

EDUCATIONAL ADMINISTRATION QUARTERLY



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Educational Administration Quarterly

VOLUME XXXVII

DECEMBER 2001

NUMBER 5

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EDUCATIONAL ADMINISTRATION QUARTERLY (ISSN 0013-161X) is published five times annually—in February, April, August, October, and December—and distributed by Corwin Press, a Sage Publications company, 2455 Teller Road, Thousand Oaks, CA 91320; telephone (800) 818-SAGE (7243) and (805) 499-9774; fax/order line (805) 375-1700; e-mail info@corwinpress.com; http://www.sagepub.com. Copyright © 2001 by the University Council for Educational Administration. All rights reserved. No portion of the contents may be reproduced in any form without written permission of the publisher.

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Periodicals postage paid at Thousand Oaks, California and additional mailing offices.

This journal is abstracted by the Institute for Scientific Information and in the **Automatic Subject Citation Alert, C.I.J.E (Current Index to Journals in Education), Current Contents/Social & Behavioral Sciences, Educational Administration Abstracts, Education Index, Health Instrument File, Health and Psychosocial Instruments, Human Resources Abstracts, International Bibliography of Book Reviews of Scholarly Literature, International Bibliography of Periodical Literature, JAL Guide to the Professional Literature, Research Alert, Sage Public Administration Abstracts, Sage Urban Studies Abstracts, Social Sciences Citation Index, and Social SciSearch**, and is available on microfilm from University Microfilms, Ann Arbor, Michigan.

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Change of Address: Six weeks' advance notice must be given when notifying of change of address. Please send old address label along with the new address to ensure proper identification. Please specify name of journal. POSTMASTER: Send address changes to: Educational Administration Quarterly, c/o 2455 Teller Road, Thousand Oaks, CA 91320.

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The Dynamics of Group Learning in a Cohort: From Nonlearning to Transformative Learning

Jay Paredes Scribner
Joe F. Donaldson

The instructional cohort is a popular delivery format in educational administration programs. This case study delves into the “black box” of cohort learning by critically examining the relationship between group dynamics and the types of learning that took place among a set of group members within a cohort. This study shows how group dynamics—including group climate, norms, roles, and communication—can foster or impede learning. The study raises concerns about whether a focus on high-performing cohorts or groups necessarily results in meaningful learning for students. With the performance-learning tension in mind, implications and recommendations for instruction and future research are also presented.

Educational administrator preparation programs have been roundly criticized for inadequately preparing aspiring school leaders with the theoretical knowledge base and practical skills needed to survive the demands of school leadership (e.g., Milstein & Kreuger, 1993; Short & Twale, 1994). In response to these pressures, many educational administration programs have sought more effective and authentic models for leadership preparation. Educational cohorts reemerged in the 1990s (Barnett, Basom, Yerkes, & Norris, 2000; Basom, Yerkes, Norris, & Barnett, 1996) as a popular program delivery strategy that catered to nontraditional students by providing clear program structuring and course sequencing, a supportive peer group, and increased

Authors' Note: An earlier draft of this article was presented at the annual conference of the American Educational Research Association, April 2001, Seattle, Washington. The authors would like to thank Lars Björk, the editorial team, and the reviewers for their helpful comments on an earlier draft of this article.

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contact with instructors (Norris & Barnett, 1994; Reynolds & Hebert, 1998; Yerkes, Basom, Norris, & Barnett, 1995). According to the literature on cohort programs in educational leadership, a vast majority of university administrators, faculty, and students have lauded cohort programs as vehicles for influencing student values, increasing student interaction and interdependence (Barnett et al., 2000; Norris & Barnett, 1994), increasing student involvement and integration with the greater university community (Reynolds & Hebert, 1995), and improving critical thinking skills (Reynolds & Hebert, 1998).

Although research shows some support for these positive qualities, current understandings of learning in educational administration cohort programs remain limited in at least two ways. First, existing studies do not directly explore the types of learning that cohort students experience. Instead, research focuses on factors tangential to learning such as students' satisfaction with the social climate of these programs, program completion rates (Reynolds & Hebert, 1995), and faculty perceptions of the strengths and weaknesses of cohort models (e.g., Barnett et al., 2000). And second, current literature fails to adequately explore the role of group dynamics in cohort learning. To begin to address these gaps, we took a case study approach to examine one project team within a cohort. The following questions guided us:

1. How did the group dynamics of a project team within one cohort facilitate or impede learning?
2. Given these factors, what types of learning occurred?

The following pages frame our study conceptually using group dynamics and types of learning literature. We then provide an overview of the study design. In our discussion, we reflect on our findings and then conclude with implications for instructional practices and future research.

RESEARCH ON COHORTS

Existing studies of cohort models in higher education (Barnett et al., 2000; Norris & Barnett, 1994; Reynolds & Hebert, 1998; Twale & Kochan, 2000) have relied heavily on surveys and self-reports from students and faculty that suggest cohorts provide positive affective (e.g., values and attitudes toward learning), cognitive (e.g., logic, analysis, and critical thinking), and transfer (i.e., knowledge utilization) benefits to students. Among these benefits, studies suggested that cohort programs were most effective at producing affective outcomes. For instance, cohort participants and faculty described stronger

feelings of group belonging, confidence, and motivation toward group tasks than their counterparts in noncohort formats (Twale & Kochan, 2000). In another study, faculty described students as more engaged in cooperative learning and more likely to be socialized into the learning environment (Yerkes et al., 1995). Furthermore, Barnett et al. (2000) found that cohort instructors tended to believe that students learned to cooperate, realized the importance of working together and supporting each other, and developed important group processing skills. Other studies reported that cohorts fostered student networking opportunities (e.g., Twale & Kochan, 2000; Wesson, 1996). On the other hand, findings for cognitive and learning transfer outcomes have been mixed. Specifically, Reynolds and Hebert (1998) reported that cohort students achieved higher grades than noncohort students—a tenuous proxy for learning. They also found that cohort students reported transferring learning to other settings to a greater (but not statistically significant) extent than noncohort students. Although informative, these studies stopped short of exploring complex relationships between the social dynamics of the cohort experience and the types of learning that occurred.

GROUP DYNAMICS

Group dynamics can impede or facilitate learning within a group. The major variables of group dynamics most relevant here include climate, group norms, roles, and how these impact problem-solving strategies; and group interaction, communication, and cohesion (Bales, 1970; Frey, Gouran, & Poole, 1999). In addition, the nature of the group task, as well as other contextual factors, influences group dynamics, performance, and outcomes (Hackman, 1990).

Group Climate

Group climate, according to Bales (1970), is determined by the ability of group members to resolve primary and secondary tensions. Most groups experience and resolve primary tensions associated with getting to know each other and developing patterns of work. However, the manner in which groups deal with secondary tensions associated with conflicts in personality, values, and beliefs tends to portend group performance and learning. As Bormann (1975) noted, groups often make preliminary moves to deal with secondary tensions but then retreat in the face of potentially unsettling confrontations emanating from closely held personal values, beliefs, and perspectives. Inherent in secondary tensions is the manner in which group

members agree or disagree. For example, Bales argued that agreement can be used as a social reward doled out to members by other members. More important, what group members agree or disagree on is critical in defining the social and task dimensions of the group. Thus, depending on the degree to which secondary tensions are resolved earlier on, disagreement within the group can either be damaging to group cohesiveness or a sign of group cohesiveness. In their work, Lipman-Blumen and Leavitt (1999) described “hot groups” in which members do not necessarily get along socially or always agree within the task domain. Hot groups do, however, deal with disagreements in ways that do not disrupt cohesiveness or detract from the task; furthermore, hot groups use disagreement as a creative tool for innovative problem solving.

Group Norms

Norms are the least visible but most powerful form of social control within groups (Keyton, 1999). They control interpersonal interactions and communication as well as structure a group’s approach to decision making and problem solving (Hirokawa & Salazar, 1999; Keyton, 1999). Norms develop in several ways—from explicit statements from group leaders, for example, about success in addressing tasks, from precedence-setting critical events, from repetitive behavior patterns, and from group members’ experiences that are imported into the group (Feldman, 1984). Norms can be enforced through humor, needling, and banishment from the group. Furthermore, ongoing norming can be detected in competing norms that arise between members or result from changes in the social and/or task dimensions of the group brought on by environmental changes or crises (e.g., Bormann, 1975).

Although norms may take the form of explicit rules that govern interaction and behavior, implicit, informal norms tend to more strongly direct interpersonal behavior in groups (Keyton, 1999). Norms play critical roles in how groups deal with primary and secondary tensions, for instance, during the early stages of group formation or times of stress. Group norms that enable groups to successfully address secondary tensions and maintain task orientation tend to lead to increased group cohesion.

Norms also play an important role in determining how problems are approached and solved and how group communication occurs. Norms contribute to the structures—implicit and explicit rules and conventions—that both enable and constrain future group interaction and performance. As such, they govern member interactions and resource use in the processes of problem definition (Hirokawa & Salazar, 1999). Some of these norms—for example, those related to coordination of work—are developed through group

interaction. Others that lead to tacit precoordination are derived from “task scripts that were shared among members before [group] interaction” (Wittenbaum, Vaughan, & Stasser, 1998, p. 179). Norms and rules have been shown to become matters of habit (i.e., conventions) that promote or inhibit group decision making and problem solving (Hirokawa & Salazar, 1999). They, for example, may lead the group to employ rational rather than political strategies to address issues (Senge, 1990). Or, norms that reinforce cohesion and agreement may suppress critical inquiry, negatively impacting problem-solving performance (Hirokawa & Salazar, 1999). Put differently, Schein (1992) argued that norms help the group maintain its culture. The danger, of course, lies with norms that double as defensive routines and, therefore, inhibit the group from wrestling with “ideas in the making”; that is, taking an original idea and modifying, accepting, or rejecting it (Bormann, 1975, p. 289). Typically, problem solving revolves around the introduction of an idea by an individual or coalition with subsequent testing of the idea. The degree to which the group is able to explore the idea or problem is directly related to the group’s ability to handle secondary tensions. When secondary tensions become too much, groups often employ defensive routines in which they find easy areas of agreement at the expense of solving the problem. Related to problem solving, group norms also guide communication. Group norms often restrict communication between members by limiting individual participation through several strategies, including role assignments and coalitions. Again, groups that are more cohesive tend to have stronger and more inclusive communication networks that lead to increased group performance (Lipman-Blumen & Leavitt, 1999).

Roles

Two viewpoints have guided much research on roles within small groups. The first viewpoint conceives of roles as expectations about the behavior of group members (Salazar, 1996). Bormann (1990) defined role as “that set of perceptions and expectations shared by the [group] members about the behavior of an individual in both the task and social dimensions of group interaction” (p. 161). When the focal person shares these expectations, the person is said to have a role in the group (Bormann, 1990). Although these expectations can evolve during the course of the group’s work and development, they may also be transferred from experience with the person outside the group or as a result of stereotyping owing to a variety of traits (e.g., gender, age) of the focal person. Research has demonstrated that prior beliefs and expectancies about a target individual are self-fulfilling—the focal person’s

behavior tends to confirm other group members' original expectations (Hare, Blumberg, Davies, & Kent, 1994, p. 183).

The second viewpoint focuses on the dynamic nature of role formation and development within the context in which the group is functioning. From this perspective, role behavior is enacted by individuals in response to (a) interactions within the group and (b) particular contextual factors (e.g., type of group task, timelines, established and developing norms, previous interactions among group members, available resources). This viewpoint also holds that the enactment of roles is based on modal characteristics and preferences of the person performing the role (Biddle, 1979; Salazar, 1996). The context of group work is particularly important because it can influence individual and group behaviors in ways that affect group performance (Bormann, 1975). From this perspective, persons become positioned in "role space" through interaction among members that defines the role as well as the nature of the role's relationship with the roles of other members. In addition, role performance of individuals tends to focus either on task or on maintenance (group-building) dimensions of group work. Norms and other structures of the group inform members about what behavior is acceptable and appropriate. Deviation from appropriate role behaviors results in sanctions, whereas performance of expected behaviors is reinforced (Salazar, 1996).

Contextual Factors

Hackman (1990) has noted that not all work groups are alike. Although they have features in common (such as norms and roles addressed above), the nature of the group, its task, and other contextual factors (e.g., support, training, time to complete task) also influence group performance and effectiveness. Within cohort programs, either subcohorts and/or project teams are frequently used to support cooperative and collaborative approaches to learning (Bruffee, 1999; Johnson & Johnson, 1998). These groups are most like task groups as defined by Hackman (1990) and Wittenbaum et al. (1998). As such, they have in common the completion of tasks (usually guided by instructor directives) within predefined and limited constraints of time. The tasks are usually employed to help the group learn about team development and work as well as particular subject-matter content (see the description of project team focus, below). Hackman has found that time limits and deadlines are powerful organizing forces for these kinds of groups. Wittenbaum et al. noted that time pressures induce groups to move directly to task execution at the expense of taking time to plan, brainstorm, and attend to group support and maintenance functions (including defining members' roles and status).

In a study of short-term project teams in a graduate business program, Druskat and Kayes (2000) explored the impact of time, relational-oriented processes, and task-oriented processes on team performance and learning. They found that team learning appeared to be less related to performance in short-term teams than in long-term teams, owing to short-term teams' focus on efficiency in the accomplishment of the group's assigned task at the expense of knowledge sharing and reflection—which would support team and individual learning. Druskat and Kayes recommended increased attention on interpersonal understanding and problem-solving proactivity (anticipating problems) as ways to improve performance and learning simultaneously. From a related perspective, Hackman (1998) has drawn attention to the importance of external organizational support (e.g., training, empowerment, resource support) rather than a focus on internal group processes as a means for organizations and other social systems to contribute to improved work group effectiveness.

TYPES OF LEARNING

In this study, learning is conceptualized as the various types of possible responses to experience, including nonlearning, nonreflective learning, reflective learning, and transformative or critically reflective learning (Jarvis, 1987, 1997; Mezirow and Associates, 1990). Nonlearning occurs when that which is presented to or experienced by learners fails to influence their understanding of a particular topic, issue, or situation. The reasons for nonlearning include a presumption that that which has been learned in the past has served quite nicely and, thus, requires no need to change one's view; the learner failed to recognize the learning opportunity; or the learner consciously rejected the experience. Nonreflective learning occurs through daily experience in which knowledge gained through physical or technical skill acquisition or rote memorization remains tacit. The manner in which nonreflective learning occurs often happens incidentally (Marsick & Watkins, 1990), through repetition, imitation, or memorization.

Reflective learning is typically associated with the realities of life and occurs through contemplation, reflective skills, and experimental learning (Dewey, 1938; see also Bormann, 1975; Bredeson, 1991; Mezirow, 1990). Inherent in this type of learning is a logical and overtly scientific approach to problem solving, including (a) analysis of the problem, (b) listing the possible solutions, (c) weighing the alternative solutions, (d) selecting the best solution, and (e) taking steps to implement the solution (Bormann, 1975).

Although a useful practice to make sense of past and present experiences, this notion of reflection focuses primarily on performance enhancement.

Although learning to perform effectively is important, reflective learning does not address either the merit of the problem or the consequences of problems not addressed. Mezirow's (1990) notion of transformative learning moves beyond reflection for sake of performance enhancement into *critical* reflection. Mezirow argued that transformative learning "focuses more on understanding the nature of . . . meaning perspectives and how they can be changed to allow new possibilities for realizing meaning and values" (p. xvi). As cognitive learning theory suggests, the creation of meaning comes from individuals' experiences in their personal and professional lives. These accumulated experiences are constructed into what Mezirow referred to as meaning schemes, or implicit rules by which we make sense of our experiences. Meaning perspectives, on the other hand, are "higher order schemata, theories, propositions, [or] beliefs" that form a structure of assumptions and criteria individuals use to judge, evaluate and understand experiences (p. 2). Thus, meaning schemes and perspectives shape how we perceive, comprehend, and remember experiences. The importance of penetrating these meaning perspectives is how Mezirow differentiated between reflective learning for performance enhancement and higher level critical reflection. Although it is important, focusing on enhancing performance tends *not* to lift learners out of the "hot action" (Eraut, 1994) of their work to help interrogate fundamental presuppositions of the way things are. Thus, through critical reflection, the learner is able to challenge his or her own assumptions obtained in prior learning and critically examine the premises on which problems are posed or defined in the first place, thereby *transforming* one's meaning perspectives into new, more inclusive territory.

