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ABSTRACT

This symposium on learning organization consists of three presentations. "Perception of Learning Culture and Concerns About the Innovation on Use of Innovation: A Question of Level of Analysis" (Rebecca Fatima Sta. Maria, Karen E. Watkins) reports a study of the relationship between organizational members' perception of learning culture and concerns about the innovation and their influence on use of one innovation (ISO 9000) in the Malaysian public sector across 11 organizations. It suggests that theories that try to explain organizational innovation implementation be tested across organizations and take into account organizational context "'Shared Vision': Are We at Risk of Creating Monochromatic Organizations?" (Verna J. Willis) is a case study of the formation of a voluntary organization that found that differences in points of view and in personal aspirations could not be papered over by the real caring that group members developed for one another and that shared vision meant different things to different people and in general was an idealized concept that never reached full fruition in the organization. "Critical Reflective Working Behavior: A Survey Research" (Marianne van Woerkom et al.) operationalizes critical reflective working behavior and raises the question of which factors have impact on critical reflective working behavior. It finds that self-efficacy and participation are important influencing factors. (YLB)

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Perception of Learning Culture and Concerns about the Innovation on Use of Innovation: A Question of Level of Analysis

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The relationship between organizational members' perception of learning culture and concerns about the innovation, and their influence on use of one innovation (ISO 9000) in the Malaysian public sector was studied across 11 such organizations. The findings raised questions about appropriate levels of analyses for such studies. It suggests that theories that try to explain organizational innovation implementation be tested across organizations and take into account organizational context. Otherwise, they could lead to inaccurate conclusions.

Keywords: learning culture, learning organization, organizational change

What is the appropriate level of analysis for studies of the influence of perception of learning culture on innovation? Should one test a model, which proposes a relationship between learning culture and use of innovation, across individuals regardless of the organizations they are from? Or should one test the model across organizations? These questions were raised as a result of a study that examined a mandatory implementation of a large-scale administrative innovation – ISO 9000, an international quality certification system – in the Malaysian public sector.

This study tested a proposed model across eleven Malaysian public agencies that were implementing ISO 9000. On an individual organizational basis the regression analyses showed that the model was able to explain the variance in use of innovation in each organization. However, a comparison of regression weights across the organizations told a very different story. The combination of variables that explained the use of innovation varied radically from organization to organization. This suggests that the model proposed cannot be prescribed generically. It must take into account organizational context. This calls attention to the fact that while one can conceive and test models of organizational change, one must be cautious about making generalizations based on studies of single organizations or case studies. Theories that try to relate variables to explain organizational innovation implementation should be tested across organizations and must take into account organizational context. Otherwise, they could lead to inaccurate conclusions.

Problem Statement

This study was motivated by a gap in the literature on understanding organizational change brought about by the implementation of large-scale administrative innovation. For some organizational development (OD) scholars, an understanding of the impact of a change initiative calls for an analysis of the diffusion of innovation over time and/or space; the determinants of organizational innovativeness; or, the process of innovation within organizations (Wolfe, 1994). Others argue that the focus of the innovation implementation process should be on targeted organizational members' use and perceptions about the innovation (Hall & Hord, 1987; Klein & Sorra, 1996). Learning organization scholars, on the other hand, stress that learning is a prerequisite for successful organizational change and innovation (Watkins & Marsick, 1993). A reading of the innovation and learning organization literature suggests that no one perspective can sufficiently explain this complex phenomenon. It follows that in order to get a more comprehensive picture of the impact of a change effort, one should perhaps use different but related lenses (Wolfe, 1994; Van de Ven & Poole, 1995). Yet research examining organizational innovation implementation from such a perspective is limited.

This study was undertaken to meet this challenge by examining the perception of the innovation implementation (the OD lens) and the learning culture (the learning organizational lens) concurrently in the context of an ongoing innovation implementation in the Malaysian public sector. This was done by determining the

relationship between organizational members' perception of learning culture and concerns about ISO 9000, and the influence of these two factors on their use of ISO 9000 in the Malaysian public sector.

Background Information on ISO 9000

ISO 9000 is an international quality certification system. Unlike product standards, ISO 9000 standards are for the operation of a quality management system. In Malaysia, these standards are widely accepted as the standard for quality in the private sector. This is because of the belief that ISO 9000 certification provides industry with a competitive advantage especially in the European Union.

What is the drive for the public sector? Malaysian policy makers expect that these standards will lead to changes in current practice with an overall improvement in performance and productivity (Halim & Manogran, 1999). In 1996 the Malaysian government decided that by the end of the year 2000 every Malaysian government agency would have at least one core business process ISO 9000 certified. At the time of writing 52 public agencies have received ISO 9000 certification.

ISO 9000 is considered an administrative innovation for the Malaysian public sector in that it brings about "a particular form of change characterized by the introduction of something new. This 'something new'... [involves] the introduction of new managerial or administrative practices or changes in...the organization" (Coopey, Keegan, & Elmer, 1998, p. 264).

Theoretical Framework

This study was guided by the Concerns-Based Adoption Model (CBAM) of Hall & Hord (1987), and the dimensions of the learning organization as described by Watkins & Marsick (1993, 1996). The dotted boundary in Figure 1 represents the conceptual framework that guided this study. The following is a brief explanation of the model.

The Perception of Learning Culture. The general consensus in the learning organization literature is that learning at the organizational level is a prerequisite for successful organizational change and performance (Garvin, 1993; Ulrich, Von Glinow & Jick, 1993; Lundberg, 1995; Hendry, 1996).

Watkin's & Marsick (1996) indicate that the design of a learning organization depends on seven imperatives: continuous learning; the promotion of inquiry and dialogue; provision of strategic leadership for learning; encouraging collaboration and team learning; establishing systems to capture and share learning; empowering people toward a collective spirit; and connecting the organization to the environment. These seven imperatives were used as a basis for determining employees' perception of the learning culture within their organizations.

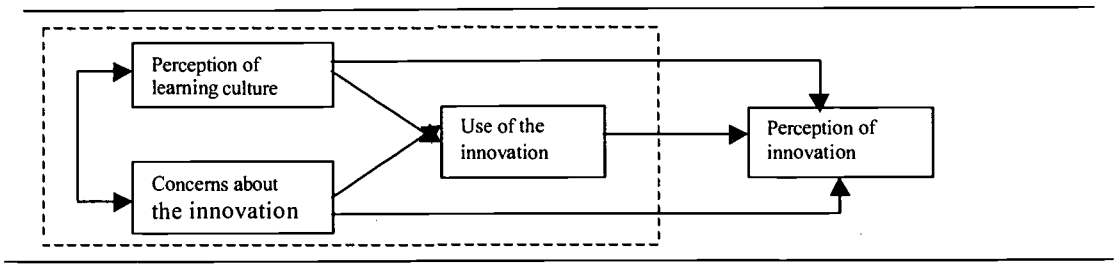

Figure 1. Conceptual framework of the study

The Concerns about the Innovation

The CBAM provides an understanding of the innovation process. This study made use of two important dimensions of the CBAM model: the Stages of Concern (SoC) and the Level of Use (LoU).

The Stages of Concern (SoC). The SoC dimension of the CBAM deals with predictable, developmentally evolving feelings and concerns about the use of an innovation. Hall & Hord (1987) identified seven different stages of concern. In the earlier stages of an innovation implementation (Stages 0, 1, and 2) users report concerns about themselves – "self" concerns about the fit between the innovation and their own skills, values, and roles. As they use

the innovation they move towards "task" concerns (Stage 3), issues like how much time the innovation is taking away from their other responsibilities. Only well-established innovations reach "impact" concerns (Stages 4, 5 and 6) where individuals are concerned about the impact of their activities and focus on refining their use of the innovation. The CBAM theory holds that innovations fail if the self and task concerns are not addressed in the early stages of innovation implementation (Hall & Hord, 1987).

The Levels of Use (LoU). The LoU addresses what the users are doing with the innovation. The focus is "on the behaviors that are or are not taking place in relation to the innovation... What people feel about an innovation and how they perceive a situation can be quite different from what they actually do" (Hall & Hord, 1987, p. 81). At issue is the degree of use of the innovation. In this study this construct was operationalized as a continuum of use.

The assumption underlying this framework is that understanding the change process in organizations requires an understanding of the perceptions of the individuals involved in the change, that for the individual change is a highly personal experience that entails growth in terms of feelings and skills in using the innovation (Heck, Stiegelbauer, Hall & Loucks, 1981). Tied to these assumptions is the premise that the learning culture of the organization has an effect on determining individuals' response to change, and therefore their use of the innovation (Watkins & Marsick, 1997).

Research Questions

The study was guided by the following research questions:

1. What is the relationship between each of the dimensions of the learning organization and targeted organizational members' stages of concern about the innovation?
2. To what extent do each of the dimensions of the learning organization independently explain observed variances in targeted organizational members' use of the innovation?
3. To what extent do the stages of concern about the innovation explain observed variances in targeted organizational members' use of the innovation?
4. To what extent can the dimensions of the learning organization and targeted organizational members' concerns about the innovation jointly explain observed variances in the use of the innovation?
5. What are the differences in the perception of the learning culture, concerns about the innovation, and use of the innovation among the different levels of organizational members?
6. What are the differences in the perception of the learning culture and concerns about the innovation on use of the innovation across the different organizations?

