation analysis, the researchers found that business challenges required leaders to employ a number of competencies simultaneously. The question then became, "What cluster of competencies should be the focus for this program?" (Step 3 & 4). The focus of needs assessment shifted accordingly.

Challenge 2: Satisfy the Necessary Conditions for Development

With the skill focus and competency clusters identified, the design teams began to craft the learning mix (step 5 & 6). The challenge for each team was to create a program that satisfied the necessary conditions for

development. In practice, the conditions became a "blueprint" for design. In order to satisfy the necessary conditions for development, the researchers planned to integrate a variety of activities into the framework that would provide the basic structure within which the learners could work. Examples of learning strategies employed in SEL are shown in Table 2.

Challenge 3: Learn by Doing

As the design outline took shape the emphasis was on employing methods that helped participants to "learn by doing." The plan called for participants to experience the program in cohort groups immersed in an integrated, large-scale business simulation. In the process, each group would be faced with challenges and opportunities analogous to the types of challenges encountered by leaders at their level back on the job (step 6). The business issues used were modeled after the situations identified in the analysis phase (see the information flow from step 2). For example, in one simulation, the group was asked to recommend a revised marketing strategy in response to new competitor and customer information. In another instance that same group was required to negotiate for capital investment resources. Each group was paired with a trained facilitator. The facilitator's role was to observe helping and hindering behavior and facilitate critical reflection discussion in the after action group debrief sessions.

Condition	Strategies Used in the SEL Approach
Insight	360-degree feedback assessment, peer-to-peer feedback, self-assessment.
Motivation	Debrief of 360-degree feedback, linking of simulation to real business issues, learner identification of benefits to be gained from the program, pre- and post-program boss discussion, linking to personal career issues for the learners.
Capability	Lecturette, experiential exercise, case study discussion, introduction of business simulation material, learner-led debrief of simulation modules, facilitator coaching.
Practice	Take-home applications, business simulation work, and some action learning components.
Accountability	Pre- and post-program boss discussion, responding to 360-degree feedback givers, organizational expectation for results, some action learning components.

Table 2. SEL Learning Strategies.

The expectation was that these cohort groups would sponsor and enrich the learning process through peer feedback and collective wisdom. Calhoun W. Wick and Lu Stanton Leon (1993) emphasized the value of cohort groups in The Learning Edge. "Leaders who are successful learners are powerboat drivers pulling a team of water skiers. By converting their energy into action, those in their wake are pulled to explore new territory, to see their work in new ways, and to get increased results they never thought possible." In bringing together leaders from diverse functions and divisions within the organization to participate in these cohort learning groups, the expectation was for participants to learn from each other as well as from the simulation experience.

Case: Deployment of SEL at Rockwell Automation

In 1998, Rockwell Automation was in the early stages of an organizational culture change. The company had reorganized several parts of its industrial controls business to create a more efficient and responsive business structure. The goal of the restructuring was an improvement in Rockwell Automation's competitive capability. As frequently happens in restructuring efforts, the structural changes occurred in advance of work on the underlying organizational culture. The previous structure had allowed the five business units a lot of autonomy, but the new organization would require a greater degree of cooperation and collaboration across the whole organization. Rockwell Automation's executive leadership felt that the legacy culture was a constraint on the ability of the restructured organization to deliver on its promised potential.

One implication of the talent need was that leaders at all levels of the organization needed to be better equipped to support the intended culture. They also needed the opportunity to develop increased leadership skills to more effectively support their employees through the change process and on a day-to-day basis. As part of the effort to provide these skills, Rockwell Automation sponsored a leadership development program to give all supervisors, managers, and directors a common set of skills, tools, and expectations. By building individual capability and creating a shared experience for leaders, Rockwell Automation hoped to gain both direct performance improvement and a foundation for a more flexible culture.

The HRD team that developed the leadership development solution began with a thorough assessment of the strategic, operational, and leadership needs of the organization. The assessment methods included leader

interviews, supervisor focus groups, review of multirater feedback data group reports, and analysis of strategic direction. The assessment revealed a broad set of leadership skills that were important to the job and to the new strategic direction, and which leaders felt needed development. By analyzing the needs in terms of importance and potential impact on leader effectiveness, business unit performance, and strength of support for the desired cultural practices, the HRD team was able to establish a reasonable focus on a set of key talent needs.