CASE STUDY BACKGROUND

In 1997, the University of Missouri–Columbia led the formation of a statewide Ed.D. program for educational leaders. In addition to traditional standards for admittance into the program, students were also required to hold leadership positions in education (K-16) or other fields (e.g., not-for-profit and health sectors). The program was organized statewide through a collaboration between the University of Missouri and five state universities. Thus, whereas the doctoral degree pursued by students would be conferred by the University of Missouri–Columbia, students participated in subcohorts at their regional universities during 2 years. As Figure 1 shows, during two consecutive summer sessions, the subcohorts formed a statewide cohort through

their participation in an intensive, in-residence, and 4-week summer learning experience at the University of Missouri–Columbia campus. Each summer session began in May with a day-long cohort meeting where organizational issues were addressed and coursework was initiated. In addition, at these May meetings, students were asked to form project teams of 5 to 8 students, in which they would work to complete portions of the summer course requirements. Students' summer course work continued in June in their respective subcohorts as they completed assignments prior to beginning the in-residence portion of the summer program. During July, all subcohorts formed a statewide cohort at the University of Missouri in which they worked with a team of instructors.

The summer session was team taught by three instructors from the University of Missouri and two instructors from the state universities. Each instructor was assigned two project teams to guide throughout the session. One of the researchers was an instructor during the second summer session and was assigned to the project team examined in this study. The other researcher was not involved in the second summer session but had taught in the first summer session. The course content during the second summer session focused on educational policy and qualitative research. Although instructional strategies varied, the major learning experience engaged each project team in a policy study using qualitative research methods. The case study project team examined the impact of Missouri's latest educational reform legislation (MO Senate Bill 380) on local district policy in four public school districts from the perceptions of four superintendents. Pedagogical approaches varied during July and included lecture, structured small group activities, and the group inquiry project. Approximately two thirds of instructional time was spent in project team work that included time spent with the team's instructor. Students worked during formal class hours (i.e., 8:00 a.m. to 5:00 p.m. Monday through Thursday) and informally after class and on weekends.

METHOD

To thoroughly explore the relationship between group dynamics and types of learning in a cohort group, we chose a case study design (Yin, 1994) that focused on one project team within the statewide cohort. As others have noted (e.g., Twale & Kochan, 2000; Wesson, 1996) the interpersonal relationships and evidence of positive effects of cohorts tend to evolve throughout the program as students establish and build tighter bonds. Thus, to best address our research questions, we began our exploration at the program's midpoint and after the cohort effect had time to develop.

<i>First Summer Statewide Cohort</i>	<i>First Fall Subcohorts</i>	<i>First Spring Subcohorts</i>	<i>Second Summer Statewide Cohort</i>	<i>Second Fall Subcohorts</i>	<i>Second Spring Subcohorts</i>	<i>Third Summer Statewide Cohort</i>	<i>Post- coursework</i>
Organizational analysis (4), proseminar (3), inquiry (2)	Educational leadership (3), application of leadership (1)	Quantitative methods (3), inquiry (1)	Educational policy (4), qualitative research (3), proseminar (2)	Content and context of learning (3), group dynamics (1)	Program planning and evaluation (3), inquiry (1)	Comprehensive examinations	Dissertation/ research (12 hour minimum)

Figure 1: Cohort Curriculum Sequence and Content Themes

NOTE: Credit hours appear in parentheses.

Selection

At the initial May meeting of the entire cohort ($N = 59$), we asked students to form groups of 5 to 8 with any of their peers. Students were encouraged to work with others from around the state. Of eight project teams that formed, the team that was the focus of this study was selected for three primary reasons. First, we believed this team provided the best opportunity to observe a cohort effect because the team fully represented one regional subcohort with no student representation from other subcohorts. In effect, we studied a cohort within a cohort that had been working together for 1 year and would be working together for another. Thus, the team had both a history and future as a subcohort. Second, the team was selected because it was willing to submit to being studied in-depth during the summer session. And third, the team offered the best opportunity within the entire cohort to observe a diverse group across several dimensions. For example, the group consisted of 7 students—4 males and 3 females. Group members represented various leadership positions. Barbara (all names are pseudonyms) was an assistant superintendent, Daisy was an elementary school principal, Rebecca was an elementary school principal, Steve was an assistant principal of a middle school, John was an elementary school principal, Mark was the assistant registrar at the regional state university, and Randy was a middle school principal but was transitioning to an assistant superintendent position that summer. Thus, the group consisted of 6 members from the K-12 sector and 1 from higher education. In addition, Daisy, Rebecca, and Steve all worked in the same district. The only person of color was a female Asian American. Finally, the group's experience as educators ranged from 8 to 25 years.

Data Collection

We explored learning in the team via observations, one focus group interview, individual interviews, and document analysis. These strategies were implemented sequentially to heighten our sensitivity to the phenomena of interest and increase the potential for collecting pertinent data throughout the process. Approximately 35 hours of structured team activities assigned by instructors (including but not limited to the inquiry project) were collected using video-recording equipment. These videotaped work sessions represented nearly 100% of formal group work. In addition, approximately 25 hours of audio recordings representing group work outside the realm of official team class time were also collected. All video and audio recordings during formal class hours were conducted and monitored by a graduate assistant.

Our preliminary analysis of observation data informed the development of interview questions. To allow students time to assimilate the intense summer experience, the focus group and individual interviews were conducted 2 and 3 months, respectively, after the summer course concluded. The focus group interview was semistructured, open-ended, and conducted by both researchers with all 7 members of the group (see Appendix A). The focus group interview lasted 2½ hours. Individual interviews probed issues that were discovered, or not fully addressed, during the focus group interview (see Appendix B). For instance, individual interviews explored in more depth how the experience influenced each member's behaviors, how it affected the quality of each member's learning experience, how each member perceived his or her own impact on group functioning and learning, and the extent to which what was learned informed one's practice. For consistency, one researcher conducted individual interviews. Interviews were semistructured and open ended and lasted from 45 minutes to 1½ hours. Interviews and observations were transcribed verbatim. Finally, a detailed archive of student artifacts (more than 150 pages of student group work and final products) were collected to provide further evidence of the focus, development, and nature of student learning.

Data Analysis

As described above, data analysis was ongoing through each stage of data collection. As described by Strauss and Corbin (1990), we used the strategies of open and axial coding to analyze data from observations, interviews, and archives of the group's work. During open coding, data were analyzed for patterns and themes informed by our theoretic lenses. To foster discoveries in our data, we did not limit our beginning categories to solely those found in the literature. On completion of each stage of data collection, we analyzed data separately, developing themes and questions for follow-up in subsequent data collection efforts. At each stage of analysis, we compared our themes and when necessary honed, changed, or eliminated them. For example, we each discovered different group norms that affected learning and thus strengthened that category of findings. Through our discussions, we also honed our category on types of learning by more clearly defining which data reflected what types of learning. Where our coding varied, we discussed issues until agreement of the relevance or irrelevance of the data was reached. We also discussed codes whose labels were similar to ensure that our definitions of the labels were congruent. Finally, to further bolster the trustworthiness of our findings and interpretations (Glesne & Peshkin, 1992), we asked

the group members to read and react to our article. Each participant stated that our interpretations of the data accurately reflected his or her experience.

FINDINGS

The types of learning that took place within this project team were varied and complex. To simplify this complexity, we present our findings according to two primary themes: the nature of group dynamics within the project team and the types of learning that occurred. In the Discussion, we further explore the relationships between these two categories.

Factors That Influenced Learning

Group Climate

Data suggest that group climate influenced the types of learning that took place by laying the foundation for the nature of group performance. Primary tensions were easily overcome because group members knew each other well through close professional working relationships and previous cohort experience. In fact, their prior acquaintance and close geographic proximity to each other led this project team to form. Secondary tensions were not so easily overcome. That is, several members described how their involvement in the team was constrained at various times throughout the summer as a result of secondary tensions. These constraints included conflicts rooted in differences in gender, age and experience, and professional relationships with one another outside the cohort. Concerning the role of gender, one female group member stated:

There was a gender issue, a power struggle, trying to prove that people were more capable than others. . . . I felt like that ladies were very candid and the men were, well, I think we got more involved in the group than they really did. . . . If you recall in the focus group, we never let go of [the summer experience] like the men did.

A male student described his feelings of at times being marginalized because of a perceived lack of experience. His comment occurred during the focus group in response to one of the women's referring to him as "the young man":

"The young man." I've dealt with that for awhile. . . . Not in a bad way, but I've noticed it as an administrator and I've noticed it here. There are certain things

about being young, or new, or inexperienced that cause the situation to be a little bit different. . . . In the group I'm "the kid." "What's he doing telling me when he's the kid?" And so, I think that's something that played out that never has really been brought out in any way.

Reflecting how professional relations outside the cohort may have affected group dynamics, a female group member stated, "There were many times when we didn't want to step on toes, but in the end we did just that." Another member of the group put it this way:

If we were a team that really didn't know each other and didn't work with each other . . . it would have been different. We're all intertwined in one way or another, through school, with family, or whatever. So I think it was a little harder [to take risks] sometimes.

Unresolved secondary tensions such as these led to numerous defensive routines, some of which manifested themselves as group norms discussed below. For instance, to the casual observer, group cohesiveness appeared high as reflected in the group's high task orientation. However, the social structuring of the group (i.e., how people perceive and relate to each other) did not develop to the point at which secondary tensions could be addressed openly. Instead, the group's social structure was defined by underlying social tensions such as feelings of insecurity regarding one's expertise relative to others, a reluctance to take intellectual risks, and an unwillingness to challenge the substantive ideas of others.

Observations revealed that the group's single-mindedness toward the task at hand—its task orientation—was a defensive routine that minimized potential conflicts over substantive issues and ideas. For instance, the group spent hours discussing minute details of editing and much less time discussing and debating issues pertaining to the substance of the policy study or qualitative analysis. In one such episode (which had lingering effects on the group's cohesiveness), two group members refused, to the dismay of others, to allow data into the policy study that might have shown their superintendent in a poor light. Rather than struggle with the ideas and concepts facing them, the group moved past the argument without resolving its tensions. The following comments capture this tension:

There was a part of our paper that you all said was "rich thick description," but because it was a poor reflection on one of the administrators—this particular administrator is interested in everything that is done about him—two group members were concerned that he would read this and not like the way it reflected him. Two of us were adamant that we keep the description in the paper.

Another student elaborated on the situation:

They didn't want us to use a certain piece of data from their superintendent because maybe we interpreted it wrong. You know, maybe he said something he really didn't mean to say. We put most of the stuff in, but if we really disagreed or thought that someone's boss might read it, we left it out. We compromised a lot like this. It affected how we processed as a group.

These comments exemplified how professional relations outside of class influenced group functioning. In this case, concern over making a superior look bad in the study caused some students to filter data that others thought was useful and, thus, created underlying tensions among group members.

Group Norms

Unresolved secondary tensions inherent in the group climate led to the emergence of several norms and defensive routines to maintain those norms. Consistent with other cohort literature, one norm of this group was a commitment to seeing all members successfully complete the program. However, this norm fostered other norms that affected learning. For instance, the group placed a high degree of emphasis on getting the project done. The high task orientation served as a strategy to suppress and limit critical conversations that could cause unresolved secondary tensions to reemerge. As a result, the group continually steered away from consideration of theoretical issues and ethical dilemmas inherent in its study. A group member explained:

The group was like an amoeba. We'd be working on the project and then once we got to a point where we knew we were going to butt heads, we would dissolve into groups and do specific tasks such as go to the library and do some research.

As the comment suggests, the group temporarily disbanded when disagreements became too intense. Observations also suggested that the group often disbanded into dyads or individuals who then focused on assigned or assumed roles (discussed below). In short, the group clung to its goal of assignment completion as opposed to the time-consuming task of struggling with ideas.

A third norm was to maintain a leaderless group. However, in interviews, students described how members continually jockeyed for position and status within the group. For instance, during the focus group interview, members acknowledged how difficult it was *not* to be a leader given their positions as educational leaders in their communities. One student put it this way:

We're all very competitive and we're all used to deciding things on our own. . . . Now that we finished the product we are back to our old selves. But we're so goal oriented and achievement oriented that we wanted to achieve the perfect document, but the vision of perfection differs from individual to individual.

Several of the members revisited this espoused norm during their individual interviews. A female group member reflected on her personal experience with the espoused versus actual norms regarding group leadership:

Another member wanted to be the group leader, and I didn't want to be the group leader at all. But I found myself always butting heads with him. . . . I guess, now that I think about it, I wanted to be the leader too.

These comments reflect the tension that occurred when educational leaders who have been socialized to be decision makers and leaders on the job are suddenly thrust into a collaborative assignment among equals.

Given the group's inability to effectively resolve secondary tensions, it comes as little surprise that avoiding conflict was also a norm that governed group work. This norm seemed to stem from several factors inherent in this group's social structuring. First was the acknowledgment that each member was an educational expert. Second was the fact that to keep the group together and successfully complete the assignment, each member's feelings had to be protected. As one member put it, "I think that [3 other members] just didn't assert themselves because they just wanted to move along." The norm of conflict avoidance also kept the group from taking intellectual risks, taking the time to thoroughly explore alternate ideas, and challenging each other's ideas. Ironically, this norm did not eliminate conflicts. But it did limit them to one kind—conflicts (and they were often) over low-risk issues. One member stated:

Steve and I established the overall global concepts of what we were doing. But he and I butted heads at times because he would get so caught up in some minute detail that would change the flavor of where we were headed. So the group would talk about it, he'd get tense, and then we would just break for lunch or into small groups, do other things, and never resolve it.

Another manifestation of group norms surrounding the avoidance of conflict related to the emergence of the meaning of *individual contribution* within the group context. Through observations of group interactions, it was revealed that to contribute meant that one's ideas had to be used and incorporated into the final product. This norm led to constant tension and difficulty

when considering individual members' ideas because to reject someone's idea meant that that person had not contributed according to implicit group rules. However, one group member, whose behavior was at times construed by others as an impediment to project completion, explained his actions this way:

I wanted us to think. . . . That's how I approached the whole situation. I'm not going to let anybody get under my skin because I'm not into petty differences, and I want to get the job done but when the job is done, I want it to be something where people say, that is something I had not thought about before. And that's basically my job is I want to get outside the box and think about things that people had not thought about before.

Group Roles

Understanding how roles were assumed and assigned had important implications for understanding the types of learning that ultimately occurred and, more important, the distribution of that learning across the group. Data suggest that in some cases roles were assigned according to members' preconceived notions of each others' strengths. These biases stemmed from the group's history together in and out of the cohort program. One group member described the roles this way:

Barbara was the gatekeeper; she's the one that kept us on track, kept us focused. She was the main person as far as editing, that was her central role. Daisy likes things orderly. She kept us advised of what we already accomplished and what needed to be done. I saw myself as the process consultant. . . . I concentrated on maintaining the right atmosphere in the group. Steve did a lot of the writing up. Randy also did a lot of writing and he would scan other groups to see how we were doing relative to them. John was our alternative perspective advocate. He tried to get us to examine alternative perspectives. Rebecca was our generalist. We had all the pieces, we were organized functionally.

Although the above comment accurately describes the roles taken, it belies the fact that in some cases the roles were only grudgingly accepted. Furthermore, role rigidity limited some students' breadth of experience and exposure to learning opportunities. One member stated, "Steve and Randy had decided to give assignments so we could move on with the paper and he did not give Daisy an assignment she was worthy of." Finally, the high degree of task orientation caused the group to assign roles to ensure completion of the group project and not necessarily to provide a broad learning experience. One student confirmed this: "I probably did not get the full flavor of policy and

research out of this because my role did not cause me to conduct any of the interviews.”