Methodology

This study used a quantitative survey method to answer these research questions. The survey instrument consisted of four parts. The first part, which measured the learning culture of the organizations, was an adaptation of the Dimensions of the Learning Organization Questionnaire (Watkins & Marsick, 1996). The second part dealt with organizational members' feelings and perceptions about the innovation. It consisted of questions adapted from the Stages of Concern Questionnaire (University of Texas, Austin, 1974). The third part consisted of questions to measure organizational members' use of the innovation. It was based on the concept of Level of Use for Innovation of the CBAM (Hall & Hord, 1987). The final part of the survey instrument addressed demographic information regarding the respondents.

This study involved eleven Malaysian public sector organizations that had been using the new system for at least a year. The organizations included two training organizations, one medical health provider, two human resource management organizations, one state development corporation, one public pension fund management organization, one provider of education service, and three technical organizations. The final sample size for this study was 628.

Discussion of the Findings

Relationship between Independent Variables. The first step in the analysis of data was establishing the fact that there was no, or at most only a small, collinearity between two sets of independent variables – the seven dimensions of the learning organization, and the stages of concern. This was important as collinearity "may have devastating effects" on the subsequent regression statistics (Pedhazur, 1997, p.295). As it was found that only a small portion of the variance in the dimensions of the learning organization was explained by the Stage of Concern

of the individuals, it was reasonable to conclude that the model was attempting to capture the interaction of two conceptually separate independent variables.

Effects of the Learning Culture. Research question #2 dealt with the extent to which the perception of learning culture, as measured by the dimensions of the learning organization, explained the variances in use of innovation in the eleven organizations in this study.

The study showed that as a whole the dimensions of the learning organization explained 31.5% of the variance in use of the innovation. This finding lends empirical support to the assertions made by learning organization scholars that learning is a prerequisite for organizational change and innovation (Garvin, 1993; Ulrich, Von Glinow & Jick, 1993, Marsick & Watkins, 1999). Further, it extends the concept of the learning organization beyond the borders of the United States that perhaps this is not just a western phenomenon. It also adds to the body of knowledge about "planned change applications in third world settings" (Golembiewski, 1998, p. 27).

On examining the details, it was observed that "embedded systems," "leadership," "continuous learning," and "team learning" explained the variance in the use of innovation more than the other three dimensions of the learning organization.

Having systems to capture learning ("embedded systems") had the strongest influence on use of the innovation in this study. Establishing systems to capture and share learning is a theme that runs through the various descriptions of learning organizations (Garvin, 1993; Watkins & Marsick, 1993; Nevis, DiBella & Gould, 1995; Watkins & Golembiewski, 1995; Gephart, Marsick, Van Buren & Spiro; 1996).

Providing leadership for learning is another dimension of the learning organization that had a strong influence on use of ISO 9000 in the organizations in this study. This finding is consistent with the literature on learning organizations. Senge (in Fulmer & Keys, 1998) talks of "committed champions" and their role in ensuring any type of organizational transformation (p. 41). Watkins & Marsick (1993) appropriately use the metaphor of the sculptor when discussing the role of leadership within learning organizations: like the sculptor, "leaders in learning organizations set the vision but cannot effectuate it without considering the feelings, thoughts, and willingness of the people who must make so significant a change in the way they work" (p. xv).

Continuous learning is another dimension of the learning organization that had a strong influence on use of innovation. This is intuitively understandable. The process of getting ISO 9000 certification involves learning how the new system works. This is consistent with Watkins & Marsick's (1993) point that "continuous learning is typically triggered by a problem or a challenge on the job" (p. 26). As the system itself is complex, its increased use would depend on the continued encouragement of learning about the system and its requirements.

Of the four dimensions that influenced use of this innovation, "team learning" had the least influence. The direction of influence of this dimension was negative. This finding is inconsistent with the literature on the learning organization. Senge stated that "the fundamental learning unit in any organization is a team" (in Zemke, 1999, p. 48). One explanation for this negative influence could be that the nature of the ISO 9000 innovation itself precludes team learning.

Concerns about the Innovation. Research question #3 examined the feelings and perceptions of individuals about the innovation. The results of the regression analysis showed that Stage of Concern explained 10.6 % of the variance in use of the innovation. It appears that this set of variables had a relatively small explanatory power of use of the innovation. However, there is no consensus among experts on the properties of the proportion of variance, or R^2. For example, Saris & Stronkhorst (1984) advocate that "for good quality data an R^2 of approximately .90 should be required... [and that] a high threshold is necessary in order to avoid unjustified causal inferences" (p. 271). On the other hand, Goldberger (1991) asserts that R^2 "has a very modest role...[A] high R^2 is not evidence in favor of the model, and a low R^2 is not evidence against it" (p. 177).

The above arguments aside, the findings draw attention to the fact that 27% of the individuals in the study reported nonuser concerns and another 10% reported task concerns. Consistent with CBAM theory, individuals at Stages 0,1,2 and 3 reported lower use of innovation than did individuals who were at Stage 4 (Consequence), Stage 5 (Collaboration) and Stage 6 (Refocusing).

This finding should alert change facilitators to the situation within the organizations implementing ISO 9000. While it is necessary for change facilitators to recognize that having high personal concerns is justifiable in some points of the change process, "it is *not* okay for change facilitators to put down, ignore, or inappropriately address intense personal concerns" (Hall & Hord, 1987, p. 77). As Klein & Sorra (1996) assert, "employees' commitment to the use of an innovation is a function of the perceived fit of the innovation to employees' values" (pp. 1062-1063).

Interaction of Learning Culture and Concerns about the Innovation. Research question #4 examined the extent to which the dimensions of the learning organization, and targeted organizational members' concern about the innovation jointly explained the observed variances in the use of the innovation.

The findings from the regression analysis showed that the model proposed in this study accounted for 36.3% of the variance in use of the innovation. In combination with the Stages of Concern, "embedded systems," "provide leadership," "continuous learning" and "team learning" had the most influence on use of the innovation. Tests of regression weights indicated that both sets of independent variables improved our understanding of the use of innovation over and above what could have been accomplished by using either set alone. More importantly, the Dimensions of the Learning Organization added more to our understanding of use of innovation than did the Stages of Concern. This may suggest that the overall learning culture of the organization has more to do with the use of innovation than what the individuals feel about the particular innovation. This is a significant potential correlation.

Placing the concept of the learning organization and the perspective of the individual organizational members in this research framework fills the void highlighted by a number of innovation scholars (Wolfe, 1994; Hendry, 1996) which call for more complex studies of the range of individual and organizational variables believed to influence adoption of innovation.

A Multi-level Look at Innovation Implementation. Research question #5 examined the differences in the perception of the learning culture, concerns about the innovation, and use of innovation among the different hierarchical levels in the organization.

This study found that there was no statistically significant difference in the use of the innovation across the different levels in the organization. Since implementation of this new system is mandatory, the system has to be used regardless of an individual's level in the organization. This could account for the results obtained.

As for the dimensions of the learning organization, it was observed that individuals in top management tended to have higher scores on most of the dimensions of the learning organization. However, the analysis of variance indicated that the differences in mean scores among the hierarchical levels were not statistically significant. This is surprising. Intuitively, one would expect the view "from the top" to vary somewhat from that of "the bottom."

On the other hand, there was a difference in the feelings and perceptions about the innovation among the different hierarchical levels. A higher percentage of individuals who reported nonuser concerns were from staff level; a higher percentage of those who reported task concerns were from the executive level, and a higher percentage of those reporting impact concerns were from top management. This means that there was a higher proportion of nonusers at the staff level; those at the middle or executive level were voicing early user concerns while those in top management were reporting impact concerns.

The finding that more people in top management reported impact concerns compared to those in the other two levels of the organization is consistent with the literature on managerial roles. The formal authority and status of those in top management lead them to focus on issues such as resource allocation, facilitating collective effort, building cohesion, and the impact of the innovation in their immediate sphere of influence (Quinn, 1988; Mintzberg, 1990).

This aspect of the study, which captures the perspectives of multiple individuals, lends empirical support to the suggestion by Klein & Sorra (1996) that researchers examine between-group differences in innovation-values fit. At the very least it surfaces the perceptions and feelings of the different groups within the organization, thereby providing change facilitators with a map of their concerns. More effective interventions can then be designed and implemented (Hall & Hord, 1987).

Putting it Together. Thus far the discussion has been on the results obtained from examining the first five research questions which focused on the individuals involved in the mandatory implementation of an administrative innovation. The findings based on these five questions can be summarized in the model in Figure 2.

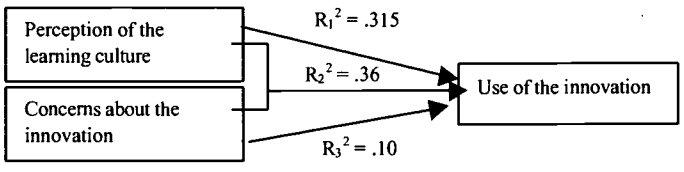

Figure 2: Model showing results of the study

Learning culture, as defined by dimensions of the learning organization, and concerns about the innovation, as defined by the Stages of Concern, together add to the explanation of the variance in use of innovation in organizations studied. The model suggested explains about 36% of the variance in the use of the innovation (Figure 2).

At the macro level it appears that each of the sets of independent variables add to the explanation of use of innovation, and that within each set there are variables that better explain the variation than others. However, on closer scrutiny, it appears that there are variations to this big picture which raise compelling questions about the interaction of the variables in different organizational contexts. This was examined in research question #6, which involved a test of the final model across the eleven organizations in study.

A Multi-Organizational Look at Innovation Implementation. Research question #6 examined the differences in the perception of learning culture and concerns about the innovation on use of the innovation across the eleven organizations. It also examined the level of use of the innovation across the eleven organizations.