The design itself included two sessions of five days each. The first session introduced a common set of management skills grouped into five areas: managing people, managing performance, selection interviewing, coaching people, and managing diversity. This session was presented as a classroom training program, including lecture, discussion, case study, role plays, learning applications, development planning, and a two hour interviewing simulation. The design team considered using simulation here, but decided to limit the simulation experience to the second session, due to resource constraints.

Between four and six weeks later, the same group of participants returned for the second session. This session focused on leadership skills (influence, decision making, fostering innovation, strategic thinking, team building) in a leadership laboratory environment. The session was designed around a comprehensive business simulation called "RoboPet," developed by PDI for this program. The fictional company called "RoboPet, Inc." was a manufacturer of high-technology toys. It faced an unforeseen challenge from a new competitor and had a limited time to respond. The learners took on the roles of cross-functional product line teams to address the market challenge of the competitor's product. The HRD team developed the materials with the goal of information richness and detail. Each participant received different information that pertained to his or her role and product line.

In the implementation phase, the facilitators ran the program as five related and sequential simulation modules. Each module furthered a storyline developed to match the scenario and the leadership skills the program would emphasize. Each simulation module followed a similar pattern: 1) introduce new information, 2) respond to the information, 3) analyze and solve problems, 4) apply the leadership skills, and 5) debrief the results of the learners' actions. The actions that the learners could take within their roles were bounded only by the resources given to them in the scenario and by the guidance of the facilitators. After each simulation module, the learners discussed their own lessons learned and shared insights about their actions, with the facilitator asking open-ended questions to prompt critical thinking. The facilitators' role in guiding this loosely structured simulation was key to its success, and required significant preparation and familiarization time.

The HRD team built the scenario for the RoboPet simulation around business situations that posed challenges for the Rockwell Automation leaders. These situations included: dealing with information overload, responding rapidly to competition, fostering innovation in teams, influencing other teams and upper management, making tough decisions independently, and creating a shared sense of purpose. The design team matched the simulation scenario and situations to what the leaders frequently experienced on the job. At the same time, the scenario was crafted so that participants could not use so much industry knowledge that the focus on leadership skills would be lost. As a result, many participants in the program commented to the facilitators about "Wow! This feels just like what I do at work!" This illusion of realism helped the participants transfer what they learned back to the job, according to later comments and evaluation interviews with program sponsors.

Case: Deployment of SEL at Anheuser Busch

The Anheuser Busch Leadership College was created in 1997 to promote learning and development across the numerous organizations that make up the Anheuser Busch Companies. In late 1998, the organization was seeking top line growth, control of the bottom line and leadership consistency across the company. In order to support these goals, managers in the organization needed to improve their ability to implement Anheuser Busch strategy and build strong relationships. A leadership program geared for the middle management population was already in place. While the existing program was generally well received, it lacked a tight focus on these and other critical competencies. A new approach was called for and the SEL design project was initiated. The HRD team included Anheuser Busch Process and Human Resource leaders and a PDI design consultant.

As in the Rockwell Automation design process, the Anheuser Busch (AB) team began with a thorough assessment of the strategic, operational, and leadership needs of the organization. The assessment methods included leader interviews, review of multirater feedback group reports, and analysis of strategic direction. Anheuser Busch is a market leading organization, very stable, it has a strong track record of success. One question asked was, "How could leader development contribute to an already successful formula?" The picture that emerged from the interviews and analysis showed some opportunities in the area of strategic thinking, cross-process influence skills, innovation management and employee development. As in many large and complex organizations, managers at

Anheuser Busch tended to have a very narrow focus on their own process and little on the bigger picture. In the bigger picture, AB was facing increasingly innovative competition, flat international sales and rising costs.

In the design of the Anheuser Busch Leader Lab, groups of leaders from across the organization, including some from brewing, bottling, and entertainment were brought together. In future programs managers from supply organizations would also be invited. Over the course of three days participants in the program assumed the leadership of a consumer products and services organization called Broucharde Companies, International. The Broucharde Companies was a multinational organization comprised of three enterprises, Broucharde Wines, Undine Hotels and Dawntide Cruiselines (BUD). Like Anheuser Busch, the Broucharde Companies was a privately held firm led by the grandson of the founder. All the issues and opportunities embedded in the scenario and simulation had their analog in Anheuser Busch.