Communication and Problem Solving

Arguably, a group’s ability to communicate and capacity to problem-solve predicts the quality of learning that ultimately occurs. This case study illustrates how certain aspects of group dynamics can hamper communication and problem-solving processes and, thus, influence the types of learning that occur. The strong network of professional relationships, for instance, constrained open communication as members brought to the cohort political sensitivities of their workplaces and preconceived notions of their peers’ personalities, strengths, and weaknesses. Therefore, as described above, most members were hesitant to take intellectual risks by offering critical thoughts or to openly challenge their colleagues’ substantive ideas. In either case, communication and thus the potential for problem identification and solving were curtailed. To illustrate this point, interviews and observations confirmed our hunches that the focus on technical issues (e.g., editing and logistics) was a defensive routine to avoid challenging others’ substantive ideas. One member put it this way:

We didn’t confront each other very much. Last summer I could leave the group and not have to continue to work with them. But this summer we knew we still had to work another year together on coursework, and we still have to depend on each other [to finish]. It’s really funny, you look at this group and it’s like a family, maybe a dysfunctional family.

Finally, we would be remiss if we did not consider the possibility that the study itself may have contributed to the group’s communication difficulties. The following exchange in the focus group interview illustrated this possibility:

Barbara: I think [being studied] affected us. . . . I felt like the [other groups] were seeing us as supposed to be the lead group, the “chosen” group.

Daisy: I think it put pressure on us that we wanted to be the star group in front of the other people. Because we put that pressure on ourselves that we better do really well.

Barbara: And we made a special effort to talk to other groups so they wouldn’t think we were elitist.

Steve: So I think that we all had that stress, but we dealt with it differently.

So far, we have shown how group dynamics can create obstacles to learning. However, as our prior discussion of learning suggested and the following section will show, learning is complex, and in spite of the challenges faced by the group, much learning did occur.

Types of Learning Acquired

We turn our attention to the types of learning that occurred in the group—that is, nonlearning, nonreflective learning, reflective learning, and critically reflective or transformative learning. Our findings are interesting to compare with extant literature that suggests that cohorts most strongly address affective outcomes. This study helps explain why this might be the case and how other learning outcomes may be equally important but less evident.

Nonlearning

Nonlearning took place to a limited degree, especially with respect to the development of qualitative research skills. Primarily evidenced through observations and analysis of student archives, it was apparent that students developed skills required to conduct qualitative research (e.g., skills needed to conduct interviews, analyze data, and write up findings). However, the acquisition of this how-to knowledge was not always distributed evenly across the group. As described earlier, this uneven distribution was largely due to the assigned and assumed roles within the group that often pigeonholed students into certain tasks. For instance, the team's archives supported the fact that students were charged with certain tasks that often did not allow them to participate in other activities that would lead to different learning experiences. For example, Barbara and Daisy conducted most of the data analysis, whereas Randy and Steve were charged with developing the initial report drafts. Thus, the data strongly support that a high task orientation and commitment to getting the job done led to a differentiation of labor that was probably not conducive to gaining full exposure to qualitative research.

Nonreflective Learning

The preponderance of learning we observed was nonreflective. A strong case can be made that nonreflective learning was the result of established norms as well as unresolved secondary tensions that stemmed from, for instance, professional relations within the group and many of the group mem-

bers' emotional "closeness" to the topic of study. As a result, we observed and explored in interviews how the group occasionally failed to thoroughly analyze the data collected. Members' closeness often left them unable or unwilling to examine their own assumptions related to the education policy under study. One student described how difficult it was for her to see the data in a different light:

I've been in public schools a long time, and I was in a position where I'd really worked with school finance issues. Barbara and I both had coded all the interviews, so we were very in tune to those interviews and what people had said and we could plot those, plug them into where they needed to be plugged into the material itself. . . . But I was stubborn with this group because I felt so strongly about the issue. Maybe if I didn't know it and I didn't have so much interest in it, I would have been more yielding.

In addition, as a result of tensions rooted in external professional relationships, students who worked in neighboring districts (that fared differently under legislation) were unwilling to flesh out complex political issues and, thus, short-circuited learning opportunities that could have led to reflective and critically reflective learning experiences.

A final example reflects the relationship between the group's high task orientation and nonreflective learning. In one case, all groups were asked to discuss the role of theory in policy research. Data suggested that after a strong beginning to an insightful dialogue, the discussion shifted to more concrete, task-oriented issues. When we queried the group about this behavior, one student stated, "Well I'm thinking it wasn't relevant to what we had to do; we were so task oriented that we just didn't get back to it."

Reflective Learning

In spite of these shortcomings, data showed that reflective learning did occur sometimes—especially by two team members. These two students engaged in reflective learning as they contemplated and reevaluated their own understanding of the policy under investigation. Through that contemplation, they realized that the complexity of the issue far exceeded their previous expert understandings. Their engagement in reflective learning also caused others to consider alternative views regarding the policy under study. One of these students described the group's perspective:

We entered into this project with a definite slant. A negative slant that said that the policy negatively affected districts, but after we got into it, we realized that

we're just not the only districts in the world; there are other districts that have benefited from this.

In addition, these two individuals' ability to sustain their level of reflective learning was due in large part to the group roles they took on. John took the role of devil's advocate as he challenged his peers' ideas and suggested alternative explanations for many of the concepts developed by the group. Mike described John's role:

John was on the outer edge for us, he was able to see more abstractly than any of the rest of us because he always came at it from a different point of view and many times his comments would make us stop and think because it was something that was not always common sense. I think that helped the group.

Thus, in spite of the group members' high task orientation, John's participation helped them engage in reflective learning more than they might have in his absence. On the other hand, Mike's reflective thinking emanated from his "outsider" status. As the only higher education person in the group, he had an ability to question the assumptions of the other members. Through his own reflective thinking, he was able to cause others to assess their own knowledge against findings that emerged from the data. Another student commented that

He was good for the group because we would start throwing out K-12 things that we thought everybody should understand and he'd go, "Whoa, wait a minute, what are you talking about." And then we would realize that the educational jargon that we use everyday isn't comprehended by everybody.

Finally, Figure 2, a memo to the group's facilitating instructor, provided further evidence that the group was expanding its knowledge base regarding a topic for which 6 of the 7 in the group had considered themselves to be experts. For instance, their in-depth exploration with four superintendents revealed a complexity surrounding the legislation's impact on district policy that they had not expected. Furthermore, through the research experience, the group was able to clarify some of the more technical implications the policy had for school district financing. It is interesting to add that Figure 2 also reveals the group's concern regarding performance and adherence to the grading guidelines.

Transformative Learning

As a result of the research process, we discovered that transformative learning—the type of learning that changes people's meaning perspectives—

MEMORANDUM

To: [Instructor]
From: [Barbara, John, Mark, Randy, Rebecca, Daisy, and Steve]
Date: July 15
Re: Analysis Reflections

You have had an opportunity to review the initial coding categories that we developed for the interview information. When we read the interviews for the first time, we discovered seven major themes that the remarks of the superintendents produced: finance/funding, MSIP requirements, optional programs, history, definitions of policy and SB 380, areas of impact, and suggested implications. We particularly noticed how these themes, especially finance/funding and Missouri School Improvement Program requirements, were reiterated in several of the five interview questions. When we color coded the comments within the transcripts and transcribed them to a coding-category chart, the commonalities and exceptionalities became even more evident. This process may have benefited the more visual learners in our group, but the exercise did help us become even more familiar with the details of the transcripts and directed us to ask for more information from our superintendents. For example, we wanted to know why one superintendent wanted to be hold harmless and where he got his information on the wealth ranking of Missouri. We also needed to clarify what the one percent expenditure for professional development is based on- state aid or budget amount. We think the actual formula is one percent of one percent.

We are wondering if we need to include a reference to the process of coding categories in the paper. Do the points in the scoring guide apply to the evidence of the process found within the archives and/or to a description within the methodology section? If we are to include dialogue about the coding categories, do we include comments to cover all the points in the scoring guide?

Again, we thank you for facilitating our progress in this arduous task.

Figure 2: Memo to Instructor

did occur, especially surrounding issues of the utility of qualitative research and team members' self-perceptions as leaders. In retrospect, it was not surprising that transformative learning occurrences were not discovered until our focus-group and individual interviews were completed.

The lapse in time between the summer experience and interviews provided time for students to critically reflect on the topics covered and group dynamics that occurred during the summer session. This approach to data collection allowed us to discover where and how critically reflective learning took place. Most of the students described the intense nature of the experience as an authentic learning experience that caused them to see and understand (a) how their own personalities affected group dynamics and (b) the dis-

sonance between their previous perceptions of themselves as school/district leaders and their actual behavior. Each student in the group described how his or her understanding of group dynamics and complicity in the group's accomplishments and stumblings had led to a reevaluation of herself or himself as a professional and particularly as a school leader. A critical finding of this study was how students described changes in their beliefs regarding how they should work with and lead groups of teachers, parents, and other education stakeholders. In essence, their experience in the summer cohort illustrated to them the discrepancy between their self-perceptions and espoused values and how their actions may really be perceived by others. We would argue that the intense cohort experience enabled students to gain knowledge and understanding of their own personal strengths and weaknesses as individuals and professionals. These understandings increased their awareness of group dynamics and their role in that process. For example, several students described how the intensity of the summer experience acted as a mirror reflecting their own shortcomings in interpersonal skills. For example, during the focus-group interview, one student explained her learning this way:

Dealing with the affective is not something we have done [prior to this experience]. It's like the learning was reversed; individually we could deal with the content knowledge, but we really had to assimilate and deal with the affective domain of dealing with each other and questioning ourselves.

Another student added, "You learn a lot about yourself and about [how you] cause others to be irritated and about yourself getting irritated. You focus more on that than the main product." Finally, a female student captured the transformative nature of her learning as a result of the summer cohort experience and as it related to her own approach to school leadership:

Overall, I learned more working in a group than I would have by myself. . . . It adds another dimension that as an administrator in public education is helpful because most of what you do . . . is done in groups. So I think that kind of learning has assisted me and made me a better principal.

To the question, "What did you take from this experience to your work?" she answered,

With my faculty, I think it brings an awareness. I watch faces more, I listen more, you watch pairings. You have a tendency to have faculty that are always talking, those that sit back, listen, and not contribute as much because of the overpowering ones. I am aware of that now.

Several students also transformed beliefs regarding the utility of various types of data in their day-to-day practice. For instance, most of the students resisted believing in the utility of qualitative data; some even felt insulted that they were required to take a qualitative research class. But as a result of the course, most of the students came to value the important role of inquiry—informed by either quantitative or qualitative data—in their professional practice, not merely as a means to finish a doctoral thesis. As this student's comment suggested, the group came to recognize the strengths of qualitative research:

I don't think any of us are dead set against qualitative research anymore. I'm not saying that it would be the research of choice for all of us, but there was a lot of apprehension there that we were being forced to do something that we just didn't believe in. We didn't have enough of a knowledge base probably to make that judgment.

Another student described his reluctant appreciation for qualitative research:

I wouldn't do qualitative research if you paid me. But having said that . . . I do think I have an appreciation for it and I do understand what I did. And I don't have a bias against qualitative research that I would have had.

DISCUSSION AND CONCLUSIONS

Although narrow in focus, the depth of exploration in this study begins to address Barnett et al.'s (2000) call for a better understanding of cohort student learning in educational leadership programs. By using group dynamics and learning lenses, this study helped to explain how learning can occur in its various forms within a cohort group; and it suggested that because of the intensity of social relations within the cohort, some learning outcomes may be overshadowed by the affective learning that takes place. In short, the study showed how the dynamic of a cohort group must be attended to in order to ensure that learning experiences for all cohort students are maximized and that, where appropriate, learning occurs in reflective and critically reflective ways. Finally, the study served as a reminder that performance and learning, although not mutually exclusive, are not synonymous. That is, groups that perform well as measured by a high task orientation and product completion do not necessarily learn most effectively. And groups that may learn in critically reflective ways may not complete course requirements in the traditional sense. In this section, we briefly discuss why we believe this to be the case

based on this study, then turn our attention to the implications for practice and research.

Learning Context and Group Dynamics

Clearly, the nature of learning within this subcohort was dependent on aspects of group dynamics. Perhaps the most fundamental impact on group dynamics and learning, however, was the context of the learning experience itself—a context, we gather, that is not unlike many other cohort programs. As Hackman (1990) and Wittenbaum et al. (1998) described, contexts within which groups work vary across time and space, and each set of contextual factors influences group dynamics differently. In this case study, contextual factors such as session time constraints, an intensive in-residence program, individual and group work deadlines, grading rubrics, and a select group of students (i.e., educational leaders) all influenced how group dynamics played out.

Above all, when examined according to the aspects of group dynamics reviewed earlier, the project team acted as a task group (Hackman, 1990) oriented toward task completion. This performance, as opposed to learning orientation, made it difficult for the group to use valuable time to resolve tensions brewing around such issues as gender-based differences in approach to the work, perceived bias based on experience level, and workplace politics brought into the group from the outside.

Furthermore, these contextual factors influenced the explicit and implicit norms that guided the group's work. Because of time constraints, norms emerged that acted to maintain performance and task completion. Specifically, norms that guided individual behavior were set early and ensured that individuals knew their specific expectations from the group. However, as predicted in the literature (e.g., Schein, 1992), norms often conflicted, which raised tensions among group members. For instance, explicit norms such as maintaining a leaderless group or including one's ideas as tantamount to contributing conflicted with the implicit norm of conflict avoidance. Thus, ironically, the group experienced tension and conflict just below the surface without ever addressing it effectively.

The students' professional experiences and personal biases external to the cohort also influenced the group's dynamic. As theory would predict, individual roles were often assigned based on preconceived notions of individuals and/or prior professional experience with other members in the group. Time constraints, deadlines, and a desire to perform well further solidified rigid role assignments. Specifically, each member held preconceived beliefs

about the relative strengths pertaining to such issues as critical thinking skills, writing and editing skills, professional knowledge of the project's focus, and so on. These preconceived beliefs, along with norms that focused attention away from debate of conceptual issues, pigeonholed students at times into roles that limited the breadth and nature of their learning. As a result, group climate, norms, and roles influenced the nature of group communication, the ability of the group to problem-solve, and ultimately how and what individuals learned within the group.

(Non)Learning and Group Dynamics

As our findings demonstrated, these dynamics influenced how and what was learned. Nonlearning certainly occurred as a result of rigid role assignments. For example, skill building in data collection, analysis, and report writing was not evenly distributed across the group. On the other hand, nonreflective learning (although difficult to detect) may have occurred for students who held strong beliefs about the impact of the policy being studied. Thus, when it occurred, nonreflective learning was probably a result of an inability of students to critically examine each other's ideas. Reflective learning certainly occurred for those students who acquired alternative views of the policy's impact on school districts or their understanding of the important role of inquiry in their profession. Finally, critically reflective learning occurred primarily in terms of each individual's understanding of his or her role in influencing the dynamics of the group. For example, whereas the intense togetherness of the cohort created problems, it also opened doors for transformative learning. Like T-groups of the 1950s (Kleiner, 1996), this cohort experience (including the focus-group and individual interviews that provided opportunity for further reflection) caused people to critically examine their behaviors within an intensive group experience and the implications of those behaviors.

Whereas transformative learning is a desirable goal in any educational program, our experience here shows that it may be unrealistic to pursue transformative experiences for all aspects of an instructional program. For example, certain goals such as the acquisition of theoretical knowledge and its application to practice or the surfacing of closely held beliefs may lend themselves to transformative learning through critical reflection. In contrast, other learning goals, such as the acquisition of skills (e.g., data collection and analysis) are more likely to be attained through other instructional strategies. The fact that past research suggests that cohorts tend to result in stronger affective learning outcomes may reflect the psychological and emotional impact of the cohort experience more than a lack of cognitive gains or

knowledge transfer to the workplace. Thus, instructors who work in cohorts are faced with an instructional dilemma. On one hand, the structure of cohort programs can almost naturally bring about transformative learning in the affective (or person-to-person) domain. On the other hand, transformative learning in the cognitive (or person-to-content) domain, such as using learned theoretical knowledge as a lens to interrogate basic assumptions about problem definitions, will require more forethought and reflection on the part of instructors, especially as it pertains to the design and management of groups and assignments so that reflection, critical reflection, and transformative learning will occur.

Implications

This study leads to important practical implications for those who develop (or participate in) cohort programs. Certainly, cohort participants must be readied for the intense learning experience that comes from working with the same group of students over time. Group cohesiveness may be a necessary condition to achieve the full potential of cohort learning, but it is not sufficient. For cohort students to fully engage with the content matter of a given course or program, learning must also address group dynamics and development. To the point, students must be cognizant of primary and secondary tensions inherent in groups, and they must be taught and able to practice the resolution of persistent tensions. To achieve this, cohort programs should incorporate group dynamics literature early in the curriculum, and instructors should periodically provide time to debrief on issues related to cohort development throughout the program.