The study found that the use of innovation ranged from an average of 36.37 in Organization 9 to 44.06 in Organization 2 (see Table 1). This means that all the organizations were using the innovation at an acceptable level (the range for "use of innovation" scale in this study was from 9 to 54). Of importance therefore would be the ability of the proposed model to explain the use of innovation across the eleven organizations. This was done by conducting regression analyses using the model proposed for each of the organizations.

The results showed that the model proposed was able to explain a "significant" portion of the variance in use of innovation in all eleven organizations, with R^2 ranging from .28 for Organization 7 to .86 for Organization 9 (see Table 1). However, a comparison of regression weights of all the variables in this study across these organizations indicated that the variables that explained level of use of the innovation varied radically from organization to organization. This means that each organization had a different combination of variables that influenced its use of the innovation and that these variables interacted differently, or had different roles within each organization, with different effects on their use of the innovation (see Table 1). For example, in Organization 1 it was the Stages of Concern in combination with "embedded systems," "systems connections," and "provide leadership," which explained 67.4 % of the variance in its use of innovation. In Organization 11 it was the Stages of Concern in combination with "continuous learning," "dialogue and inquiry," "embedded systems," and "provide leadership," which explained 68% of its variance in use of the innovation.

Conclusion and Recommendations

This study adds to the body of knowledge on the importance of learning in organizational change and innovation. In addition, it extends current research on the learning organization and organizational innovation implementation by providing a model that facilitates the concurrent examination of both constructs. More importantly however, this study raised questions about the appropriate level of analyses for organizational studies similar to the one done here.

The analysis across the eleven organizations questions the findings obtained from analyses at the individual level. This study found that the variables in the model combined differently within each of the eleven organizations. This provides compelling evidence for researchers to bring into focus organizational context in attempting to understand the process of implementing organizational innovation. There are nuances, perhaps political, perhaps functional, which appear to impact the way the variables interact. It responds to the call that researchers move beyond single-site research (Wolfe, 1994; Klein & Sorra, 1996) to cross-site analyses. Studies that make inference based on a commingling of data from multiple sites lose significant variance as seen here. It also confirms the concern expressed by Evan & Black (1967) a quarter of a century ago: "without comparative research on the innovation process in various types of organizations, we can only speculate about the generalizability of elements in the innovation process" (in Wolfe, 1994, p. 416).

This study also suggests that there is no recipe for successful organizational change and innovation. What it does provide is a model which change facilitators and change agents can use as a guide in creating learning organizations or in introducing innovation and change into organizations. In other words, consultants and change agents should not be prescriptive, neither should they replicate models for innovation implementation without paying attention to the organizational context of the change. Ultimately, the uniqueness of the organization must prevail. It will be their ability to fit the innovation and its implementation to their local culture that determines the ultimate success of their efforts.

Change scholars and practitioners will be simultaneously concerned and relived by these findings. As scholars seek to identify generalizable characteristics of a potential learning culture, practitioners have argued, "But it doesn't work that way here." What this shows is that by using both the individual and the organization as units of

analysis, we can simultaneously draw limited, cautious generalizations for changes while reassuring practitioners that they are indeed correct; they really need to adapt their approach to the context.

Finally, ISO 9000 is a controversial innovation, with a heavy emphasis on documentation procedures and paperwork. Some might argue that the features of ISO 900 conflict with the characteristics of a learning organization such as empowerment. Looking at these results by organizations, we would assert that, depending on the fit of the innovation with the organization, organizations high on the learning organization dimensions may be less likely to use this particular innovation. Clearly, the complexity of the change process requires research approaches that, like this one, are equally complex.

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Table 1. Comparison of Perception of Learning Culture, and Concerns about the Innovation on Use of Innovation, and Use of Innovation across the Organizations

Variables / Org	D1	D2	D3	D4	D5	D6	D7	S0	S1	S2	S3	S4	S5	R^2	adjusted R^2	Use (s.d)
1 (n=98)	.31	.04	-.32	**.42***	.33	**-.69***	**.31***	**-21.9***	1.84	-7.11	**-12.44***	-2.37	-5.72	.674	.623	40.09 (8.68)
2 (n=33)	-.09	**.47***	**-.70***	.66	-.28	.04	.48	a	**-4.94***	-3.34	-5.24	b	**-3.68***	.721	.575	44.06 (4.63)
3 (n=46)	-.85	.39	-.78	**1.15***	**-.64***	.33	**1.30***	a	3.91	6.73	b	**13.44***	4.22	.613	.487	38.17 (10.4)
4 (n=80)	-.05	-.03	.23	.29	**.84***	-.39	-.09	a	-4.11	**-8.47***	1.05	-6.12	**-7.05***	.453	.356	38.24 (8.48)
5 (n=85)	.28	.001	**-.66***	.53	.56	.01	.27	a	-3.70	-1.78	**-8.62***	1.20	-1.91	.575	.504	36.54 (10.3)
6 (n=53)	.39	-.07	.02	-.22	.12	.65	.13	a	-9.54	-5.25	-3.77	-3.26	-5.76	.489	.336	36.81 (8.63)
7 (n=63)	**1.19***	-.51	-.57	**.91***	.12	-.47	-.47	a	**-14.13***	**-9.24***	**-6.59***	**-9.16***	**-9.04***	.421	.282	38.82 (8.61)
8 (n=26)	.77	-.55	-.05	-.14	-.39	.88	-.37	-1.54	4.54	**13.73***	b	4.72	3.80	.714	.450	43.34 (7.02)
9 (n=19)	.54	.08	-.11	-.34	-.34	-.77	**1.98***	a	-1.71	4.53	-5.28	b	5.64	.944	.855	36.37 (7.21)
10 (n=39)	-.29	.58	-.34	**-.98***	**-1.35***	.88	**2.63***	a	5.02	5.52	11.31	5.57	3.10	.684	.538	40.38 (9.04)
11 (n=86)	**.67***	**-.74***	.02	**.76***	**-.43***	-.22	**.84***	**-7.95***	-1.56	-3.41	-3.59	.92	.77	.679	.620	39.16 (8.88)
Full model (N=628)	***.16****	***-.021***	***-.14****	***.30****	***-.36***	***-.25***	***.26****	***-.98****	***-.17***	***-.20***	***-.65****	***.074***	***-.17***	***.363***	***.350***	***38.95 (8.96)***

D1= continuous learning; D2= dialogue & inquiry; D3= team learning; D4= embedded systems; D5= empowerment; D6= systems connections; D7= provide leadership; S0, S1, S2, S3, S4, and S5 are the dummy variables used for the Stages of Concern. a = this stage of concern was not reported. b = these variables were excluded (collinearity tolerance = .000); *p< .05

"Shared Vision": Are We at Risk of Creating Monochromatic Organizations?

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Building shared vision attracts attention in HRD and management literature because an organization that collectively "sees" ahead through future search, scenario-building or other means, must logically be positioning itself for a better future. Helping to create the vision, watching others endorse it, and understanding that paychecks depend on its implementation may make advantages accruing from a unitary, shared vision seem obvious. We may listen but not hear important voices and ideas in the blending process.

Keywords: Shared vision, learning organizations, group consensus

The problem is that semantic, philosophical, social system orientations, and practical applications are among the issues embedded in notions of and advocacy for shared vision in organizations. We have seen many approaches, but no sure-fire prescriptions for making the process of building shared visions and implementing them predictable. Kouzos & Posner (1987) and Senge (1990) are among organization theorists who sensibly note that having some kind of vision is better than having none. However, Weisbord (1992) with a long history of conducting and examining future search conferences, admits that regardless of the energy and enthusiasm present during the conference, describing a collective vision does not guarantee successful implementation every time. From private conversation with a corporate executive who has a long history of being concerned about learning in organizations, I heard a far more radical skepticism: "There is no such thing as shared vision." Only individuals have visions, he continued, and how they work these out in organizations is often a very personal and carefully negotiated thing.

This is the dilemma for HRD practitioners: while we have a hunch that developing shared visions holds real promise for recreating organizations, we still do not have an accurate sense of what shared vision means, and whether or to what extent it dominates or obscures the colorful, creative visions of individual persons who work there. We do like inspiration and excitement. But we're human, and we often accept ideas at face value, lacking a critically reflective attitude toward those ideas and principles we find attractive. We especially like the idea of a vision that all can share and act upon. Weisbord is cautious, asking whether building shared vision is skirting "the bottomless pit of irreconcilable differences" and simply agreeing "to put our energy into working the common ground" (p. 11). Spending his life in pursuit of this common ground, he nevertheless maintains a critically reflective stance toward what he does and encourages others to do the same. It seems a useful way to regard HRD practice dilemmas.

The level of abstraction of visions imposes yet another constraint on the practicality of shared vision. Senge views visioning as an "unearthing of shared 'pictures of the future'" in pursuit of "lofty goals" (1990, p. 9). Assumptions about intentionality and community seem freely built into the literature. For example, Richardson (in Weisbord, 1992, p. 320) describes the emergence of the following shared vision at a conference of disabled persons, their parents, and health care and government officials.: "Every person in Australia has the right to live a socially respected life in the community of their choice." Surely a vision so commendable that 90 people present had agreed upon it would not be seriously challenged, but there are no clues, regardless of good intentions, about how the vision might be operationalized legislatively. This is often the "make or break" point for organizations: After the vision, then what? Does sharing show up in rewards and other outcomes, too?