The program implementation followed a similar scheme as identified in the Rockwell case. Each participant was asked to engage in a 360 assessment and goal setting process prior to the program. Once at the program, participants gathered together in learning teams. Each team was paired with a facilitator. In the Anheuser Busch program, there were five sequential modules. Each module addressed a specific competency cluster and the simulation story line was continued in each module. The participants engaged with the simulation, debriefed the activity, reflected individually, and then moved to the next simulation module to highlight another competency cluster.

It has now been a year and a half since the first delivery of the program. Since that initial delivery this program has become one of the more popular workshops offered through the Anheuser Busch Leadership College. In late 2000 the program was offered for the first time outside of the United States to managers in England. In post program reaction evaluations, participants are asked to list the most valuable aspect of the program. Many participants identify the simulation experience as being most valuable. Others cite the value of the 360 feedback. However the number one response by far is the impact of peer and coach interaction in critical reflection or real business case discussions held within their learning teams.

Conclusions

Through the experience of developing and testing the Simulation-Enhanced Learning methodology in two organizations, we were able to address our initial research questions. As expected, new questions and directions for further study arose, as well.

Research Question Conclusions

In the process of creating the Simulation-Enhanced Learning methodology and the two programs described in this paper the authors addressed three questions. First, we asked: *"Would the use of simulations be an effective way to enhance traditional classroom-based leadership development programs?"* We found this to be the case, at least as measured by participant response. The participant response ratings and comments indicated that the simulation-enhanced programs led to more insight, as perceived by the learners. Follow-up questions about utility also indicated that participants and supervisors were more likely to have used what they learned in this program than in other leadership development programs they had taken. However, this data is entirely based upon perception and anecdote. As yet, no rigorous evaluation has been done on either of the SEL programs. Addressing the necessary conditions for development, including use of feedback, multirater instruments, and engaging practice in a simulation, made the entire learning experience effective for the participants. Programs without some simulation component have not been able to achieve such high levels of engaging practice.

Second, we asked: *"How could simulations feasibly portray the complexity of strategic business issues in ways that are engaging and effective for the learners?"* We found that, as expected, the process of creating simulations is complex. It requires a deep understanding of the social system being modeled, the ability to diagnose the system issues underlying the day-to-day challenges, and the ability to portray those system issues through the simulation storyline. We found if we created a well-written story and supported it with reasonable data then people quickly became engaged and enthusiastic about their participation in the simulation. As with any fictional work, enough supporting information must go into a simulation scenario to allow the participants to suspend disbelief. Without details that make the simulation "feel" like real work, participants do not immerse themselves in the experience and construct new insights and learning.

The third question was: *"How could such simulations be developed and integrated into classroom-based leadership development programs in such a way as to meet the practical needs of training designers, facilitators, learners, and program sponsors?"* The key to answering this question was the integration of the necessary conditions for development into the SEL methodology. One of the lasting outcomes from these projects was a

repeatable methodology for creating and implementing Simulation-Enhanced Learning programs. Using the SEL approach, shown in Figure 1, we were able to identify the system issues and constraints, group competencies into related clusters, and design programs that included a variety of learning strategies, supported by business simulations. The SEL approach helped us balance the very real constraints of time, money, and effectiveness as we made decisions about how much detail to put into the simulations, how to structure learning around the competency clusters, and what learning activities to emphasize or limit.

Other Questions and Directions

There are other questions about the use of simulations for leadership development that remain unanswered. This study did not examine how learners used their learning groups to enhance the quality of their learning. Continuing work beyond the simulation and into real business issues could be a very powerful action learning extension to the SEL approach. Another unresolved question is whether or not the SEL approach is more effective, empirically, than its traditional alternatives. One additional possibility raised during the design phase of these projects was whether participants could engage in e-learning with online versions of the simulation in lieu of or in preparation for the learning event. Each of these issues offers the potential for further study.

Returning to our original premise, leadership development in the face of increasing complexity must incorporate more effective and engaging learning methods. Using simulations to put boundaries around the complexity and, in essence, "package it" for learning has shown to be a useful tool. Within the simulation itself, the learner has much greater control of his or her learning than is possible in most traditional learning activities. Adult learning theory continues to suggest that this learner control and engagement is key to the construction of knowledge and to making intentional changes in behavior.

As we find new ways to help people develop the knowledge and skills they need to adapt to complexity, simulations are likely to play an increasingly important role. Simulation-Enhanced Learning is one way to bring the context into the classroom to build strategic leadership capabilities.

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