This study also serves as a caution to instructors to be aware of (and make students aware of) certain cognitive traps. For instance, we would argue that instructors (ourselves included) and students often unwittingly blur the distinction between learning and performance. To wit, “high-performing schools” is a common cliché in today’s educational parlance (e.g., Odden, 1995). Our findings support earlier evidence (Druskat & Kayes, 2000) that, perhaps ironically, high-performing groups (i.e., groups that complete their tasks according to predetermined goals) may not necessarily be groups that learn most effectively. In this study, although the group showed outward appearances of success—high task orientation, clear role definitions, and successful completion of course requirements—learning was constrained due to the group’s focus on productivity. Thus, it is incumbent on instructors to remain mindful of the tension students may feel between completing course assignments (being productive) and considering, in reflective ways, what they are doing and why they are doing it (learning). Students come to

cohorts socialized by years of implicit and explicit norms of competition in the learning environment and the daily demand to complete myriad tasks on the job. As instructors, our means of evaluation—whether intended or not—can create industry-like production teams rather than fostering critically reflective learning teams. Thus, our challenge is to foster an appreciation for learning, for experimenting with new knowledge and skills, and for completing assignments and evaluating outcomes.

A final instructional implication involves the importance of the formative evaluation of cohort programs. Ultimately, without benefit of the research process employed in this study, we never would have known in which instances learning was constrained or where transformative learning was occurring. The opportunity for students and instructors to reflect on the experience led to our discoveries of the complex and dynamic nature of cohort learning. Formative evaluations that use focus-group and individual interviews can act as forums for students to air problems with the program or other members that are limiting the potential of the learning experience. Also, cohort instructors can use the information from formative evaluations to inform future instructors of the same cohort to avoid similar mistakes or to change the way future cohorts are organized and managed throughout the experience. One way to conduct these evaluations would be to use a research approach like the one we used in this study.

Future Research

We see several important avenues for future research that logically follow from this study. For instance, we did not study the relationship between individual learning styles and the actions of individuals in a cohort setting or, conversely, their effect on the cohort's cohesiveness. Nor did we intend to specifically examine the different experiences and perceptions of men and women in the cohort. Clearly, these are questions worth pursuing in more depth. Also, whereas our study strengthened our understanding of how cohort experiences can lead to transformative learning that, in turn, leads to changes in practice, future research should focus more squarely on the transfer of learning issue. For instance, longitudinal studies that assess the long-term influence the cohort experience has on students could provide deeper insights into the efficacy of cohorts as models for transformative learning. Finally, this study has raised important questions about the relationship between group performance and learning in educational leadership preparation programs. To this end, future studies should explore the influence of instructor expectations and program structures on cohort learning.

Study Limitations

There are several limitations inherent in this study. First, we could not benchmark students' leadership styles, behaviors, values, or beliefs prior to the study. Nor did we observe students in the field after the study. Thus, we cannot say with certainty that changes in beliefs and behaviors described by students actually occurred and were perceived by others. As noted earlier, research on the team may also have influenced the study's results, in part because others in the cohort knew the team had been selected for study and our data-gathering interventions. Nonetheless, this study has strengths not found in other cohort studies. It explored the learning experiences of one project team during a specific cohort learning experience—an approach to adult learning probably employed in many leadership programs. As such, the study has begun to help us unpack one aspect of the “black box” of the cohort experience. In addition, the study marks a good beginning toward a better understanding of the possibilities and potential pitfalls of cohort experiences in affecting meaningful student learning.

SUMMARY

This study explored the complexity of cohort learning. Through an in-depth qualitative approach, both the learning experiences and myriad factors that facilitated and impeded learning were explored. Understanding and applying group development and dynamics theory provided useful lenses for determining the extent to which cohort instructional models were successful for participating students. With this knowledge in hand, cohort instructional models will more likely minimize angst-producing situations that constrain critically reflective learning. As a result, transformative learning experiences—experiences that change professionals' values and beliefs and create new meanings from past experiences—will be more apt to occur and lead to positive changes in the ways educational leaders approach their profession, students, teachers, and parents.

APPENDIX A

Focus-Group Interview—Guiding Questions and Sample Probes

- What are your impressions of the learning experience this summer?
 - What specifically did you learn this summer?
 - How would you categorize that learning?
- What did you learn this past summer that has facilitated your learning this semester?

- How does the fact that many of you know and/or work together outside of this cohort affect your learning in the cohort?
 - From our observations and our discussion here, it seems as though you focused more on the process of completing the project and less so on dealing with the affective tensions within the group. Why?
 - You all have mentioned how the group “bogged down” at times. Why do you think you bogged down on certain things? What types of issues bogged you down?
 - How were decisions made within the group?
 - As a group, you have pointed out the strengths of different people. When did you become aware of those strengths?
 - What factors facilitated/hindered your learning this past summer?
 - You stated that some important ideas went un-discussed. And yet you created a product.
 - How did that affect your ability to complete the assignments?
 - How did that affect your ability to learn from the assignments?
 - Tell us about the process of getting to know each other better this summer.
 - What did you learn from that process? What surprised you?
 - How has your prior knowledge about yourself changed since this summer experience?
-

APPENDIX B

Individual Interview—Guiding Questions and Sample Probes

- How did the group organize for work? Why?
 - How were decisions made?
 - What types of issues created the most tension?
 - What types of issues did the group focus on?
 - What was your role in the group?
 - What were the roles of others in the group?
 - How did the group process affect your learning?
 - How did the social interactions among the members affect your learning?
 - How cohesive do you believe the group was? How did that affect your learning?
 - How did relationships outside the group affect your learning?
 - What experiences or issues did people bring to the group that facilitated or impeded learning? Achieving the goals of the group?
 - How did your own professional life impact your learning experience?
 - How did your experience in the group impact your own work and professional life?
 - What did you learn as a result of the experience?
 - What did you learn about yourself?
 - What did you learn that is useful to your work?
 - Of the things you have described, which are the most valuable?
 - Reflecting back on the summer experience, what do you associate most with the angst of learning?
-

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Institutional Theory and Educational Change

Mark Hanson

Are some educational organizations “smarter” than others in their capacity to solve problems and introduce change initiatives? Rather recent developments in organization theory suggest the answer is quite probably yes. The objective of this article is to integrate three key segments of the research literature (organizational memory, organizational learning, and institutional theory) into an overall conceptual framework. An argument is made that the framework lends insight into three progressively comprehensive types of change: homogenization (where one school adjusts its composition to look like other schools), evolution (where first steps into unknown territory are taken), and reform (where significant transfiguration takes place).

In the process of educational change, is there something to be said for organizations' learning to be smart? As social entities, James G. March (1999, p. 1) argued that organizations can learn to be *intelligent* and avoid costly errors in serving faithfully the goals of their constituencies or *stupid* and pursue courses that may seem momentarily clever but repeatedly lead to blunders. Unfortunately, both paths are well worn.

How does an educational organization learn to become a smart organization, particularly in terms of that elusive goal of educational reform? Making use of the evolution in organization theory that has taken place principally in the past two decades, the primary objective of this article is to construct a conceptual framework that links together critical ideas drawn from the literature regarding organizational *memory*, organizational *learning*, and *institutional theory* that lead to insight toward or away from significant educational *reform*. Reform is defined here as major change leading to a restructuring of core processes, programs, and/or procedures.

This path to the change process begins with an understanding of the nature of organizational memory: how an organization acquires and stores its accumulated knowledge.

ORGANIZATIONAL MEMORY

Considering that educational systems are knowledge-based organizations in the field of knowledge management, it is essential that they progressively accumulate both the *intellectual capital* of acquired knowledge on which decisions are made and *human capital* of people with the necessary expertise to exploit the intellectual capital effectively. The programs and policies of the future are necessarily extensions of past experiences as recorded in memory. "Unless the implications of experience can be transferred from those who experienced it to those who did not," Levitt and March (1996) pointed out, "the lessons of history are likely to be lost through turnover of personnel" (p. 526). To go forward, schools, like any type of organization, must possess a sound *holding environment* of past experiences or they are destined to drift along repeating errors. This holding environment is called *organizational memory* (Argyris & Schon, 1996).

The repositories of an educational system's collective memory are many and varied. As March (1999) pointed out,

Inferences drawn from experience are recorded in documents, accounts, files, standard operating procedures, and rule books; in the social and physical geography of organizational structures and relationships; in standards of good professional practice; in the culture of organizational stories; and in shared perceptions of "the way we do things around here." (p. 83)

Looking strictly at educational systems, Tschannen-Moran, Uline, Hoy, and Mackley (2000) wrote that

Accepted teaching practices, school disciplinary codes, honors, and ceremonies embody the school's knowledge and beliefs about student learning and behavior. Knowledge is invested in the physical objects that organizational members use as guides to conduct their business, such as curriculum materials or library resources. (p. 248)

Organizational memories contain what organization theorists call *soft knowledge* and *hard knowledge*. Soft knowledge is found principally in people and documents, can be formal or informal, and is transmitted and perpetuated through processes as in-service training, imitation, socialization, and

professionalization. Hard knowledge is considerably less vulnerable because it is stored as school rules, policies, routines, processes, standard operating procedures, and roles (Mintzberg, 1975).

Just as some people have better memories than others, so do organizations. Whereas educational organizations are particularly proficient in establishing and pursuing hard knowledge in the way of firm policies, procedures, and routines, they have particularly poor memories for soft knowledge. Sometimes this is the case because of badly indexed and stored records, minutes not being taken at meetings, blackboards getting erased too quickly, "old hands" being transferred, teachers who experienced an academic experiment having different recollections of the experience, and the recorded data lacking key details. In addition, the unique insights teachers have of the special qualities and characteristics of individual students who move through their classrooms on a yearly basis are typically lost as the students move on to new teachers in new classrooms.

In closing a discussion on organizational memory, George Huber (1996) placed emphasis on

the critical role of organizational memory in organizational learning . . . [because] that which has been learned must be stored in memory and then brought forth from memory; both the demonstrability and usability of learning depend on the effectiveness of the organization's memory. (p. 150)

However, it is equally true that organizational memory can compromise new learning when such memory includes bad information or suggests that, based on past experience, new avenues of problem solving are doomed to failure.

ORGANIZATIONAL LEARNING

Can Organizations Learn?

In schools, the organizational learning process begins when a particular problem is encountered that cannot be resolved by searching organizational memory for solutions that worked in the past to solve similar concerns. The particular problem at hand can be either *short-run*, such as identifying the protocols for treating a visiting state governor, or *long-run*, such as financially coping with the economics of losing slowly the region's industrial base.

In schools, the organizational learning process begins when the educators engage the problem-solving process through *knowledge acquisition*. George Huber (1996, pp. 134-141) listed five forms of knowledge acquisition:

1. *copying* what similar organizations are doing by, for example, replicating the successful math or counseling program of another school;
2. learning from *personal experience*, such as evaluating the effectiveness of a strategy for raising funds;
3. learning by *observing*, such as watching and judging the outcome of another school district's switch to phonics from whole word reading;
4. *grafting* on carriers of new knowledge, such as seeking out and hiring teachers specialized in computer-based training; and
5. acquisition by carrying out focused and wide-ranging *sensing* of the external environment, such as reviewing scholarly literature for keys to better models of in service training.

However, acquired knowledge only becomes organizational knowledge when it forms the basis of belief and actions (Argyris & Schon, 1996). Thus, organizational learning is not the sum total of individual learning representing unconnected gems of wisdom. Rather, organizational learning is the product of social interaction resulting in organizational knowledge only when it becomes part of the collective wisdom of the school. What drives this form of learning is a measure of success that can be attributed to its introduction into the system. For example, acquired knowledge about how to work productively with a group of activist parents who appear to be clueless gets around the school and becomes an informal guideline for other teachers.

How Do Organizations Learn?

A relatively common assumption in the research literature is that organizations learn like individuals—through a cognitive process. That is, organizational learning is the sum total of individual knowledge, and just as individuals learn from mistakes, so do organizations. In considering this view, Cook and Yanow (1996) presented an insightful counterargument:

Specifically, we believe that organizational learning is not essentially a cognitive activity, because, at the very least, organizations lack the typical wherewithal for undertaking cognition: They do not possess what people possess and use in knowing and learning—that is, actual bodies, perceptive organs, brains, and so forth. (p. 439)

Cook and Yanow (1996) argued that organizational learning can only be done by a group and not an individual. They used the examples of a concert orchestra and a basketball team, pointing out the obvious that a single violinist, no matter how brilliant, cannot perform Mahler's Third Symphony and that a single basketball player, no matter how tall, cannot play the game alone. Also, given the need for timing, tempo, rhythm, and nuance based on

individual knowledge, a room full of musicians or basketball players could not perform with any degree of sophistication. An orchestra becomes an orchestra only when the artistry of the winds and strings blend with precision and grace, just as a basketball team becomes a basketball team when the picks, passes, fakes, and drives down the lane blend with precision and fortitude. In short, organizational knowledge is found in the collective interactions of the group and not in the isolated knowledge of people who happen to be members of a group.

Yet the New York Philharmonic and the Boston Pops, although both are orchestras, and the Los Angeles Lakers and the Boston Celtics, although both are basketball teams, are very different in the way they play. These differences, Cook and Yanow (1996) argued, can be attributed to an organization's *culture*, which they define as

a set of values, beliefs, and feelings, together with the artifacts of their expression and transmission (such as myths, symbols, metaphors, rituals), that are created, inherited, shared, and transmitted within one group of people and that, in part, distinguish that group from others. (p. 440)

Schools also have their own unique cultures that are shaped around a particular combination of values, beliefs, and feelings. These school cultures emphasize what is of paramount importance to them as they strive to develop their knowledge bases in a particular direction, such as producing outstanding football teams, high SAT scores, disciplined classrooms and skilled auto mechanics or sending kids to college who come from inner-city urban schools. Although the culture of a school is not visible to the human eye, its artifacts and symbols reflect specific cultural priorities, such as the type of ceremonies held to honor students, how the school's budget is distributed with respect to relative weights given to particular academic and nonacademic programs, the quality and quantity of efforts made to work with various segments of the community, the pictures and trophies on display in the front office that greet each visitor to the school, and so forth.

As a member of a school's parent advisory committee, I once recommended that a school ceremony intended to honor top students should also honor students who had raised their grades from the D to the C range. The school's administrators dropped that suggestion with all due speed as it did not reflect the image of quality they were trying to project.

Organizational learning, as acquired knowledge, has at least two types of applications. Chris Argyris (1999), in his extensive writing on the subject, coined the concepts of *single-* and *double-loop learning*. Single-loop learning involves an incremental updating of the knowledge necessary to retain or

even upgrade the effectiveness of relatively *routine and repetitive* issues. For example, the University of California (where I work) recently modified its admissions requirements to include additional math, laboratory science, and foreign language requirements. Almost immediately, high school counselors throughout the state began to modify their published documents and verbal scripts for parents and students about minimum requirements for admission to the university. In Chris Argyris's words, single-loop learning "helps get the everyday job done" (p. 69). However, as Scribner, Cockrell, Cockrell, and Valentine (1999) pointed out, "transforming typically intransigent school cultures into communities where learning is continuous, reflective, and focused on improving student outcomes will require change beyond first-order restructuring" (p. 131).

Double-loop learning, by contrast, involves the acquisition of knowledge that is intended to ensure the long-term future of the organization in a changing environment. This form of organizational learning responds to "core issues and decision-making premises" by constructing new frames of reference, interpretive schemes, and governing policies (Virany, Tushman, & Romanelli, 1996, p. 305). An interesting illustration of double-loop learning took place when the California voters passed a referendum virtually outlawing bilingual education. In a state with a massive non-English-speaking population, existing policies had to be reviewed and changed almost immediately. To make the required adjustment, this new education code required a sharp learning curve plus a whole new set of assumptions and policies about how to teach thousands of non-English-speaking children.