Theoretical Framework

Kouzos and Posner started from the position, popular at the time, that it is visionary leaders who initiate and develop the "seeing" and then "enlist" others in the vision. This they discovered through a variety of survey and interviewing methods. Some leaders they interviewed discounted

the use of the word vision, and preferred to speak in terms of personal agenda or purpose. While the researchers moved on to discuss the "collective nature of visions" that "attract people to common purposes (p. 85)," they continued to focus on the leader's responsibility to "develop a deep understanding of the collective yearnings" of employees "through careful listening (p. 115)." Senge et al (1994) started in the same place, but then proceeded to divide the forming of vision into five stages, with the final stage clearly depending on the grassroots organization for "co-creating" the shared vision process (p. 322). The intervention stage and strategy would be selected to reflect organizational readiness for various degrees of participation. There are variations on these positions throughout the literature.

Personal engagement of employees in the "business" of organizations has at least some historical roots in the development of Sociotechnical Systems Theory (Pasmore, 1988). Other roots lie in the work of human relations pioneers like Lewin and Lippitt who are widely quoted and referenced (e.g. Weisbord, 1990, 1992). When we use code words like participation, partnership, shared vision, collective "buy-in", interrelationship, team-work, "getting everyone on board," commitment, culture of learning -- we are at once recognizing the power of sharing *and* stating that it is a sine qua non for vitalizing human organizations. These terms cannot be separated from their connection with the group dynamics and processes of building shared vision. Neither can they be separated from the research on what conditions are necessary in organizations in order to encourage learning. Further, in an era when we are dealing with degrees of diversity and complexity in organizations that we had not previously imagined, theoretically grounded systems thinking offers meta-cognitive ways of addressing the unresolved tensions between individual purposes and organizational needs and allows us a critical perspective on the claims for shared vision. If HRD itself is an evolving system (Willis, 1996), ecologically interdependent with the social systems, commercial or non-profit, that it serves, then the social tensions between individualism and collectivism and their potential resolution in community are also of theoretical interest to those researching shared vision.

Research Questions: Emergent

The case study reported here was to have been a first stage in an on-going study of the formation of an organization. I had no interest in categorizing the organization as voluntary or profit-making, nor in drawing out the characteristics of different types of organizations. This has been done by many predecessors. What intrigued me was that this organization had not yet "jelled," had an overt and avowed interest in becoming a learning organization, was very much concerned to enact many of the futuristic notions of organizations they had encountered in their HRD practices, and was willing to meet for several hours at a time at least once a month. It seemed to me that this was the perfect "time and attention" situation that higher-order learning and making commitments to persons and organizations require. My longitudinal research plan was to act as participant-observer every step of the way, to document what I saw and heard and experienced, and, from time to time, collect data more formally as the group desired or required. Research questions were so "grand tour" that they are just expressions of vibrant curiosity... the starting point for all exploratory research What would happen? How would group dynamics unfold? What would be the major learning events? What would we value most? What would I personally learn and how could I translate that into other parts of my life? What networking advantages would we gain, collectively and individually? Other research questions could be expected to emerge from the data as it was gathered.

For reasons detailed below, the longitudinal case study has evaporated. While many observations and field notes were made, the goal here is to submit only this small segment of evidence, calling attention to the need for further research to illuminate what coming together to create shared vision means. Only analytical, not statistical generalizations are claimed. A fundamental assumption in reporting this single case study is that the concept of *shared vision* is subject to many different interpretations, depending on what we mean by "agreement," and depending on whether we view it as an overriding of dissent, a cultural acquiescence, or perhaps an ecologically ethical meeting of minds. Each *may* have different consequences. Deeply embedded in each person's point of view about shared vision are also tacit assumptions about what *individualism, collectivism, and community* mean. Possibly our distrust of "isms" shades the meanings of the first two terms. "Community" seems to be a safer word, having less controversial connotations. In any of these visionary conditions, it makes sense to ask the question: whose vision is it, anyway? The results of the study seem to bear out the concerns that many gender and

diversity researchers have expressed about the possibility that familiar world views may dominate less conventional or less familiar world views in our organizational futures.

The study is limited to one case, because it is one of a kind. It is rare to be present at the "birthing" of a new learning organization which without profit motive wishes to serve as an incubator for creating learning organizations. That seemed to be the shared vision that was trying to be articulated. Standard data coding and sorting procedures were used, amplified by post-taping phone interviews conducted with a small number of group members as a content validation measure.

The Case

What does "sharing" such an idiosyncratic phenomenon as a vision really mean? This goes far deeper than the question of how the sharing is obtained, or even the question of whether collective good is the goal of sharing. The question is: what is sacrificed when a diversity of visions is channeled and articulated as a unity? What are the colors that are lost, and does their loss really matter? Where do the colors go? If these were merely rhetorical questions, the events of the case study reported here would not have happened, and there would have been no need to begin and end this report with reflections about the purposes and effects of shared vision, and what happens to individuals who either "buy in" or do not.

The case concerns a voluntary organization of human resource development practitioners in the southeastern United States. This group was specifically aware of the literature on shared vision. The organization was in start-up mode and considered itself a "design team," a small core group that had set itself the task of figuring out what exactly it wanted to be or do on its way to becoming a learning organization. No one was asked to join who did not have a practitioner background, and all who joined earnestly desired to use their HRD practice to make the world a better place for everyone. While most were geographically clustered in a major metropolitan area, some came from a considerable distance, accruing frequent flier miles at their own expense.

Asked to join the group explicitly because I had grounding in process observing, research, and general system theory on top of practitioner experience and university affiliation, I was quickly folded into the core group. I continued to view this as an exciting, in-on-the-ground-floor opportunity to see how a group that from the outset meant to constitute itself as a learning organization might evolve. It was of particular interest to me to see how --or even if --this new interest group could define itself differently from other self-help professional associations each of us had previously experienced. Since we openly discussed our reasons for being there, my participant-observer status and the fact that I might do research on group process were not secret. Additionally, each of us was asked to submit by e-mail our own personal, written visions of what we wanted the organization to become.

Collecting Data

Participant observers have a built-in bias because they cannot ever fully extract themselves from their group participation. I did refrain from the written visioning exercise, and from other shaping events when I thought I might exert undue influence on the group. Like most researchers who favor the qualitative paradigm for social science research, I had already confronted what Denzin and Lincoln (1994, p. 12) call the ethics and politics of research, finding with them that value free inquiry of any "persuasion" is a logical inconsistency. Data collection was longitudinal and accomplished by various means. I was 1) careful to keep participant-observer field notes, 2) was consistently present for regular, announced meetings, 3) conducted informal interviews with other participants 4) was very active in the exchanges of e-mails, of which I made hard copies, and 5) with permission, tape recorded our deliberations at a critical juncture in the life of the organization. The recording was transcribed by an assistant who did not know the people involved and who never attended a meeting. This transcript furnishes the rationale for questioning what "shared vision" means to people, and to what extent it is used to test expectations we have of other people particularly under conditions of stress.

Organizational Profile

The group consisted at any point in time of from 6-18 members, with assorted guests who came with members to see what happened and whether they would also like to affiliate. By the time I was invited to join, an informal leader was in place, volunteering to convene the group and to be a liason person

to contact similar groups around the country. Another person acted as recorder, distributing materials and updating group information by e-mail. Others stepped up to facilitative roles and similar tasks as occasions demanded. Attendance was not consistent even for the core group, although certain individuals, including those who had assumed specific duties, were reliably present. These were long, monthly luncheon meetings, with time for conversation and time for deliberations. An easy camaraderie seemed to develop; people were glad to see each other and looked forward to "touching bases" and hearing each other's stories. Members were independent consultants, internal consultants in some of the high profile businesses in the region, and also internal consultants from the government sector.

A major topic of discussion was how to organize, or even if to organize, i.e., deciding the issues around how formal or informal we should remain. Because we had this conversation over and over, in many forms, it was clearly a source of tension. We stated and restated positions. Some were concerned to "grow" the membership; others seemed uncommitted to growth, saying that structure and growth were not high values for them and that what they wanted was to be able to gather informally and learn from each other in a group where high levels of trust were operating.

In retrospect, it is probably not an overstatement to say that there was a built-in schism from the very beginning, with those of one persuasion desiring structure and rules of operation, allowing for budgetary support and project development, and those of a different persuasion desiring to protect the group as an oasis for reflection in the course of busy lives. When a "charter" member later exclaimed that we had no "shared vision," this is what she meant. When a person who joined at a later date said that in a learning organization there should be room for multiple visions, implying the need for individuality, the edges of the schism were etched in plain view.

The reality was that there were assumptions afloat about a shared vision that some members were not even aware they had signed up for. This seemed especially at odds with these members' expectations because there had been much talk about evolving toward different subgroups that would meet differing needs, so that people could choose their levels and types of involvement. Before the group had reached that point, however, it had collectively approved by-laws. Legalization as a formal entity with a snappy acronym was underway. We were becoming dues paying members and we would soon be having elections.

What was also underway was planning to sponsor a Fall event for the express purpose of announcing ourselves to the public, providing an interesting learning opportunity, and growing our membership. We worked against a deadline, because the intention was to offer this event in conjunction with a national meeting of like nature. This became the defining moment for the organization. We failed.

The Fall event was euphemistically "postponed" when it became apparent that we had neither the funds to carry it out nor a real sense of unity about the importance of the event. We also had very few people to carry the burden of responsibility, partly because the membership was small in the first place, and partly because some were waiting to see where they would be needed and how they could best contribute. Misgivings had been expressed in several ways, on several occasions, but planning had gone forward to the point of obtaining mailing lists, preparing a brochure to mail, and even sending some out --which later needed to be recalled. This occasioned considerable embarrassment.