It should be noted that organizational learning is not the same as *organizational intelligence*. Whereas the former refers to the process of gaining new knowledge, the latter applies to the capacity to use that knowledge wisely. The road of organizational learning leading directly to organizational intelligence can appear more promising than reality typically permits. Educational organizations, like individuals, are flawed instruments, and consequently there are many reasons why they may repeat their errors of judgment, such as the consequence of a rapid turnover in leadership, ambiguous goals, internal and/or external conflict, and a school culture that supports athletics over academics. In this vein, March (1999) observed that "the contributions of learning to intelligence are constrained by three major problems of myopia" (p. 217).

Temporal myopia involves learning that is intended to resolve a series of short-run problems and along the way loses sight of, and possibly even aggravates, the greater long-run challenge. Local schools, for example, are under enormous pressure to increase the student average scores on high-stakes tests. In consequence, educators across the nation are routinely directing their

time and energies on teaching to the test or on test-taking techniques rather than on the long-range goal of improving the quality of learning.

Spacial myopia has individuals placing the interests of the subsystem they belong to, or that resides near them, over the needs of the larger system. In consequence, tensions emerge because educators must function within the organizational space of more than one system. Scribner et al. (1999) wrote that

schools as formal organizations experience the tension between a professional community ethic of caring for students, critical reflection, and collaboration on the one hand, and the bureaucratic necessities of hierarchy, accountability, rationality and control on the other. As more and more schools use the metaphor of professional community to guide practice, professionals in those schools will have to negotiate these tensions. (p. 154)

Failure myopia occurs when “organizational learning over samples successes and under samples failures” (March, 1999, p. 218). Therefore, a lack of balance develops in the knowledge base with respect to an understanding of what can go wrong. As a definite bias toward absolute success develops, overconfidence tends to emerge that is not easily overcome. Good high school football coaches never simply study films of games they won; they scrutinize even harder the games they lost.

In sum, can organizations, including schools, learn? The short answer is yes. Organizational learning more or less takes place along the following lines: (a) A problem emerges that needs to be resolved; (b) a search of the organizational memory finds no ready solution; (c) new knowledge is acquired as a product of shared interaction among the learners; (d) new knowledge that results in positive outcomes becomes part of the collective wisdom of the school; (e) this collective wisdom is transmitted through socialization, hard and soft knowledge, the school’s culture; and (f) this new knowledge enters organizational memory and becomes the basis of decision-making choice or action when similar issues arise in the future. Along the way, organizational learning must overcome numerous barriers (e.g., bad information, selective perception, myopic conditions) as it seeks a higher quality of problem solving.

In addition, as Cook and Yanow (1996) pointed out, “organizational learning, like individual learning, does not necessarily imply change, particularly observable change. An organization can, for example, learn something in order *not* to change” (p. 439). Considerable organizational learning is of the single-loop variety, that is, to develop more efficient routines or standard operating procedures. If this can be considered change, it is *minimal*

incrementalism and not the more fundamental double-loop variety that challenges established routines and has the potential of redirecting the established trajectory of an organization.

As Figure 1 illustrates, the organizational memory serves as the point of departure for organizational learning, and through the feedback process, the new learning also becomes part of organizational memory. So, given the fact that organizational memory and learning can apply the wisdom of past experience and the insights of newly acquired knowledge to the challenges of bringing double-loop change to educational systems, why is it that such fundamental change tends to be so scarce? To understand the process of educational change, and particularly the formidable forces of resistance associated with it, *institutional theory* can be extremely useful.

INSTITUTIONAL THEORY

We now know that it is quite possible for some educational systems to have better organizational memories than others, and it is equally possible for some to be better at organizational learning than others. Building on the concepts of organizational memory and learning, James G. March (1999) took an additional step by arguing that just as some individuals are more intelligent than others, some organizations are more intelligent than others. "An intelligent organization is one that adopts procedures that consistently do well (in the organization's own terms) in the face of constraints" (p. 1). Intelligence is seen in actions. Even granting the differences in capacities between organizations, we still must address two questions for all educational organizations: (a) What are the constraints that make significant educational change so difficult? and (2) Under what conditions can (and does) significant change actually take place? A good place to begin is with the rapidly growing body of literature called *institutional theory*.

What Are Institutions?

One might reasonably ask, Why do all societies more or less have the same institutions, such as schools, hospitals, military, government, and so forth? The reason is that all societies face similar problems to resolve: educating each successive generation of youth (schools), providing for a healthy citizenry (medical), protecting national sovereignty (military), representative rule (government), and so forth. Obviously, whereas the ultimate societal needs may be the same, the manner in which any given nation responds to

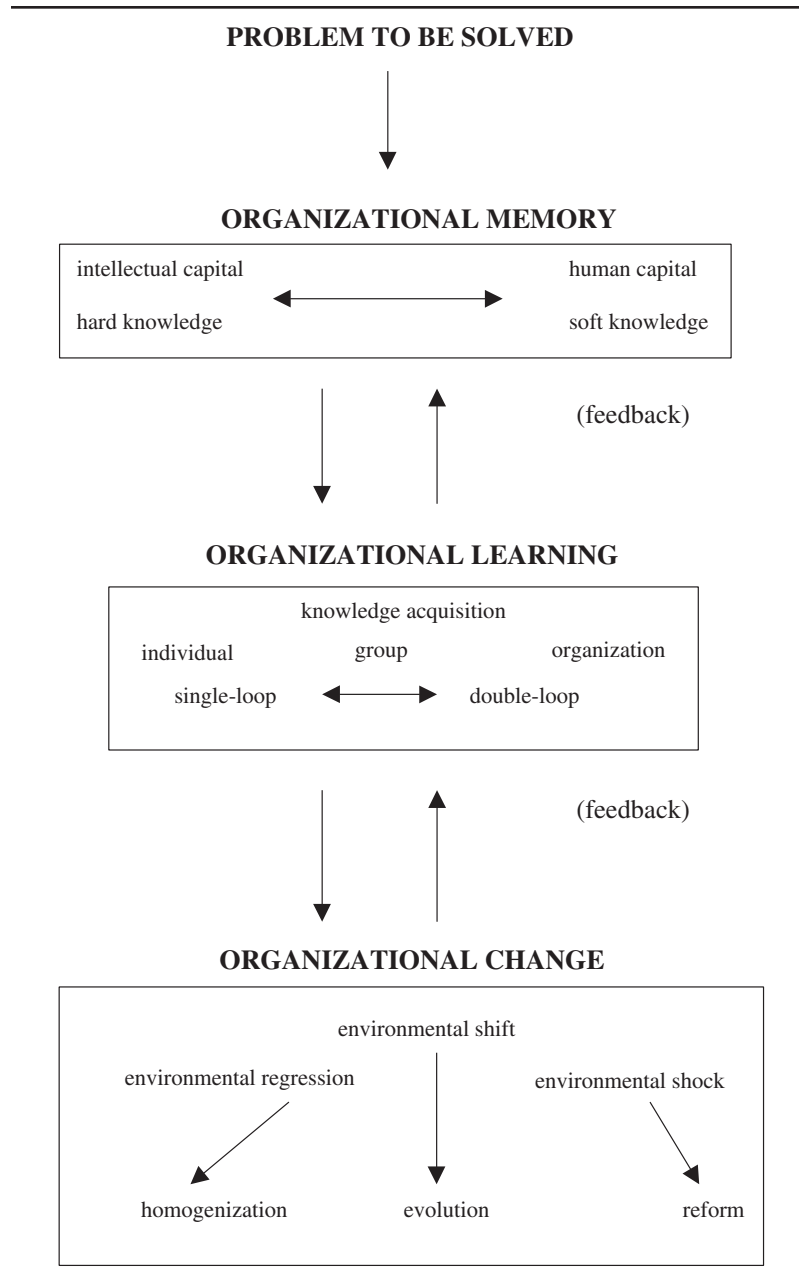


Figure 1: Institution Theory and Change

these needs is decidedly different (e.g., an American educational system is very different from one found in Japan or Bolivia).

At a conceptual level, however, institutions have the same common denominators. Scott (1995) offered the following definition: "*Institutions consist of cognitive, normative, and regulative structures and activities that provide stability and meaning to social behavior. Institutions are transported by various carriers—cultures, structures, and routines—and they operate at multiple levels of jurisdiction*" (p. 33, italics in original). Breaking this conceptual definition down into parts, the three pillars of institutions are regulative, normative, and cognitive.

The *regulative pillar* plays a stabilizing role by prescribing actions through formal and/or informal rules that establish, monitor, and sanction activities. For example, school rules, state laws, court decisions, and professional standards govern the actions of teachers and administrators. The *normative pillar* emphasizes values and norms about how educators should pursue valued ends through legitimate means. For example, coaches should teach good sportsmanship over winning at any cost.

Finally, the *cognitive pillar* shapes the filter through which people view reality and gives meaning to them as they interpret their world. Witness, for example, the teacher who says, "I love to teach but hate my job." This is an unfortunate cognitive interpretation of a complex work environment, one that (as will be discussed later) is shaped fundamentally by the rigidity of institutional pressures (Jepperson, 1991, p. 145).

Why Does the Institutional Environment Produce Organizational Rigidities?

In the evolution of our understanding of how organizations work, the 1960s witnessed a compelling shift toward viewing organizations as *open systems* interacting with their external (and internal) environments (Katz & Kahn, 1966). This model, with its input, throughput, output, and feedback emphasis, portrayed the organization as inextricably tied to its external environment as if it were a life-support system. In an educational organization, the external environment of schools is seen as providing *inputs*, such as teachers, instructional materials, and state laws; *outputs*, such as educated students heading for the workplace or higher education; and *feedback*, which comes in many forms such as acquired experience, test score information, new tax dollars, parental support (or lack of such), and so forth.

As Scott (1991, p. 165) pointed out, however, the open systems model that gained acceptance in the 1960s had a rather narrow focus as it concentrated on the technical facets and resource flows necessary to support the

production process necessary to turn inputs into outputs. The position of the open system model as the dominant paradigm was shaken in 1977 by a seminal paper by Meyer and Rowan (1977). The outcome has been an interesting irony. Whereas open system theory focused on the changing nature of organizations as they seek to establish effective and productive exchanges with their respective environments, institutional theory (as it became known) focused on the constraints in the environment of organizations that limit their ability to change. In the theory-building process, open system theory became a subset of institutional theory. Scott (1991) wrote, "Perhaps the single most important contribution of institutional theorists to the study of organizations is their reconceptualization of the environments of organizations" (p. 165).

The reconceptualization begins with an awareness that educational organizations, like any other type of organization, exist in what DiMaggio and Powell (1991) called an *organizational field*: "By *organizational field* we mean those institutions that, in the aggregate, constitute a recognized area of institutional life: key suppliers, resource and product consumers, regulatory agencies, and other organizations that produce similar services or products" (pp. 64-65). A school's organizational field includes, for example, accreditation agencies, teacher training programs, state boards of education, state legislatures, courts (local, state, and federal), universities, parent groups, and textbook producers. "While fields provide a framework for locating and bounding the phenomena of interest, we must not assume that they are not problematic and unchanging" (Scott, Ruef, Mendel, & Caronna, 2000, p. 13). The field surrounding an educational system, with all its ties that bind, has new players with their own rules and expectations regularly arriving on the scene.

The formal and informal expectations, regulations, information flows, norms, myths, values, laws, and so forth impacting on schools tend to develop *structuration*, which is a form of *connectedness*. That is, the interaction between organizations becomes patterned through such means as information sharing, contractual relationships, formal and informal agreements, and mutual awareness of governance procedures (Scott et al., 2000, p. 26). Schools, in other words, know the players sitting around the table and the rules of the game, and they know better than to try to violate the rules. However, to carry a bad metaphor even further, the game gets truly interesting when all of the players sit down with their own set of rules and expect the school to play the game their way.

As accommodations are made between the numerous organizations in a school's field, a powerful field of forces (Lewin, 1951) emerges that acts like a network of constraints, not unlike Max Weber's (1952) iron cage (or Brer Rabbit's tar baby) and tends to "trap" schools in their places. For example,

textbooks are written and teacher training programs are shaped to accommodate state board standards, which are framed by state and federal legislation, which must respect limits imposed by the courts, and so forth.

In sum, this network of constraints in a school's organizational field places serious limitations on the change process. Schools get tied down by the network of organizations in their fields by laws, operating procedures, purchase orders, bus schedules, delivery schedules, parent expectations of what a "good school" does, and so forth. As DiMaggio and Powell (1991) pointed out, "Organizations in a structured field . . . respond to an environment that consists of organizations responding to an environment of organizations' responses" (p. 65).

How Do Organizations Respond to Environmental Constraints?

When confronting a fragmented external environment, such as numerous authority structures and funding sources, Meyer (1992, p. 189) argued that organizations tend to develop elaborate internal subsystems and mechanisms in an attempt to introduce a level of enhanced internal stability as a counterpoint to the complexity of the external environment. For example, schools and districts that depended more on federal funding with multiple budgetary categories and independent programs tend to have much larger administrative structures than schools and districts that depend primarily on state funding.

Another mechanism used by organizations to help them function in fragmented environments is that of developing routines that have worked in the past. Routines are made up of rules, strategies, programs, and technologies that drive the organization. The very necessary practice of using routines has significant consequence for the educational change process because, as Levitt and March (1996) pointed out, "Routines are based on interpretations of the past more than anticipations of the future. They adapt to experience incrementally in response to feedback about outcomes" (p. 516). These routines become part of the collective memory of the organization and are transmitted through its culture, socialization, professionalization, personnel hiring practices, and imitation. Thus, they become forces for stability rather than change.

The pressures on schools from organizations and agencies in their environmental fields (e.g., accreditation, court decisions, teacher training programs, state regulations), are quite similar across the country, and in consequence, public schools in one region of the country tend to act like schools in other regions. In the language of organization theory, this tendency towards

homogenization is called *isomorphism* (Rowan & Miskel, 1999). By definition, "isomorphism is a constraining process that forces one unit in a population to resemble other units that face the same set of environmental conditions" (DiMaggio & Powell, 1991, p. 66). The greater the constraining pressures from the environment, the fewer the degrees of freedom for educational change. In consequence, educational organizations become increasingly similar.

DiMaggio and Powell (1991) identified three mechanisms through which the pressures toward homogenization are exerted. *Coercive* isomorphism stems from formal and informal pressures for compliance. The pressures exerted can be highly visible, formal, and forceful rules that schools are required to develop, such as individual learning plans for students with special needs. Or the pressures can be relatively invisible, informal, and subtle, but no less powerful, such as local school board beliefs that men are better suited than women to manage the tasks of a high school principalship.

Mimetic isomorphism occurs when one educational organization consciously models itself after another that it believes to represent a higher level of success and achievement in the public eye. The intention to mimic is constantly encouraged and reinforced by (a) educational consultants who vigorously (and profitably) spread the latest news about exciting things taking place on the other side of the fence, (b) academic conferences that function as supermarkets for new ideas, and (c) the rapid movement by administrators between schools or districts near and far.

Normative isomorphism is rooted in the processes of professionalization in which the values, codes, and standards are imposed by universities as well as professional certification and accreditation agencies. These agencies also act as gatekeepers, determining who gets into the profession and therefore further reinforcing normative expectations and order on the behavior of teachers and administrators.

Also reinforcing this institutional homogenization process is the struggle for the legitimacy that public schools constantly pursue. By and large, this struggle exists because schools fit into a classification that Cohen, March, and Olsen (1972) identified as *organized anarchies*. In most types of organizations, particularly those in the private sector, rather specific goals can be defined (e.g., making 10% return on investment, producing 250 toasters per hour), technology is certain (e.g., red wires connect with red wires and not white wires), and workers must participate continuously (e.g., no worker discretion to put tires on some cars and not others).

According to Cohen et al. (1972), these three rather rationalistic conditions do not exist in organized anarchies. The age-old question is, What are the goals of education? The list is endless. In educational systems, goals tend

to be ambiguous (not to mention conflicting), with everybody and his or her brother—teachers, administrators, football coaches, PTA officers, janitors—having his or her own goals for a given school. The technology of action is also unclear. What is the best way to teach reading or math? “It depends,” is usually the response in an organized anarchy. Finally, the fluid participation of members is usually the hallmark of an organized anarchy. Professionals often choose the projects they work on as well as employ different strategies of teaching, or motivating, or evaluating depending on their judgment of the unique set of circumstances they encounter in the school or classroom. Under these conditions, external organizations (e.g., political parties, unions, professional associations, parent groups) attempt to fill the void of uncertainty by imposing their own definitions of the best goals, teaching/learning technology, standards of excellence, and so forth.