It was at this point, in the midst of our painful analysis of what went wrong, that the group agreed to participate in a tape-recorded debriefing. It was scheduled ironically on the night our event was to have occurred, simply because we all had that date reserved in our calendars. We thought we would get maximum attendance of our group for that reason, and we especially wanted to hear from those who seemed to have stayed on the fringes of the group. What were their perceptions?

Findings

Salient themes and patterns that emerged from the 28-page transcript were these:

- *There was commitment of group members to each other, but that did not translate into heavy commitment to the group project.*
  This lack of commitment seemed the first clue to the tenuousness of "shared vision." The more active members appeared totally unprepared for this, and lack of commitment was accounted for in the transcribed comments in a variety of ways:

1) *personal and professional over-commitment* -(too busy, too little money, working overseas, lack of adequate planning time, absence of the "budget person," fluid membership, decisions made for others who were not present)
2) *group shortcomings* -(lack of shared vision, in-group/out group planning meetings and inadequate sharing of decisions, unheard voices, unclear guidance, lack of passion for end result, failure to share misgivings, difficulty of maintaining timely electronic communication, mixed signals, high ideals without execution, group schism or "different bents," unrealistic desire for perfection, imbalance between ideas and acts, fallacies regarding capabilities for self-directedness, confusion over what the group "was about," lack of desire to affiliate with the larger organization of which the group would be a "fractile," purpose for the event not entirely clear.
3) *trust factors* -(inability to allow for differences, suspicion of preconceived or even hidden agendas, inability to figure out "what wants to happen here," lack of integrity not in people but in the system --the group, lack of harmony of purpose, not "wanting it enough," unwillingness to trade off deepening relationships for growth in numbers.

- *There was a very high emotional investment in the process of discovering what the group would or would not become.*

  This manifested itself in several ways --from tears, expressions of frustration, expressions of caring and concern, and expressions of faith that this was a powerful learning experience from which all would profit. For several minutes, members were reluctant to acknowledge differences that had surfaced among them.

  1) There was a careful and patently honest desire not to point fingers and assign blame for the failure of the project or even for the feelings of failure about the group itself. Yet the language of many pieces of the dialogue was recriminatory. Those who were most active and who most wanted the event to happen felt betrayed by those who were not so certain this was what "needed to happen." Those who were not the most active felt that their own point of view was misunderstood. As one person said: "I was never fully comfortable that we could pull this off. But I don't want that to be confused with willingness to try to make it happen." The charge of lack of commitment, even though not personally directed, felt like a misreading of motives.
  2) The reaching-out motif was in stark contrast to the reaching-deep-inside motif in many ways. While some had seen the Fall event as a way to bring others into the circle of conversation about the values of being a learning organization, offering a way to share treasured insights outside the group; others felt almost interrupted in their own growing by the intrusion of the event. Another manifestation of these inside/outside orientations was the fact that an outsider had been invited to participate in this soul-searching debriefing without the knowledge or consent of others. His experience in a similar group in another part of the U.S. may have seemed intrusive in light of the intimacy of the conversations underway, and the transcript is testimony to the fact that his comments went largely unnoted and/or unresponded to. Members had met him only once before.
  3) It was pointed out that high group energy was generated over the prospect of making informal presentations within group, sharing "passions" democratically with one another. Twenty-five possibilities were brain-stormed in an earlier meeting in a matter of minutes and individuals assigned themselves responsibility for each of the 25, eager to contribute. In contrast, in-group energy seemed to drain away as soon as planning for the Fall event intervened. One speaker characterized the enthusiasm for staying in group as an emphasis on private "being" over public "doing" and suggested that a learning organization does not always have to "do" or act outside itself in order to justify its existence. There was speculation whether the activist predisposition of independent consultants had prevented discovery of the whole, systemic nature of the group.
  4) Eventually, members of the group began to admit to each other that they had not been good listeners and that often goal-orientation had stood in the way of hearing anything that would jeopardize the goal. It was not that others had "said nothing," but that perhaps group integrity and holism were viewed by some as bound up in, and inseparable

from, the execution of a common project. "Shared vision" is clearly referenced here and seemed to mean that the project was the cornerstone of shared vision.

- *Optimism about the future of the organization was not shared at this crucial feedback session.*
  Curiously, no mention was made in the transcript of either reconvening or disbanding. Turning off the tape recorder as we moved to adjourn, I made a pledge to share the transcript with everyone at the next meeting and suggested that it was only a first milestone among many that we might also record and learn from collectively and individually as we tracked our progress over time. However, there was no next meeting and no interest in reading the transcript was ever expressed. Aside from a few e-mails, not necessarily shared with everyone on the organizational roster, nothing has happened for this group since November 1999. The pro-tem leader resigned because of an upturn in consulting contracts and no one stepped into the gap. Judging from the few e-mails that did come through, everyone seemed ready to move on to other things that they felt would help them attain their goals or execute their personal visions, either virtually on-line, or in other types of affiliations.

On the surface, at least, the absence of further group activity would indicate that the "schism," the split-screen vision with multiple perspectives, was not a problem members wanted to have or were willing to work to resolve or accommodate in any way. It may be that the organizational growth segment of the membership could see no further prospect of arriving at a shared vision, at least as they understood the term. As for the personal growth segment of the membership, while getting together as a subgroup remained and still remains a possibility, no one has taken that initiative.

Interpretation

The evidence strongly suggests that the differences in points of view and in personal aspirations could not be papered over by the real caring that members had developed for one another. Shared vision meant different things to different people and in general seemed to be an idealized concept that never reached full fruition in the organization during its year of existence. There did not appear, in the transcript, to be willingness to engage in further assessment of what was learned about learning organizations or of what might be implied for consulting practice or academic curriculum. Reflecting on earlier sessions, I went back to my notes and found several instances when reflections about process were quickly sidetracked in order to "get on with the business" of organizing. Possibly whatever learning occurred was simply a refresher to remind us of the difficulties and demands of group dynamics. If so, there might have been an easier way to do this to ourselves. Disappointments fell heavily on each of us, at different times, and were manifested in different ways. The main effect of being a voluntary organization was that we could opt out of the organization at will. Members of non-voluntary organizations have less obvious ways of "opting out" if the organization is not listening to or supportive of multiple visions. But a side effect may be that they lose faith in community and fall back on an individualism that is insulated from the workplace.

One of the background elements that also came out of the transcript was that several people referred to the desire to replicate previous experiences in this new context. These earlier experiences seemed to have been especially meaningful for those who mentioned them, and for them the lack of replication was distressing. Several meaningful events had been connected with workshops on visioning and organizational learning. Some had involved large numbers of people, and group size (growing or shrinking) had not emerged as an issue. In other cases, enriching experiences had been designed specifically to capitalize on small group intimacy. On the fringe --which in terms of the transcript has to mean the group members who did not come to the debriefing --one person interviewed confessed to being confused about purpose from the very beginning, but because she respected the other members and valued their insights, she came as often as she could.

While the desire to learn seemed to be universal, the nature of the learning intended by each individual remains murky. An exception to this is the very overt statements made by members who wanted the "oasis" kind of learning --a place and an occasion to reflect on what they were frantically trying to accomplish in their work and private lives. What others intended seemed to be a generous passing of the torch to people who had had no experience with organizations as communities. Both oasis motives and torch-passing motives appear to be grounded in HRD practitioner experience --performing complex tasks, enjoying the refreshment of new ideas, and desiring to share insights with others. But in the organization

as it constituted itself, the learning motive and the teaching motive seemed to flow in reverse directions. My own notation as participant observer is that, while the organization often showed great promise of becoming what it said it would be -- an organization dedicated to learning --it did not and perhaps could not live up to its promise. That does not necessarily mean that the experience was of no use. It served a purpose we often failed to recognize --the opportunity to try something new and see if we could create something new, in a laboratory sort of way. Because research was not a member-shared activity, I am uncertain of how committed the group was to learning about itself. It might have been helpful to engage others in the research activity, so that action research could become a primary tool everyone would use.

There were many distractions, including two marriages (not to other members of the group), many out-of-town trips, at least four job changes, and the arising of necessary commitments to work-related projects. Attendance needed to be optional. As in all organizations, whoever came and whatever came up sometimes fed and sometimes consumed the energy of individuals. These were very high level, very ambitious people who did not need the group for professional visibility, but who somehow had felt that all their professional relationships could be enhanced by belonging to it. They wanted commitment from each other and agreement to test that out.

Conclusions: Ambiguities and Wash-outs in "Shared Vision"

There is much to be learned in this simple case about the ambiguities in "shared vision" and about the practice of HRD, as well as the need for research on our own practices. The fledgling voluntary organization in this case had every intention of being a dynamic,sharing community. It also had every intention of being a system that was interconnected on many levels. Still, it does not seem to have had a very good sense of its own external or internal ecologies. One person who did exhibit a rich ecological sensitivity remarked (as transcribed):

> If you ask me what I would like in this organization, it would be just a group of people coming together just like we are coming together now --to do whatever we decide to do in this space. It is not to necessarily make it into something bigger or to do events. However if that is what we decide to do and I have the energy and time to help do that because I care about the people in this room, I am willing to do those things even if my choice is 12 people that I just like, sitting and talking and learning from just being. And so, although I saw the dynamic of it, I had a level of acceptance that there was this schism in the group, and I'm thinking...it all happened the way it was supposed to happen, but had that date not been there [the Fall event], I think it would have manifested itself in a different way that we would have allowed people to be and that was okay or allowed people to do and do it at a date that made more sense for the organization.

This is a very different vision from the one that members were accused of not buying into, not "sharing." It is a vision that protects individualism but does not ignore the need for community or the willing sacrifices required of the individual who lives in community. This particular group member had clearly identified herself with the group and had been offering us different versions of this quoted statement for many months, in a variety of open and articulate ways.

There always seems to be something in a group that wants to wash out all the colors as if it were better for all of us to wear the same faded jeans or show up with the same pre-printed banner across our chests. Perhaps this is because we still do not feel our own "connexity," the joining together with others as a moral imperative as well as for our own social purposes (Mulgan, 1997). Soon, says Mulgan, we will have no other choice than to live in connectedness. The issue is whether we will be able to "become a self-organizing society, as opposed to a society made up of separate self-organizing groups" (p.156). Agreeing with his premise, I am disappointed that there is so little to be learned from the case at hand about how to become either one or the other. It is akin to the feeling of a researcher who finds no statistical significance after months of arduous research and analysis. It is not a reason for me or for any other researcher to give up trying to understand why the shared vision was not shared, or perhaps did not even exist.

What we may have forgotten is that continuous co-creation is necessary. A vision does not last, even if it can be shared. And even if it is very colorful, it cannot stand out in the sun too long. Gilley (1998) has said that we fear the state of "not knowing" so much that we "anesthetize" ourselves by going into anti-fear "trances" so tightly sealed that information we need cannot get through (p. 191). That sounds like a realistic explanation for why we may not learn as much or as rapidly as we ought to learn, or why we are so uncomfortable with fluid visions.

There may be a danger that we will so elevate our confidence in "shared vision" that it becomes a collective, monochromatic, let-us-not-dare-to-be-different trance, a stationary trance so organizationally dominant that individual contributions of information and wisdom cannot get through. It is arresting to think about what may happen to the colorful voices of diversity if being entranced with a "totally shared vision" is where we are headed organizationally, and if HRD practitioners and scholars do not continuously critique the new concepts--like shared vision -- that we love and embrace.

Perhaps the purpose of the failed organization was simply not congruent with the real needs of the members. Or perhaps too many of us were trying --not to create something new --but to replicate what we already had found previously. Margaret Wheatley may unwittingly have provided the last and best critique of goes wrong with self-organizing systems like the one this case describes:

> Any time we attempt to impose a solution generated by another system, any time we attempt to transfer a program from one place to another, we are not only wasting our time, we are insulting the system. Why, with its creative, discerning capacities, should it even for a moment accept a solution that is the result of another system's creativity? Why shouldn't it insist on its own insights, its own designs?

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Critical Reflective Working Behaviour: A Survey Research

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In this paper critical reflective working behaviour will be operationalized. Second, the question will be raised which factors have impact on critical reflective working behaviour. The following dimensions of critical reflective working emerge: reflection, vision sharing, challenging group-think, asking for feedback, experimentation and awareness of employability. In a survey amongst 742 respondents these dimensions are validated. Important influencing factors seem to be self-efficacy and participation.

Keywords: Critical Reflective Behaviour at Work, Informal Workplace Learning, Learning Organisation

Good employees could be characterised as critical reflective employees. This conclusion is drawn from an explorative case study research in seven organisations: two banks, three factories (a cheese factory, a packaging factory, and a textile-printing factory), a call centre, and the Post Office (organisation). These case studies were a preliminary investigation for the main research, and were aimed at describing informal on-the-job learning and competence. In the preliminary study respondents representing different levels in the organisation gave answer to the question "What is your definition of a 'good employee?' Many respondents, especially in the packaging factory, the cheese factory and one of the banks, in answering this question stressed aspects having to do with critical reflection (Van Woerkom et al., 2000). They mentioned the importance of thinking critically about the whys and wherefores, asking questions like "Why are things organised like this? Can the work be done more efficiently? Why do I work like this?" Main conclusion of the preliminary study is that critical reflection is both an important form of informal on-the-job learning and an important aspect of competence. The next step now is to make critical reflection operational and to look for factors that influence critical reflection. This paper discusses this next phase in the study. The research questions are: (1) What is critical reflection and how can we measure it? (2) What factors influence critical reflection?

Theoretical Framework

After having identified critical reflection as an important aspect of successful working behaviour, the concept of critical reflection needs to be defined. What exactly is critical reflection and how can we describe critical reflective individuals in work organisations? As Brooks (1999) rightly remarks, because the concept of critical reflection has been developed within the context of theory or practice, rather than research, (Freire, 1972, Mezirow, 1981, Brookfield, 1987 in Brooks, 1999) it has not been developed operationally and no instrument exists to identify individuals capable of critical reflection. Furthermore, scholars don't seem to agree on terminology and definitions. Some speak about critical reflection, while others speak of reflection, critical thinking, double loop learning, model II behaviour, transformative learning etc.

Towards a Unifying Definition?

As said before, many concepts are related to critical reflection, and many definitions exist of what critical reflection is. Let's try to find an operational definition that can help us to measure critical reflective working behaviour. According to Marsick and Watkins (1990) *critical reflection* relates to understanding one's own

standards, goals, and interests, and learning about backgrounds, assumptions and performance objectives, aimed at improvement. The research of Marsick and Watkins (1990) showed that critical reflection enabled people to challenge norms and to examine the assumptions behind their reasoning and actions. According to Brooks (1999) the ability to ask (critical) questions is fundamental to *'informal critically reflective learning'*. "Making inquiries stands as the only method we have to break us out of the worldviews we take for granted." According to Brooks, critical reflection is useful for improving work practices, addressing moral and ethical dilemmas, and evaluating organizational goals and strategies. A practical means of assessing the value of critical reflection is to measure whether it improves work practices. The concept of *double-loop learning* that Argyris and Schön (1996) distinguished is closely related to critical reflection. Double-loop learning enables workers to identify, question and change the assumptions underlying workplace organisation and patterns of interaction. Workers publicly challenge workplace assumptions and learn to change underlying values. Furthermore, Argyris & Schön describe behaviour related to critical reflection and necessary for double loop learning (so called model II behaviour). This can be characterised by asking (critical) questions, expressing one's (sincere) opinion and inviting others to give feedback or to confront visions, perspective taking and experimenting with new behaviour and work methods. Non-defensive behaviour is also part of model II behaviour. Brookfield (1987) defined the process of *critical thinking* as the process by which we detect and analyse the assumptions that underlie the actions, decisions and judgements in our lives. Essentially it has three stages: firstly, becoming aware that these assumptions exist, secondly, making them explicit, and thirdly, assessing their accuracy and validity. Bolhuis en Simons (1999) define *critical learning* as learning that is consciously initiated by the learner out of dissatisfaction with earlier learning. What has been learned before (frame of reference) has to be unlearned to make place for new knowledge, skills and attitudes. Critical learning can be seen as breaking down and building up.

This small sample proofs different characteristics of definitions and functions. Questioning assumptions seems to be a central aspect of most of the definitions but is not being made concrete in an organisational context. Assessing the usefulness for the purpose of this research, a few problems emerge: Most of these definitions are indeed not very operational, most of these definitions characterise a process instead of a visible behaviour and most of these definitions are rather focused on learning or thinking than on working in an organisation.

The *model II behaviour* (Argyris & Schön, 1996) seems to comply most with the purpose of our research. For this research it is important to make critical reflection operational in terms of observable examples of critically reflective behaviour in work organisations. Therefore the following definition of critical reflective working behaviour is being made: *Critical reflective working behaviour is a set of connected, individual activities, aimed at analysing, optimising or innovating work practices on individual, team, or organisational level.*

After finding the theoretical notions on critical reflection, again an analysis of the case-study material is being made, aimed at looking for identifiable, concrete, practical examples of these theories. The combination of literature review and the analysis of the case-studies (these were carried out in a parallel process, returning from one to the other) leads to the operationalisation of *critical reflective working behaviour* in nine dimensions, which are being chosen because they are recognisable both in theory and in practice. These dimensions will be discussed below, with examples of theory and the case-study material.

Reflection on Oneself in Relation to the Job. All fore mentioned authors have an element of reflection in their definition. Reflection is a mental activity, aimed at examining one's own behaviour in a certain situation (Van Bolhuis-Poortvliet & Snoek, 1996). The importance of reflection was demonstrated by statements from respondents like "reflecting on the whys and wherefores" "Why are things organised like this? Can the work be done more efficiently? Why do I work like this?" "Employees should be able to step back occasionally from their daily routine and devote more attention to self- and time management".

Learning from Mistakes. Reflection leads to consciousness of undesirable matters (for example work routines, communication deficiencies, mistakes, problems, lack of motivation). In stead of denying these undesired matters, they are interpreted as something positive, namely as source for improvement or learning. As Senge (1990) states "failure is, simply, a shortfall, evidence of the gap between vision and current reality. Failure is an opportunity for learning about inaccurate pictures of current reality, about strategies that didn't work as expected, about the clarity of the vision. Failures are not about our unworthiness or powerlessness". Many respondents from the case-study's stressed the importance of 'not being afraid to make mistakes or showing one's vulnerability. When managers were asked for their definition of 'the learning organisation' they often mention the importance of learning from mistakes.

Vision Sharing. Vision sharing is one of the observable activities caused by reflection. One expresses the result of reflection by expressing ones vision, asking (critical) questions or suggesting improvements. Making your vision publicly is one of the two central aspects of the model II behaviour (Argyris & Schön, 1996). The respondents in the case-studies stressed the importance of contributing ideas and discussing this with others. "Good critical workers are not just being negative but do suggestions for a different way of working".