Organizations selectively adopt these externally defined goals and processes in an effort to establish legitimization in the eyes of society. That is, they try to gain societal confidence by doing what the major stakeholders on the outside expect them to do. Through legitimization, an organization establishes justification for a claim on societal resources and protects itself against attacks on its activities and procedures. Thus, when educational organizations can argue that they are doing what the state requires, what the “best research” indicates, what the professional societies expect, what the courts require, and so on, they are rewarded for their conformity (Aldrich, 2000, p. 50).

Three of the leading scholars in the domain of institutional theory argued (but perhaps overstated) the point that

school organizations go to the greatest lengths, not to accomplish instructional ends, but to maintain their legitimate status as schools. They seek *accreditation*, which depends on structural conformity with a set of rules that are professionally specified and legally mandated, and react in panic when it is threatened. (Meyer, Scott, & Deal, 1992, p. 54)

As schools seek legitimization, the *replication* process begins. That is, educational organizations tend to look for guidance to what highly regarded schools are doing (even if they do not have the human and material resources), and this results in a homogenization process, with schools looking and acting like other schools. An unintended consequence of this struggle for legitimacy is that educational organizations are all-too-often rewarded and preserved for their conformity to “correct” structures, programs, and processes rather than the quality of their product (Rowan & Miskel, 1999, p. 364; Scott, 1981, p. 126).

Institutional theory also teaches us that new schools are not delivered by some wayward stork but are created in the image of respected (legitimized) educational organizations that exist at their founding. The creation of new organizations in the reflection of their existing counterparts is referred to as *imprinting*. A process that leads to the replication of existing schools thus furthers the homogenization process. Any new school that strays too far from the established norm by attempting a dramatic change risks the loss of legitimacy and social support that goes with it (Smith & Keith, 1971).

How Do Groups in Schools Contribute to Organizational Stability?

Institutional theory holds that, like the onion, organizations exist in a layered form encompassing the environmental field, the organization, formal and informal groups within the organization, and the individual employees. Scott (1995) wrote that

generalized models—beliefs, norms, menus, and scripts—flow “down” through the various levels, carried by socialization, social construction, and sanctioning powers. These codes are carried and reproduced, but also modified and reconstructed, by the interpretations and inventions of subordinate actors: individuals, organizations, and fields. (p. 141)

The degree of conformity, or fit, between the layers in the onion determine the degree of organizational stability. However, there is always some measure of diversity, or degrees of freedom, at every level. At the group level, for example, all educational systems witness intergroup struggles for new resources against a fixed budget or the old guard against the young turks regarding homework policies.

Under conditions of a tight fit, Kondra and Hinings (1998) wrote,

isomorphism can be self-serving to the dominant coalition: if all organizations “play by the rules” everyone gets to keep their jobs, thereby providing a strong incentive not to question institutional norms and simply take them for granted, further entrenching an institutional environment. An economist might consider this tacit collusion. By the dominant coalition’s standards, this behaviour is efficient and optimal, given their needs. (p. 749)

This is a charge frequently aimed at teachers and administrators, who are often criticized for preserving the status quo by not being more inventive or willing to challenge what many outsiders see as moribund school routines.

However, just as school groups can be moribund and protect the status quo, they can also be dynamic in pursuit of educational change. High-performance teams, frequently called *hot groups*, can emerge when some form of crisis overwhelms existing routines (such as parent challenges to the teaching of evolution in biology classes) or when a particularly dedicated group is inspired by the challenge to take on a seemingly intractable problem (such as counseling on birth control).

Under novel conditions and tight deadlines that major crises generate, the pressing task at hand overwhelms normal concerns about power and control. Formal hierarchies and status systems are often suspended in the desperate search for anything that might restore equilibrium. During crises, new voices may be heard and previously ignored alternatives may be considered. (Leavitt & Lipman-Blumen, 1995, p. 114)

Hot groups are generally small in size, see the challenge to succeed as their greatest reward, establish high-performance work standards, live on faith capital, and draw on sources of previously unknown intellectual energy. Outsiders frequently see them as caught up in a Don Quixote syndrome and in dire need of padded restraint. These groups can only spring up if sufficient flexibility exists in the organization to give them the independence to exercise their energy. However, visible or invisible hot groups can also emerge as a negative force with designs on sabotaging or deconstructing the organization.

Are There Institutional Constraints on Individuals?

Institutional theory argues the existence of a top-down field of forces that constrain the independence of action at each successive organizational layer, including the individual level of leaders, managers, and other employees. In consequence, administrators and teachers as individuals engage in an institutional world that knowingly and unknowingly shape not only their patterns of work but also their thinking about work. "Even the conception of an autonomous agent with a particularistic way of feeling, acting, and expression is an acquired identity, a socialized understanding of self and others" (March & Olsen, 1996, p. 249).

A continuing complaint from outsiders about educational leaders and their supposed inability to introduce genuine educational change across America is that they tend to be cut out with the same cookie cutters. Institutional theory suggests that there is considerable validity to this view. DiMaggio and Powell (1991) wrote that

to the extent managers and key staff are drawn from the same universities and filtered on a common set of attributes, they will tend to view problems in a similar fashion, see the same policies, procedures, and structures as normatively sanctioned and legitimized, and approach decisions in much the same way. (p. 72)

In the highly volatile world of top managers, institutional theory also offers some insight into why educational leaders seemingly make efforts to catch each successive wave of innovation sweeping the country (Aldrich, 2000, p. 50). Meyer et al. (1992) wrote that

while it is common to decry the traditionalism of the American school system, it seems more appropriate to emphasize the extraordinary rate at which innovations of various kinds are incorporated into American schools (as well as the rapid rate with which they disappear). (p. 56)

Kondra and Hinings (1998) suggested an explanation for this phenomena: "As long as top management can 'keep up with the industry' their jobs are safe" (p. 749). By mimicking the apparent changes going on in the field, educational leaders establish the reputation of being reformers even if there is a new change every year and ultimately nothing of significance really changes. The safe route for job protection and even advancement in the profession is to project the image of change even if meaningful change does not result.

The almost routine pursuit of each hot innovation on a yearly basis, whether in curriculum development, in-service training, motivation methods, or whatever, runs the real risk of becoming largely ceremonial. In an effort to break away from leaders produced by cookie cutters, a growing number of school districts have begun to hire their senior leaders from outside of the profession, particularly former military generals or political leaders like governors and mayors.

INSTITUTIONAL THEORY AND EDUCATIONAL CHANGE

Institutional theory represents a body of thought that identifies, emphasizes, and explores the forces that constrain organizations from changing. For the field of education, the outcome is a greater understanding of why educational systems are so isomorphic (homogeneous) and commonly give the appearance of change without the reality of change. What is fundamentally missing in this discussion is that educational systems do change; it is perhaps

not as often or dramatically as reform advocates would like, but they do change.

Sorting through the possibilities, there appear to be at least three energizing forces in the external environment of educational systems that can bring about organizational change: (a) *environmental shifts*, (b) *environmental regression*, and (c) *environmental shocks*. Environmental shifts occur when one or more of the many organizations in an educational system's organizational field modifies some aspect of an expectation or requirement placed on the school, such as a new court decision or a state-mandated change in testing procedures. Although new environmental expectations or requirements such as these are not unimportant, they are generally incremental in nature, and the changes the educational system makes are also incremental, such as introducing a "culture-free" metric or requiring algebra for all students.

Oliver (1991, p. 152) identified five strategies an organization can use to accommodate environmental shifts that require attention. Continuing with the example of introducing a high-stakes test, the school can *acquiesce* (do what is expected), *avoid* (delay and hope it goes away), *compromise* (give a modified version), *refuse* (attack the test as ideologically tainted or culturally biased), or *manipulate* (teach to the test or flat-out cheat). Even a casual reading of newspapers reveals all of these strategies are alive and well in American education.

The second type of force for change, environmental regression, happens when, metaphorically speaking, the apple falls too far from the tree. That is, when the activities of an organization are so far beyond the accepted norms of the institution that its legitimacy in the institution is questioned, environmental pressures are exerted to initiate the changes needed to bring it in line with the accepted standards. In short, pressures to conform by organizations in an educational system's environment result in changes in the direction of *organizational homogenization*. Schools are pressured to look like other schools.

Kondra and Hinings (1998) addressed this form of change by identifying two classifications of organizations with divergent institutional fits. *Dogs* are "those organizations that have a low fit with institutional norms and perform below institutional norms, the Dogs, are at great risk of being selected out. Dogs perform inadequately and lack legitimacy" (p. 751). At the other extreme are the *renegades*, or organizations that either by choice or chance use unorthodox or nonstandard means to perform above the institutional range of performance. The guardians of institutional norms (e.g., legislatures, courts, accreditation agencies) have at least two change-related options. They may use coercive means to force compliance with institutional standards, or they may legitimize the renegades and free other similar organizations to mimic their activities.

As an illustration, I once participated in the creation of a new type of management training program on the Riverside campus of the University of California. One single program trained managers for four sectors: public, private, environmental, and educational. It was made up of two parts: The first half comprised generic core courses on subjects that all the management students took (e.g., organization theory, quantitative skills, finance, marketing, communication, etc.), and the second half was composed of specialty courses in each of the four fields and all students went their own way. Faculty members were hired with strong management backgrounds but also with training in one of the four specialties. One of several objectives was to provide academic and interpersonal interactions between students training to work in four sectors of management.

After several years of activity with high student demand and excellent job placement, the program ran afoul of a campus review committee that questioned its legitimacy. That is, the standard used as a metric was the type of training programs found on the UC Berkeley and UCLA campuses. Because our program did not look like theirs (the accepted standards), ours had to be wrong. In short, ours was a renegade program that had fallen too far from the established tree. We were given an ultimatum: change everything to the traditional program formats or be terminated. Hence, we engaged in the organizational homogenization change process and soon adopted the trappings of traditional programs. Although this represents a form of change, it is different from evolutionary, incremental change that leads slowly in untried directions.

A third type of organizational change can be attributed to environmental shock: a condition in which changes in an educational system's external environment get seriously ahead of any incremental adaptations the schools can make. When organizations are highly institutionalized and inflexible, they become vulnerable to environmental shock. The classic illustration is the French Revolution, during which the French state with its institutionalized emphasis on class and privilege clashed violently with an emerging new social order. The resulting changes saw the destruction of the old state and the construction of another. In the modern private sector, such environmental shocks have repeatedly attacked the automobile and consumer electronics industries in recent years, with new brands rising to the top and others crashing without recourse (Strebel, 1992).

The field of education has encountered numerous profound environmental shocks, some of which changed the school forever. Environmental shocks can be brought about by dramatic: (a) shifts in *technology*, such as the introduction of the hand-held calculator, the computer, and the Internet; (b) shifts in the *law*, such as the "separate but equal" configuration of American

schools ended by the *Brown v. Board of Education* Supreme Court decision in 1954; or (c) shifts in *public awareness*, such as those caused by “A Nation at Risk” National Commission on Excellence in Education (1983), or the TIMSS (Third International Mathematics and Science Study), which revealed that American students ranked among the lowest when compared with students from 21 other nations (U.S. National Research Center, 1998).

When a strong environmental shock runs through our system of education, the institutionalized forces that have held schools to the status quo tend to be weakened and major change becomes possible. This weakening of the institutionalized forces becomes particularly pronounced when public confidence is shaken by the shock. Two dramatic, historical examples stand out: educational reforms during the period of the Vietnam War and the mid-1990s when the nation’s politicians discovered that education and teacher bashing could win elections.

During the war, when public confidence in what was called “the system” hit its biggest low since the depression of the 1930s, schools were basically liberated to try wild and crazy approaches in curriculum, organization and management, school design, and just about everything else anyone wanted to introduce in the name of creativity, innovation, and freedom. Those of us old enough to remember saw such things, for example, as schools without walls, schools within schools, open-space schools, daily demand schedules, unstructured time schedules (do what you want as long as you want), schools with no administrators, student-designed curricula, career ladders, and ungraded and nongraded schools, among many others.

As society stabilized following the end of the Vietnam War, so did the nation’s educational system. Soon thereafter the familiar rhetoric was heard once again: back to the basics, accountability, administrative control, academic standards, school discipline, and so forth. In short, after a few years of relaxed constraints, the educational system had been reinstitutionalized once again.

The second period began in the mid-1990s, when public confidence in public education was shaken by the unrelenting drumbeat that something was desperately wrong with American public schools. Candidates for both political parties ran on that theme. The response in most of the states was deregulation, or freedom from the grip of the institutionalized forces that fixed schools to the status quo. American education quickly saw the emergence of charter schools, home schooling, and the administration of public schools by private sector profit-sharing companies. Whether the 2000s’ deregulation will be any more resistant to the grip of reinstitutionalization than the 1960s’ remains to be seen. One significant difference is that the what is going on today seems to be a reaction to the lack of confidence in public schools,

whereas in the 1960s, it was more a lack of confidence in government and society and the old standards of society as a whole.

THE SMART EDUCATIONAL ORGANIZATION

Can we speak in terms of smart organizations? March (1999) thought we could: "Organizations pursue intelligence. In that pursuit, they process information, formulate plans and aspirations, interpret environments, generate strategies and decisions, monitor experiences and learn from them, and imitate others as they do the same" (p. 1). Assuming this notion of organizational intelligence is correct, we can also assume that some organizations are smarter than others in pursuing organizational change.

As illustrated in Figure 1, the process of organizational change begins with a sticky problem that will not go away. The first stage in the problem-solving process is not unlike the thinking of master chess players who, in problematic situations, stare at the board, searching for guidance from similar situations in historic matches. Memory is no more than a holding environment for these past experiences. Unlike the chess player, an organization's memory is composed of hard knowledge and soft knowledge. *Hard knowledge* is stored in routines, rules, role requirements, and standard operating procedures. *Soft knowledge* is more vulnerable to loss, as it is found principally in personal experiences, nonroutine and informal documentation, beliefs, attitudes, and conventional wisdom.

Both types of knowledge stored in memory are transmitted from generation to generation through the written record, organizational culture, socialization, in-service training, and imitation. As a smart organization moves across time, soft knowledge will inform and influence hard knowledge (and vice versa) so that rules, routines, and procedures will be updated to reflect current experiences and requirements. This practice will not happen in a less-than-smart organization.

The quality of an organization's memory is based on the quality of its accumulated *intellectual capital*, that is, the accumulated knowledge on which it bases decisions. The quality of an organization's accumulated body of intellectual capital is by and large dependent on its *human capital*, that is, the experience, skills, education, and motivation of its employees. As the smart organization moves across time, its accumulated human capital will add knowledge and experience to the accumulated intellectual capital (and vice versa) so that the organization's memory will expand in a productive direction.

Why would one school have a better memory than another? Returning to the chess analogy, if the player has recorded the strategies of few past matches, or gets them mixed up, or forgets the key strategic moves, his or her historic memory will provide little guidance. The same is true for the educational organization if records are not carefully kept and catalogued, if teachers and/or administrators with insightful experiences are routinely transferred, or if the value of consulting the historic memory is discounted.

As Figure 1 points out, if the problem is not resolved by consulting organizational memory, the process of organizational learning begins. This next stage in the change process begins with filling in the unknowns through knowledge acquisition, of which there are various methods, such as observing, copying what others have done, hiring people with expert knowledge, and reviewing the scholarly literature. The less-than-smart organizations seem to place their hopes on the problems' simply going away, which, of course, they rarely do.

Whereas organizational learning takes place at the collective rather than the individual level, what individuals learn feeds the collective knowledge base. Thus, knowledge is acquired and exchanged between the individual, group, and organizational levels. Smart organizations recognize and respond to the notion that acquired knowledge vested only in individuals, even "stars," cannot do much to elevate the quality of performance of the organization until all the actors understand and can interact as a collective unit, sharing their thoughts and moves at a sophisticated level. In short, none of us are as smart as all of us.

Smart organizations are also cognizant that all acquired knowledge is not equal when it comes to organizational learning for problem solving. With single-loop learning, the acquired knowledge is for the short term and intended to facilitate routine day-to-day problem solving. Double-loop learning, on the other hand, is intended to ensure the long-term future of the organization by analyzing core issues and making policy judgments.