Challenging Group-think. However critical thinking can not always be perceived as being positive. In Brooks case study of a "Baby Bell" telephone company, two images were used by many individuals to describe critically reflective participants. "The first was that they "can see the emperor is wearing no clothes", the second is that they "are troublemakers". Although being called a "troublemaker" does not appear to be regarded as bad, informal critical reflection is not always met with a welcoming embrace. It can be rejected, leaving an employee isolated." Brookfield defines critical thinkers as people who challenge group-think, that is, ideas that a group has accepted as sacrosanct. This also means that critical thinkers are alert to premature ultimates, invocations to higher values. Some respondents in the case-studies mentioned 'challenging group-think'. "The guy is a trouble-maker, but he sharpens us."

Asking for Feedback. The essence of model II behaviour of Argyris and Schön is the balance between advocating and inviting others for feedback and vision-sharing. Social dimension of critical reflective working behaviour. The importance of this dimension is demonstrated by statements of respondents referring to a social dimension of critical reflective working behaviour. On the one hand is social interaction an important source of information for reflection. On the other hand is "being critical on your own" often not perceived as constructive and effective. Employees operate in a social context and will have to get support for their ideas to make things happen.

Experimentation. Schön distinguishes between reflection-on-action en reflection-in-action. Reflection-in-action is a kind of experimenting. "When someone reflects in action he becomes a researcher in the practice context. He is not dependent on the categories of established theory and technique but constructs a new theory of the unique case." Experimenting is often mentioned as the last step in a reflection cycle (for example Dewey (1933), Korthagen (1985), Van Bolhuis-Poortvliet & Snoek (1997). Brookfield (1987) perceives "exploring and imagening alternatives" as one of the two central activities of critical thinking. (The first is identifying en challenging assumptions). Although the term experimentation was not mentioned by respondents (it has a connotation of experimenting without any obligations) what they did mention was the importance of putting ideas into practice. "Good teams don't need a suggestion box; they immediately turn ideas into improvements".

Sharing Knowledge. Sharing knowledge can be seen as a dimension of non-defensive behaviour (Argyris & Schön, 1996). Sharing knowledge means that people are not only motivated by protecting their own position but want to be part of something that is bigger than themselves (Senge, 1990). It also can be seen as a social aspect of critical reflection in the context of an organisation. As long as knowledge, insights, and visions are not being shared, the organisation won't benefit from it, and the individual will be frustrated in his attempts to change work practices. and Senge states that people don't only act out of self-interest, but although critical reflection seems to be an individual activity, the effect of it is not to be defined apart from the social context. The result of critical reflection (insights, visions, suggestions for improvements) can not be made effective if this is not shared with others. "Good workers like to share knowledge with their colleagues, without being afraid for competition." A training manager at a bank noticed that competitiveness amongst colleagues has a negative effect on knowledge sharing. More and more attention is paid to this problem.

Awareness of employability. Awareness of employability can be seen as a logical consequence of reflection. As a result of reflection about oneself in relation to work, people become aware of their motives and the extent to which work satisfies their motives. If necessary one will orient on other possibilities. This quality was stressed by many respondents. The case study material showed that both organisations and the people who work in them do benefit from employable employees who ask themselves if they really want to follow the changes in their job or if they would not prefer to look for another job. The ability to take responsibility for one's own career if one does not like the changes that are taking place in the job, and to continue this career with another employer is not only in the interests of the employee but also in those of the employer, if, for example, jobs change or disappear and employees cannot be dismissed because they are protected by law.

Factors Influencing Critical Reflective Working Behaviour

The second research question is related to factors having impact on critical reflective working behaviour. In this paragraph an analysis is made of two clusters of factors: individual factors and factors related to work and organisation.

Individual Factors

Motivation. The theory of self-determination (Deci and Ryan, 1985, Deci and Flaste, 1995) expects three factors in workplace conditions to have a distinct impact on motivation for working and learning, namely experience of social integration, experience of autonomy and experience of competence. People feel socially integrated if they believe that their work is acknowledged by their colleagues and superiors and if they feel integrated in the community of work. People experience autonomy when they have the feeling that they have the scope to act independently and to carry out their work according to their own planning and insights. People feel competent if they believe that they can carry out their work successfully and effectively. Another motivational component is the balance between insecurity and challenge in a situation (Maddi, 1970). An hypothesis in this research is that these four motivational components all have a positive effect on critical reflective working behaviour. However, the effect of social integration is still ambiguous. On the one hand feeling socially integrated will make it easier to be open, vulnerable and critical. On the other hand social integration can make it more difficult to resist social pressure and to come up with new ideas, ask (critical) questions etc.

Self-efficacy. Self-efficay is the belief in one's capabilities to organise and execute the sources of action required to manage prospective situations (Bandura, 1986). Self-efficacy also depends on self-evaluation and how people view their capability. For they may perceive an ability needed for some aspects of their current or anticipated future work either as an acquirable skill or as an inherent, possibly inherited aptitude. The former is highly conducive to skills development as people judge themselves in terms of performance improvement and regard errors a natural part of the learning process. The latter constrains learning, especially when people compare themselves unfavourably with others. Research from Van der Klink (1999) Gielen (1995), Gist, Stevens & Bavetta (1991), Hastings, Sheckley & Nichols (1995), Matieu, Martineau & Tannenbaum (1993) show the significance of self-efficacy for motivation for training and commitment with organisation. An hypothesis in this research is that self-efficacy has a positive effect on the dimensions of critical reflective working behaviour because they require courage (daring to be vulnerable, to be open, to resist social pressure). People will have this courage if they have high efficacy. Eraut c.s. (1999) point out that confidence was frequently cited by respondents as both the major outcome of a significant learning experience in the workplace and a critical determinant of good performance at work. Sometimes it derived from the achievement of a good result or the solution of a problem, sometimes from the recognition that others were no less fallible than themselves. Confidence encouraged more ambitious goal-setting and more risk-taking, both leading to further learning. Usually it was fairly specific, relating to ability to execute a task or successfully perform a role, what Bandura calls self-efficacy.

Experience Concentration. Experience concentration refers to the diversity of experience in ones career (Thijssen, 1996). In general, with the increasing of age, the multitude of experience increases and the diversity of experience decreases. The hypothesis is, that experience concentration has a negative effect on critical reflective working behaviour. The more experience one has in one context, the less one will put up for debate this particular context.

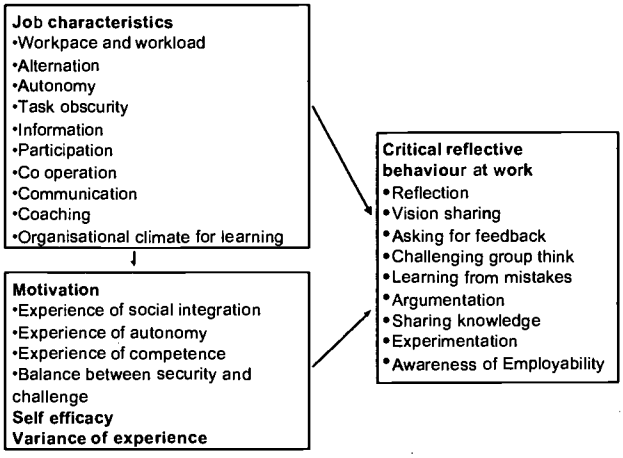
Job and Organisational Characteristics

Because critical reflective working behaviour is a type of informal on-the-job learning, we sought for theories about the effect that job characteristics have on on-the-job learning. Karasek's job demand control model is a model in which stress as well as learning are considered as dependent variables and task characteristics as independent variables (Karasek and Theorell, 1990). This model supposes a combination of high task demands and much control to lead to learning and to motivation for competence development. Task demands can be both quantitatively (workpace and workload) and qualitatively (for example alternation). High task demands are necessary for learning. To prevent stress, one needs control. Control (or decision latitude) is defined as the potential control of an employee over his tasks and his behaviour/performance during his working day. Control can refer to autonomy and participation. In a later version of this model, social support was added to this model (Kwakman,

1999). Another theory is that of the learning potential of jobs (Onstenk, 1997) based on the work of Baitsch and Frei (1980). The learning potential refers to the likelihood of learning processes occurring in a particular job situation. This depends on a specific combination of worker characteristics and job characteristics. Learning opportunities are determined by job characteristics (like breadth and variety of tasks, the degree of innovation and problem solving and the degree of control and autonomy), the information environment and the social environment (task group, co operation, guidance and feedback by supervisors and colleagues.

From these theories, the following job characteristics were selected because of their supposed impact on critical reflective working behaviour: workpace and workload, alternation, autonomy, task obscurity, information, participation in innovation and decision-making, co operation, communication (top down), coaching, and organisational learning climate. The hypothesis is that workpace and workload and task obscurity will have a negative effect, while the remaining variables will have a positive effect on critical reflective working behaviour.

Figure 1: Conceptual Model of Factors Influencing Critical Reflective Behaviour at Work



Methodology

Based upon the conceptual model a survey research is carried out in order to validate the nine variables of critical reflective working behaviour and the various predictor variables and to examine the relationships as specified in the conceptual model. The variables are being operationalised in a questionnaire for 'self-report' with on average six to eight items per variable. The items referring to workplace-conditions can be scored on a four-point scale (1 = hardly ever, 2 = sometimes, 3 = often, 4 = (almost) always). The items referring to critical reflective working behaviour can be scored on a six-point scale which only describes the extremes (1= totally wrong....6 = totally right).

It is evident that measuring a concept such as critical reflective working behaviour in a survey is a complex matter, and can only lead to a faint glimpse of the 'truth'. However, after a first phase of research that was qualitative, a need for a more quantitative foundation of concepts and relationships was felt. Of course there are many problems involved with a questionnaire for self-report. Firstly, what a person says, is often not more than an indication of what he or she does. Secondly, persons are aware of the fact that the researcher is looking for something and thirdly, questions can evoke something that otherwise would have remained latently (van der Hoogstraten, c.s. 1985). The following attempts are taken to (partly) overcome these problems. Firstly, items are formulated as much as possible in terms of concrete behaviour in stead of feelings or thoughts. Secondly, a pilot of the questionnaire is tested on 20 people in various jobs. And thirdly, twelve respondents (scoring low, average and high on the instrument) are interviewed afterwards on the same indicators as in the questionnaire to check the consistency of their answers (results not available yet).

Participants are obtained from a data bank with school leavers of secondary and tertiary agriculture education and selected on the following criteria: Having a payed job, are working in an organisation of at least 20 employees and in a job which requires working together with colleagues.

Although the respondents have the same educational background, their work experience varies largely (production, financial services, education and consultancy, etc.). The questionnaires were sent in June 2000.

Reminders were sent after two weeks. From the 1670 questionnaires that were sent, 742 valid questionnaires were returned (respons rate of 46%). 67,8% of these respondents are men, 32,2% are women. The average age is 29,8 years old (SD=4,6). One-third of the respondents has a diploma of a secondary vocational education, the rest has a diploma of tertiairy vocational education.

In order to answer the first research question (Is it possible to measure critically reflection?) factor and reliability analysis were carried out. In order to answer the second research question (What influences critical reflective working behaviour?) multiple regression analyses were carried out.

Results and Findings

Reliability of the Instrument

To determine whether the nine dimensions of critical reflective working behaviour really exist, a factor analysis (with principal components method and vari-max rotation) with nine factors to be extracted is carried out. This leads to the conclusion that the items belonging to reflection, reasoning and learning from mistakes spread among the other concepts. For the sub-scales reflection and learning from mistakes, this can be explained by their 'basic' character. These sub scales are in a way part of all the other sub-scales. For the sub scale argumentation this can be explained by the low reliability of the initial scale. Only after deleting three items, the scale reliability was acceptable (α=.66). However, when in a next factor analysis items belonging to these three sub scales were removed, the rest of the six concepts come to the fore unambiguously in six factors with Eigen-values higher than 1. After deletion of items loading less then .35 on any of the factors, these six factors explain 48,2% of the variance. Although this is not much, this solution leads to considerable data reduction. After carrying out reliability analysis deleting some items to improve the scale consistency , nine variables were being constructed by computing mean scores.

In order to find out if the sub-scales indeed load on one underlying construct, namely critical reflective working behaviour, again a factor-analysis (with principal components method and no rotation) is carried out on the nine variables without indicating a number of factors to be extracted. This leads to a two factor solution, with Eigen-values higher than 1. It turns out that learning from mistakes, argumentation and sharing knowledge belong to another factor than the other sub scales. Because the most and the most important scales belong to the first factor, it is decided to eliminate the three sub scales that load on factor 2. For the variables loading on the first factor a factor score is being computed which represents the concept of critical reflective working behaviour as a whole. This leads to the scales as described in Table 1. As we can see reliability of both the construct critical reflective working behaviour, and the underlying dimensions are fairly reasonable to high. Because of limited space, the reliabilities for the predictor variables are not being presented. The reliabilities of these variables varied between .70 and .91.

Table 1. Descriptive Statistics For Sub Scales

	M	Range	SD	Cronbach's alpha	Number of item
Critical reflective working behaviour	-.003	-3.28-2.92	1.00	.76	6
Reflecting	4,35	2,00-6,00	,68	.68	8
Critical vision sharing	4,11	1,29-6,00	,87	.83	7
Asking for feedback	3,98	1,60-6,00	,77	.83	10
Challenging group-think	4,40	1,20-6,00	,88	.74	5
Awareness of employability	3,97	1,00-6,00	1,25	.80	4
Experimenting	3,83	1,17-6,00	,84	.75	6

Effects on Critical Reflective Working Behaviour

A stepwise regression was used to discern the relationship between (the sub scales of) critical reflective working behaviour and workplace and organisational characteristics and individual characteristics. The results are shown in Table 2 (only significant effects are shown). A large part of the variance on the factor score of critical reflective working behaviour is explained by the independent variables (51%). The most important predictors are self-efficacy and participation. Also the explained percentage of variance in the sub scales critical vision sharing, challenging group-think and asking for feedback is fairly high (respectively 41%, 38% and 30%). The most important predictors for critical vision sharing seem to be self-efficacy, participation and function level. The most important predictor for 'challenging group-think ' is self-efficacy. The most important predictors for asking for feedback seem to be self-efficacy and coaching. A relatively low percentage of the variance in the sub scales awareness of employability, experimentation and reflection is explained by the independent variables (respectively

14%, 17% and 19%). Self efficacy and age seem to be the most important predictors for awareness of employability. Most important predictors for experimentation are self-efficacy and participation. For reflection the most important predictor is self-efficacy.

Table 2. Regression Analysis, the Effect of Workplace and Organisational Characteristics and Individual Characteristics on the Sub Scales of 'Critical Reflective Working Behaviour'.

	Critical vision sharing	Asking for Feedback	Awareness Of employab	Challen- ging group- think	Experimen	Reflecting	Factor score CRWB
Workplace and organisational Features							
Workpace and workload	.09						
Variety						.14	
Participation	.35	.12		.13	.22		.20
Coaching		.23				.08	.09
Organisational learning climate	-.08	.13				.09	
Function level	.17						
Number of employees		.12	.08				.12
Individual features							
Difficulty with change					-.11		
Self-efficacy	.43	.32	.23	.55	.26	.28	.56
Function experience			-.11			-.11	
Sex (man =1 woman=0)	.11		-.14				.07
Experience concentration			-.11			-.10	-.08
Age			-.21	.10			
Explained variance (R-square)	*.41*	*.30*	*.14*	*.38*	*.17*	*.19*	*.51*

Again a stepwise regression is used to discern the impact of workplace and organisational characteristics on individual characteristics. Because of the importance of self-efficacy for critical reflective working behaviour, the most interesting thing is to discern which factors have impact on self-efficacy. It turns out that only a small percentage of the variance in self-efficacy can be explained by the predictor variables (14%). The most important predictor for self-efficacy seems to be participation.

Conclusions and Recommendations

Critical reflective working behaviour seems to be a construct consisting of six dimensions, namely reflection on oneself in relation to the job, critical vision sharing, challenging group-think, asking for feedback, experimentation and awareness of employability. Both the sub-dimensions and the construct as a whole seem to be reliable concepts. With regards to the effects of the predictor variables the most striking result seems to be the effect of self-efficacy on all the different sub-scales of critical reflective working behaviour. This can be explained by the fact that all the sub scales of critical reflective working behaviour imply a certain way of risk taking behaviour. One has to have courage to withstand social pressure and be critical, to take a vulnerable position and ask for feedback, to take a close look at ones performance and ones future career, to experiment in stead of walk the beaten track. People who feel confident will sooner be prepared to take such 'risks'. Second important result seems that that workplace and organisation characteristics (except for participation in policy and decision making) are not very significant for critical reflective working behaviour. Workplace characteristics that were being selected based upon the theories about the learning potential of jobs from Karasek (1990), Onstenk (1997) and Baitsch and Frei (1980) probably refer more to forms of single-loop learning than to forms of double loop learning. This means that if critical reflective working behaviour indeed is an indicator for double loop learning, it is quite hard for organisations to stimulate it. If organisations do want to stimulate double-loop learning this has to be achieved via stimulating employees self-efficacy. The problem with self-efficacy however is that this is both an outcome of a significant learning experience in the workplace and a critical determinant of good performance at work (Eraut, 1999). A way to break this vicious circle could be to gradually build up the uncertainty employees have to deal with in their job. In other words, people should start to operate in a safe environment where they can develop their competence, and develop their own vision on the job. After this they should be challenged to push back frontiers and be invited to think about policy and decision making and innovation in the organisation. The fact that the scale 'self-efficacy' is so much more significant than 'experience of competence' seems to indicate that self-confidence indeed is fairly specific and related to the ability to perform a specific task. In a way one could also argue that an experience of incompetence (conscious incompetence) though combined with self-confidence is the best catalyst for learning. As Lee (2000)

states in her discussion of the 'learning ladder' "It is very easy to become so immured to the struggle and the need for achievement that one becomes unconsciously competent at 'doing the job'. So much that one no longer takes time to be 'conscious' or aware of why the job is being done in the first place". This can be illustrated by an interview with a software engineer who scored high on the dimensions of critical reflective working behaviour and who stated in a confident way that he was insecure. "Being insecure for me is part of the job, you make many choices under time pressure when you are still not sure about the best solution. I know some colleagues who are never insecure and who sometimes fervently advocate a solution while I can think of ten reasons why to choose for another option."

How This Research Contributes to New Knowledge in HRD

As the transfer of training is a very complex matter, HRD should focus more on how to make use of the informal learning experiences that derive from everyday working life, instead of on formal training. True organisational (double loop) learning can only happen when management and employees work in a critical reflective way. As Franz (1999) states, you can people force to work, but you can not force people to work well. In order to work well, people must be able to (collectively) put up for discussion their day to day work practices. It seems that critical reflection brings together the interests of both employers and employees. The benefits of critical reflection to the employee lie in the critical reflection itself, which gives him a feeling of self-determination, growing personal mastery and which will help him in career development. For the employer, however, it is the economic value of critical reflection that is of importance. Critical reflection is essential for continuous improvement, quality management and innovation - all matters that are vital in order to survive in a competitive economy.

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Author Names	Marianne van Woerkom Wim J. Nijhof A.F.M. Nieuwenhuis
AHRD Reference #	174

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