The smart organization, as indicated in Figure 1, recognizes that there should be an interaction between single- and double-loop learning. That is, when the smaller issues are recognized to form a pattern, such as the historic pattern of playground disputes becoming gang related, considerably more information and policy formulation are needed. If single-loop learning is the modus operandi of a school, it can only float with the tide rather than sail with the wind. To continue the metaphor, the smart organization has its radar on, constantly conducting what organization theorists call "environmental scanning." That is, it identifies opportunities or threats and subsequently acquires the systematic knowledge to deal with them effectively.

As illustrated in Figure 1, there is (or should be) a strong interaction between organizational learning and organizational memory, with each informing and facilitating the other. Smart organizations, for example, will be careful to evaluate new policies and programs (products of double-loop learning) and to systematically store the findings as hard knowledge (e.g., built into routines or rules) or soft knowledge (e.g., maintained in the files for reference).

Organizational change now becomes a possibility. Way back at the beginning of this model, the original problem that would not go away and needed solving could have started in the internal environment of the organization (e.g., interdepartmental conflict or promotion disagreements) or external environment (e.g., new state laws or a shortage of new teachers). Institutional theory emphasizes that when the “fit” between what the environment expects and requires and what the organization is doing and producing gets out of alignment (when a gap exists), something takes place in the environment or the organization to reestablish the fit.

However, as noted earlier, much of the emphasis of institutional theory is devoted to the institutional pressures and forces that reinforce stability within an organization at the expense of change (Aldrich, 2000, p. 51). Nevertheless, organizational change does take place, and the degree of change depends on how great the gap in the fit has become between the organization and its environment.

If the gap is due to an environmental shift, such as a prestigious university requiring an additional year of English as part of its admission requirements, then the high schools of the state are forced by institutional pressures to add English teachers and change their academic programs for many students.

A gap between the organization and the expectations and demands of its external environment can also emerge if the organization establishes programs or activities too far from the established norms in the field. By doing so, it risks its perceived legitimacy. Take, as an example, a new school that elects not to assign letter grades for student performance but depends on teacher comments alone. The external organizations, such as accreditation teams or parent groups, would no doubt quickly act (environmental regression) to force the school to change to more traditional practices. Organizational homogenization is the result, as the renegades are forced to act like everyone else.

However, when the gap becomes vast—if, for example, the state government eliminates bilingual education, or if teacher tenure is eliminated—then organizational reform must take place. Smart organizations make efforts to understand and shape the change process, whether that be (a) taking an

evolutionary step forward, (b) getting caught up in a homogenization process, or (c) going for systematic reform that significantly alters one or more core organizational components. In addition, smart educational organizations, as indicated in Figure 1, will be sure to learn the lessons of the change process by feeding the experience back into organizational memory and learning.

In sum, are some educational organizations smarter than others? Quite probably yes. Can an educational organization learn to be smart? Absolutely.

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The Influence of Leadership Style on Teacher Job Satisfaction

Ronit Bogler

The article examines the effects of principals' leadership style (transformational or transactional), principals' decision-making strategy (autocratic versus participative), and teachers' occupation perceptions on teacher satisfaction from the job. More specifically, it attempts to find out how much of the variation in teachers' job satisfaction can be attributed to their perceptions of their occupation, as compared to their perceptions about their principals' leadership style and decision-making strategy. A quantitative questionnaire using Likert-type scales was administered to 930 teachers in Israeli schools, of whom 745 responded. Path analysis was used to explain teacher job satisfaction by the exogenous variables. The most salient finding was that teachers' occupation perceptions strongly affected their satisfaction. Principals' transformational leadership affected teachers' satisfaction both directly and indirectly through their occupation perceptions. Implications of the study are discussed in relation to supervisors and principals, as well as to policy makers at the government level.

How do teachers perceive their principals? Do they regard them as transformational or transactional leaders? Do they evaluate them as participative or autocratic? How does the behavior of principals relate to teacher job satisfaction? A number of researchers have investigated the relationship between principals' leadership style and decision-making processes and teacher satisfaction and performance (Kirby, Paradise, & King, 1992; Koh, Steers, & Terborg, 1995; Silins, 1992) and teacher efficacy (Hipp, 1997; Hipp & Bredeson, 1995). However, a crucial factor has not been incorporated in these investigations, namely the perceptions of the teachers regarding their

Author's Note: This is an expanded version of a paper presented at the annual meeting of the American Educational Research Association in Montréal, Canada, April 1999. The author is grateful to Aviad Bar-Haim, three anonymous reviewers, and the editors of this journal for their helpful comments on earlier drafts of this article.

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occupation. This variable entails a number of aspects that relate to the concept of teaching as a profession: professional prestige, professional identification and status, sense of self-fulfillment, scope for self-expression and personal development, job autonomy, and centrality of the vocation. The goal of the current study is to examine the effects of three factors on teacher satisfaction from the job: principals' leadership style (transformational or transactional), principals' decision-making strategy (autocratic versus participative), and teachers' perceptions of their occupation.

THEORETICAL FRAMEWORK

Transformational and Transactional Leadership

During the past decade, schools have undertaken fundamental changes in areas such as curriculum development, students' and teachers' roles, and learning strategies. These changes have brought about a shift in the philosophy that dominated the realm of educational leadership. As Leithwood (1992, 1994) indicated, the form of instructional leadership corresponded well to the era of the 1980s and the 1990s because it met the expectations of the public's and the decision-makers' expectations from the principal. However, the changes undertaken during the 1990s could not be dealt with when the principal was functioning as an instructional leader. The concept of transformational leadership gradually moved to the center of the discourse as principals were expected to bring the visionary leadership to the organization—a task that was not taken care of by instructional leaders. Leithwood and Jantzi (1990) showed that school principals who succeeded in their job have used a wide range of mechanisms to motivate and activate their staff to bring about changes in their school culture.

Referring to transformational leadership, Burns (1978) described followers and their leaders as inspiring each other to achieve "higher levels of morality and motivation" such as justice and equality (p. 20). The transactional image of leadership refers to exchange relationships between the leaders and their followers: Each enters the transaction because of the expectation to fulfill self-interests, and it is the role of the leader to maintain the status quo by satisfying the needs of the followers. Silins (1994) indicated that transformational leadership "bonds leader and followers within a collaborative change process" (p. 274) and thus contributes to the performance of the whole organization. Transactional leadership, on the other hand, "does not bind leaders and followers in any enduring way"; therefore, it results in "a routinized, non-creative but stable environment" as compared to the "responsive

and innovative environment” that the transformational leadership brings about (p. 274). This perception of leadership styles contains a value judgment where transformational leadership is described more favorably than transactional leadership.

In attempting to validate the leadership concepts of Burns, Bass (1985) developed the Multifactor Leadership Questionnaire (MLQ). By conducting a factor analysis, Bass was able to identify three subfactors of transformational leadership that he labeled charisma, personal consideration, and intellectual stimulation and two subfactors of transactional leadership that he labeled contingent reward and management by exception. According to Bass, charisma is the ability of individuals to arouse people and bring them to follow the leader’s mission and vision, personal consideration is the leader’s ability of paying personal attention to the followers, and intellectual stimulation is the ability of the leader to motivate the followers to think of innovative and extraordinary solutions to problems. Later on, Bass and Avolio (1990) added another factor, inspiration, to describe transformational leadership. The ability to inspire is perceived as closely related to charisma and is therefore often regarded as the same constituent. Leithwood and Jantzi (2000) identified six main characteristics of educational leaders who are transformational: building school vision and goals, providing intellectual stimulation, offering individualized support, symbolizing professional practices and values, demonstrating high performance expectations, and developing structures to foster participation in school decisions. Contingent reward, one subfactor of transactional leadership, pertains to a situation where the leader rewards the follower on completing an agreed-upon task. Management by exception, the other subfactor describing transactional leadership, relates to a situation where the leader responds only in instances when things go wrong. Later on, this factor was conceived in two forms: passive and active (Bass & Avolio, 1990). This subfactor, management by exception, appears to be a negative attribute of leadership (Geijsel, Slegers, & Berg, 1999; Silins, 1994). This is especially true with regard to active management by exception that is defined operationally “in terms of looking for mistakes or enforcing rules to avoid mistakes” (Yukl, 1999, p. 289). The items composing this scale underscore “intrusive, controlling forms of monitoring” without indicating strategies that the leader adopts to correct followers’ mistakes whenever they are detected (Yukl, 1999, p. 289). In relation to the educational settings, transactional leadership has been described as having four dimensions: staffing, instructional support, monitoring school activities, and community focus (Leithwood & Jantzi, 2000).

Autocratic and Participative Decision Making

Although extensive literature has been published on participative leadership, there is, to date, no general agreement about the taxonomy of decision procedures (Yukl, 1994). Nevertheless, there are four styles of decision making that most researchers agree on: autocratic decision, where the manager does not consult any of the group or organization members and comes up with the final decision alone; consultation, where the manager gets advice from other members but, after taking the suggestions into consideration, makes the final decision alone; joint decision, where the manager discusses the problems with other members and together they come up with a final decision, in which each has had some influence; and delegation, where the manager gives one or a group of members the authority to decide. The “delegated” decision maker (or makers) carries the responsibility for the decision, even if the manager demands prior approval for it (Vroom & Yetton, 1973, pp. 10-38; Yukl, 1994, p. 157). It is hypothesized that the greater the involvement of teachers in decision-making processes, the higher their level of job satisfaction. This hypothesis is based on research on the relationship between teacher job satisfaction and involvement in decision making (e.g., Imper, Neidt, & Reyes, 1990; Rice & Schneider, 1994; Schneider, 1984). In an open climate, where principals are perceived as democratic managers who maintain open channels of communication with the staff, teachers would be more satisfied with their job as compared to schools where principals exhibit a harsh and authoritative attitude (Kottkamp, Mulhern, & Hoy, 1987).

Teacher Job Satisfaction

The education mission seems to be dependent on the way teachers feel about their work and how satisfied they are with it. Therefore, it is not surprising that researchers suggest that “schools must give more attention to increasing teacher job satisfaction” (Heller, Clay, & Perkins, 1993, p. 75).

Most research on teacher job satisfaction is rooted in the pioneering work of Herzberg, Mausner, and Snyderman (1959) who identified the satisfying and dissatisfying factors. Herzberg’s “two-factor theory” associates the satisfying factors, the “motivators,” with the higher order needs and the dissatisfying factors, the “hygiene factors,” with the lower order needs (Dinham & Scott, 1998). The higher order needs, the satisfiers, apply to the intrinsic aspects of work, such as achievement, recognition, the work itself, responsibility, and opportunity for advancement. The lower order needs, the dissatisfying factors, correspond to extrinsic matters of work, such as working conditions, supervision, work policy, salary, and interpersonal relationships.

Extensive literature supports the claim that job satisfaction is positively related to participative decision making and to transformational leadership (e.g., Maeroff, 1988; Rossmiller, 1992). Overall, teachers report greater satisfaction in their work when they perceive their principal as someone who shares information with others, delegates authority, and keeps open channels of communication with the teachers. A low level of teachers' involvement in decision making is related to a low level of satisfaction from work (Imper et al., 1990; Rice & Schneider, 1994).

Teacher job satisfaction is also associated with higher autonomy at work (Hall, Pearson, & Carroll, 1992; Poulin & Walter, 1992) and with aspects related to the teaching profession. Goodlad (1984) found that teachers who reported that they chose this occupation because of inherent professional values expressed higher levels of satisfaction and greater commitment than did their counterparts who went into teaching for economic reasons. Hall et al.'s (1992) study revealed that teachers who were planning to leave the profession expressed less job satisfaction and more negative attitudes toward teaching as a career and toward the school administration (p. 225). Teacher job satisfaction is also linked to teacher retention through aspects such as satisfaction with principal leadership (Betancourt-Smith, Inman, & Marlow, 1994) and satisfaction in general (Zigarelli, 1996). Reyes and Shin (1995) found that teacher job satisfaction is a determinant of teacher commitment and that it "must be present before the individual develops organizational commitment" (p. 36). The relationship between job satisfaction and commitment is not necessarily a characteristic of teachers only. More general research on worker job satisfaction and commitment has shown that conditions at work such as role conflict, autonomy, support from peers, and adequacy of resources are related to job satisfaction (Meyer & Allen, 1997; Spector, 1997).

Teachers derive their job satisfaction from their relationships with current and past students who keep in touch with them and from relationships with parents and colleagues (Dinham, 1995). Dinham (1995) found that these interpersonal relationships were among the main sources of teachers' job satisfaction, whereas the sources of teachers' job dissatisfaction were related to structural and administrative factors. Another indication to the importance of teacher-student relationship is found in Gay's (1995) study, which revealed that most effective teachers put great emphasis on the student-teacher relationship. As Shann (1998) concluded, "What the middle school teachers liked first and foremost about their jobs was their students. Teachers felt that teacher-pupil relationships were most important and reported that they were more satisfied with this aspect of their job than any other" (p. 72). "Reaching" the students and watching them learn from their experience, in addition to

using the skills that they had acquired, were the principal sources for job satisfaction among teachers in the greater area of Chicago (Plihal, 1982). Taylor and Tashakkori (1995) found that teachers use descriptions of job satisfaction that deal with how they feel about coming to school every day and their feeling of success, or lack of it, that they carry with regard to their performance with students.

Student achievement is identified as a very critical source of teacher satisfaction, a finding that draws implications on teachers' competence and efficacy (Dinham, 1995). The importance of student achievement to teachers' job satisfaction is found in another study that reveals that satisfaction in meeting students' achievement needs explained 28% of the variance in teacher satisfaction (Heller, Rex, & Cline, 1992). Ostroff (1992) found positive relationships between teacher satisfaction and indicators of student quality (reading and math skills, discipline problems, and attendance rates).

Teachers' Occupation Perceptions

The term *teacher's occupation perception* refers mainly to the intrinsic and extrinsic dimensions of the teachers' occupation. Intrinsic properties relate to aspects of teaching such as autonomy at work (Pearson, 1995), professional prestige and status, personal development, and self-esteem. Extrinsic properties refer to the physical aspects of the working place and to its benefits (e.g., salary). Obviously, both types of aspects are concerned with issues that relate to the teaching occupation as a profession.

In relation to job satisfaction, it is hypothesized that teachers' descriptions of their occupation as one that provides high status, promotion opportunities for talented individuals, possibilities for self-development, and personal growth (among other things) will positively affect their satisfaction from the work. Sergiovanni (1967) too, in attempting to test Herzberg's two-factor theory, confirmed the findings of Herzberg et al. (1959). In studying the factors that affect satisfaction and dissatisfaction of teachers, Sergiovanni found out that the "satisfiers" accounted for achievement, recognition, and responsibility, and the "dissatisfiers" included the interpersonal relationships with peers and subordinates, supervision (technical), school policy, and personal life (pp. 75-76). In a study that examined the effects of leaders' behavior, consideration, and initiating structure, it was found that occupational status was a crucial factor in predicting job satisfaction among research and development workers (House, Filley, & Kerr, 1971).

The effect of teachers' perceived autonomy in the classroom was also examined and was found to be positively correlated with job satisfaction (Kreis & Brockoff, 1986). Teacher empowerment is another facet of teachers'

perceptions of their occupation. It refers to professional growth, autonomy, self-efficacy, impact (the teachers' perceptions about their ability to influence school life), professional respect, and involvement in decisions that directly affect their work (Sheppard, 1996). Sheppard (1996) found positive relationships between the instructional leadership behaviors of principals, that is, behaviors that are directly related to teaching and learning, and professional involvement, which was defined as "the degree to which teachers are concerned about their work, are keen to learn from one another, and committed to professional development" (p. 335). Dinham and Scott (1998) found that teachers were most satisfied with intrinsic matters of their job, such as self-growth, mastery of professional skills, and supportive environment (p. 375). These findings imply that the teachers valued greatly the professional facets of their occupation.

Most researchers who study teacher job satisfaction examine the effects of variables such as principals' leadership style and principals' decision-making strategy on the contentment of teachers and the rate of teacher burnout from this occupation (Kirby et al., 1992; Koh et al., 1995; Silins, 1992). The present study, however, was set out to examine, among other things, the influence of teachers' occupation perceptions on their satisfaction from the job. Teacher's occupation perception is hypothesized to directly affect job satisfaction, but it is also hypothesized to be affected by principals' behavior (leadership style and decision-making strategy). Principals who demonstrate transformational behavior, such as paying personal attention to the needs and interests of the teachers, providing for intellectual stimulation and challenges, raising teachers' expectations and motivation to devote, and investing extra efforts, are assumed to encourage teachers to view their occupation as more rewarding and central to their lives.

Such a relationship will also pertain to principals' decision-making style, as teachers who take part in the decision-making processes in school will feel more involved and committed to their jobs. Therefore, principals' behavior (leadership style and decision-making strategy) will be examined through its direct and indirect effects on teachers' satisfaction.

It is assumed that teacher satisfaction will be less influenced by the participative decision-making style adopted by the principal and more by his or her transformational type of leadership. Earlier research indicates that teachers' burnout is significantly related to "consideration behaviors," which refer to paying attention to the needs and expectations of others (a transformational type of behavior), rather than to "initiating-structure behaviors." Initiating-structure behavior emphasizes task-oriented activities, where concerns and interests of people are only secondary in their importance scale (Halpin, 1966; Mazur & Lynch, 1989).

To summarize, the purpose of the study was to examine the effects on job satisfaction of (a) teachers' perceptions of their principals' leadership style (transformational/transactional), (b) teachers' perceptions of their principals' decision-making strategy (autocratic/participative), and (c) teachers' occupation perceptions. It should be noted that the study was aimed to examine the teachers' perceptions of their principals' behavior rather than the principals' actual behavior. Therefore, throughout the article, when these concepts are discussed, the references are to the teachers' views rather than to the observed behavior of the principals or to their self-reported assessments.

METHOD

Participants

From a sample of 930 teachers, 745 responded and returned usable questionnaires (80% return rate). The teachers in this study were from elementary (51%), middle (20%), and high schools (26%)—a total of 98 schools located in the northern part of Israel. Although it was not possible to select a random sample of all the schools in this region, care was taken to select urban, suburban, and rural schools from diverse populations that represent the composition of teachers in Israel with regard to gender and religion. Sixty-six percent were women, 62% were Jewish, and the rest were non-Jewish (mostly Muslim). Of the Jewish teachers, almost 90% were women. Of the non-Jewish teachers, the majority (70%) were men.

Research Instrument

A quantitative questionnaire using Likert-type scales was administered in 1997 to 930 teachers. The respondents were instructed to refer to their current school principal and to fill out a questionnaire that asked a range of questions about that principal's leadership style and decision-making strategy, their perceptions about the teaching occupation, and their satisfaction from various issues related to the school work.

The first section of the questionnaire was about transformational and transactional leadership. It was taken from the MLQ (Bass, 1985), which was translated into Hebrew and adapted to the Israeli milieu. It was a 27-item question with a 5-point scale (scored from 1 = *not at all* to 5 = *very typical*), which asked the respondents about the leadership style of their principals, according to the three categories of transformational leadership (charisma/inspiration, personal consideration, and intellectual stimulation) and the two

categories of transactional leadership (contingent reward and management by exception). The MLQ was tested by Bass in a number of studies. One of these studies was conducted on a sample of 256 U.S. supervisors and managers from a *Fortune* 500 firm (Bass, 1985, pp. 225-229). In this study, the coefficient α reliabilities per scale were as follows: charisma, .94; individual consideration, .87; intellectual stimulation, .89; contingent reward, .83; and management by exception, .70. (More about the structural validity of the MLQ can be found in Tepper & Percy, 1994). The MLQ has been used also in K-12 educational settings. Ingram (1997) used the MLQ to study transformational and transactional leadership behaviors of principals as perceived by teachers in inclusive educational settings. In this study, Ingram reported the high validity found for the overall transformational and transactional leadership constructs in three studies that used the MLQ in the general K-12 settings (King, 1989; Koh, 1991; and Hoover, Petrosko & Schultz, 1991, as cited in Ingram, 1997). In another study, T. J. Evans (1996) asked teachers and principals to respond to the MLQ to study the relationship between elementary principals' use of transformational leadership strategies as determined by teacher reports and the presence of five social-organizational factors within the schools: shared goals, teacher collaboration, teacher learning, teacher certainty, and teacher commitment.

The second section of the questionnaire dealt with autocratic and participative strategies of decision making. It was taken from Friedman's (1985) questionnaire on the decision-making style of school principals. Friedman's questionnaire, which is based on Vroom and Yetton's (1973) concept of decision processes, entails four main forms: (a) manager makes own decisions without consulting with subordinates, (b) manager consults with subordinates but makes own decisions, (c) manager makes joint decisions with subordinates, and (d) manager delegates decisions to subordinates. According to Vroom and Yetton, the first form of behavior refers to autocratic management, the second one to consultative management, the third to group decision making, and the last to the delegation type of decision making.

The third section of the questionnaire dealt with teachers' occupation perceptions. It was a 28-item question (scored from 1 = *disagree strongly* to 5 = *agree strongly*), which asked about various facets of the teaching occupation (Yaniv, 1982). From Yaniv's questionnaire, five subscales were used in the current study: Perceived Status, Perception of the Profession, Professional Identity, Perceived Autonomy, and Professional Competence. Coefficient alphas ranged from $\alpha = .54$ to $\alpha = .93$, indicating that some subscales were relatively high and others relatively low in their internal reliability.

The last section of the questionnaire regarding teacher satisfaction was taken from a questionnaire on principals' and teachers' job satisfaction that had been previously administered and validated (Tarabeh, 1995). The question included 25 items with a 7-point Likert-type scale (scored from 1 = *never* to 7 = *always*). In his work on an Israeli sample of teachers and principals, Tarabeh (1995) identified four dimensions describing teachers' satisfaction: fulfillment of expectations ($\alpha = .93$), guidance and assistance from the Ministry of Education ($\alpha = .88$), internal conditions of work ($\alpha = .81$), and relationship with students and parents ($\alpha = .72$). The coefficient alpha for the whole question was .94.

Although the research instruments were tested for validity and reliability by their authors, the factorial constructs were retested. Principal component analysis with varimax rotation was performed on each of the study scales on a random sample of the respondents to test for scale validity.

The questionnaire for the present study was pretested on a group of 35 teachers. After incorporating a number of changes (e.g., clarifying statements and omitting items that were ambiguous and/or not relevant), and a retest on 5 more teachers, the revised questionnaire was finalized. Table 1 lists a sample of items from each scale that was used in the questionnaire.

RESULTS

Dimensions of Transformational and Transactional Leadership

Principal component analysis with varimax rotation was performed on the 30 items of the MLQ to determine if the various behavioral dimensions proposed by Bass and Avolio (1990) would replicate for this sample. The factor analysis yielded six factors. The first factor contained 15 items that referred to charisma, intellectual stimulation, and vision (item loadings ranged from .49 to .80). The second factor contained 2 items that referred to personal consideration (item loadings .60 and .72). Because in the current study emphasis has been given to the overall effects of the exogenous variables on the criterion teachers' satisfaction, an overall scale was constructed for each of the factors using the mean score of each one: (a) Transformational Leadership, (b) Transactional Leadership, (c) Teacher's Occupation Perception, and (d) Teacher's Satisfaction (see Table 2). Therefore, the two factors that included 17 items were combined to create one scale of transformational leadership.

The third factor (five items) and the fourth factor (three items) reflected management by exception (passive) (item loadings from .61 to .75) and contingent reward (item loadings from .74 to .80). The fifth factor contained two

TABLE 1
Selected Items of the Study Scales

<p>Transformational Leadership</p> <ul style="list-style-type: none"> • The principal projects himself or herself as a role model. • The principal displays talent and ability to cope with decision making. • The principal strives toward the collective goal of fulfilling a mission. • The principal presents new challenges and projects. • The principal believes in the teachers' ability to deal with obstacles. <p>Transactional Leadership</p> <ul style="list-style-type: none"> • The principal focuses his or her attention on finding exceptions, deviations, and weaknesses in teachers. • The principal does not hesitate to remark on mistakes and errors that call for his or her intervention. • Problems must become chronic before the principal takes action. • The principal tells staff members what to do to receive rewards for the efforts. • The principal will not bother the teachers if they will not bother him or her. <p>Decision-Making Style</p> <p>Respondents were asked to describe, based on the following scale, the way their principal makes a decision with respect to different situations (1 = makes own decisions without consulting with subordinates; 2 = consults with subordinates but makes own decisions; 3 = makes joint decisions with subordinates; 4 = delegates authority to subordinates).</p> <ul style="list-style-type: none"> • Determining rules and regulations regarding discipline problems at school. • Determining the character of classroom activities. • Choosing the textbooks that will be used in the next year from the list of approved textbooks. • Determining the dates for faculty meetings at school. • Allotting lab or computer time to each class. <p>Teacher's Occupation Perception</p> <ul style="list-style-type: none"> • I feel free to try new ideas and teaching techniques in the classes that I teach. • My line of work provides me with a high status. • Teaching gives me the feeling that I can change people. • There are always promotion opportunities for a talented teacher. • In my line of work, opportunities for self-development prevail. <p>Teacher's Satisfaction</p> <p>Respondents were asked to indicate how often they felt satisfied with various aspects of their work.</p> <ul style="list-style-type: none"> • Cooperation with other teachers. • Student achievement. • Physical conditions of the school. • Support of the supervisors. • School budget.
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items that reflected management by exception (active) (item loadings .67 and .80). The third, fourth, and fifth factors were brought together to create one scale of transactional leadership (see the appendix for descriptive statistics of

TABLE 2
Reliability Indices, Means, and Standard Deviations for the Five Scales

<i>Scale</i>	<i>Reliability</i> ^a	<i>M</i>	<i>SD</i>
Transformational Leadership (17 items; <i>n</i> = 682 teachers)	.94	3.64 ^b	.75
Transactional Leadership (10 items; <i>n</i> = 712 teachers)	.77	2.34 ^b	.67
Teacher's Occupation Perception (28 items; <i>n</i> = 702 teachers)	.93	3.19 ^c	.60
Decision-Making Style (24 items; <i>n</i> = 601 teachers)		2.45 ^d	.47
Teacher's Satisfaction (25 items; <i>n</i> = 677 teachers)	.96	4.73 ^e	.99

a. Cronbach's alpha.

b. Rating scale: 1 = *not at all* to 5 = *very typical*.

c. Rating scale: 1 = *disagree strongly* to 5 = *agree strongly*.

d. Rating scale: 1 = *autocratic decision* to 4 = *delegation*.

e. Rating scale: 1 = *never* to 7 = *always*.

the scales). The sixth factor (two items) was meaningless and therefore it was omitted from the analysis. The eigenvalues of the five factors were as follows: 9.89 (Factor 1), 3.34 (Factor 2), 1.71 (Factor 3), 1.24 (Factor 4), and 1.05 (Factor 5), explaining 61% of the total variance.

Dimensions of Teachers' Occupation Perceptions

Principal component analysis with varimax rotation was performed on the 28 items that composed this question. The factor analysis yielded six factors. The first factor contained 6 items that referred to occupational prestige (item loadings ranged from .47 to .72). The second factor contained 6 items that referred to the teachers' self-esteem (item loadings from .42 to .70). The third factor contained 4 items that referred to autonomy in class (item loadings from .50 to .80). The fourth factor contained 4 items that reflected professional self-development (item loadings from .47 to .73). The fifth factor contained 4 items that reflected degree of consideration in the opinions of teachers (item loadings from .48 to .80). The sixth factor contained 4 items that reflected professional autonomy (item loadings from .46 to .79). The eigenvalues of the six factors were as follows: 9.58 (Factor 1), 2.07 (Factor 2), 1.5 (Factor 3), 1.22 (Factor 4), 1.14 (Factor 5), and 1.08 (Factor 6), explaining 59% of the total variance.

Dimensions of Teachers' Job Satisfaction

Principal component analysis with varimax rotation was performed on the 25 items that composed this question. The factor analysis yielded three

TABLE 3
Pearson's Correlation Coefficients Among Research Scales

Scale	1	2	3	4	5
1. Teacher's Satisfaction		.56** (739)	-.21** (738)	.35** (735)	.65** (739)
2. Principal's Transformational Leadership			-.25** (744)	.38** (741)	.40** (745)
3. Principal's Transactional Leadership				-.02 (740)	-.01 (744)
4. Principal's Autocratic-Participative Style					.37** (741)
5. Teacher's Occupation Perception					

NOTE: Numbers in parentheses are sample sizes.
 ** $p < .0001$.

factors. The first factor contained 11 items that referred to self-fulfillment conditions (item loadings ranged from .62 to .82). The second factor contained 9 items that referred to the internal conditions of the teacher's job (item loadings from .47 to .74). The third factor contained 5 items that referred to physical conditions of the job (item loadings from .41 to .78). The eigenvalues of the three scales were as follows: 12.48 (Factor 1), 1.78 (Factor 2), and 1.26 (Factor 3), explaining 62% of the total variance.

These findings of the factor analyses, and the values of the Cronbach's alphas that were calculated for each factor and yielded very similar values to the ones found in the original studies, provide another confirmation to the content validity of the factors.

The correlation matrix of the independent variables and teachers' job satisfaction revealed the following results: Teachers' satisfaction was significantly correlated with teachers' occupation perceptions ($r = .65, p < .0001$), transformational leadership ($r = .56, p < .0001$), participative style ($r = .35, p < .0001$), and transactional leadership ($r = -.21, p < .0001$). (See Table 3.)

The more the teachers perceived their occupation in terms of a profession, the more they perceived their school principals to be transformational leaders, the more they perceived their school principals to be transformational leaders, the more the principals were participative, and the less they exhibited transactional leadership, the greater their job satisfaction.

Path analysis was employed to test the model in Figure 1. This method, which assumes linear and nonrecursive relationships among interval variables, allows examination of the direct and indirect effects of the independent variables, principals' leadership style, their decision-making strategy, and

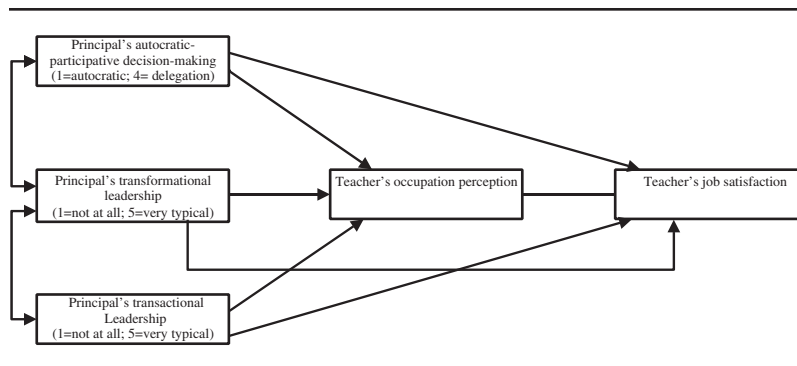


Figure 1: Conceptual Relationship Between Principal's Leadership Style, Principal's Decision-Making Strategy, Teacher's Occupation Perception, and Teacher's Job Satisfaction

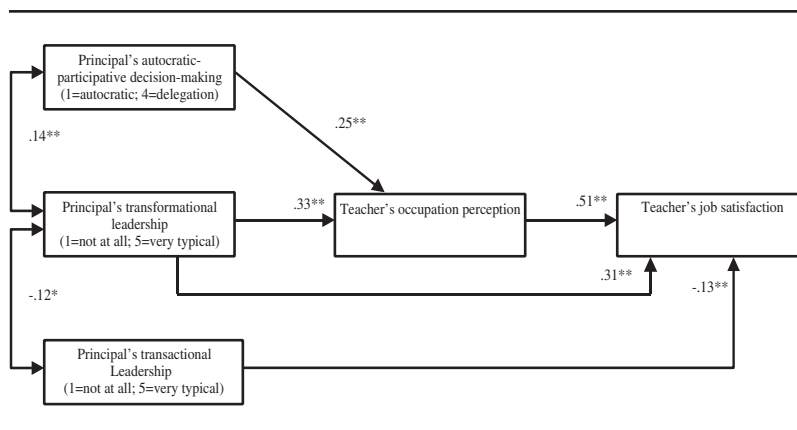


Figure 2: Path Analysis of the Relationships Between Principal's Leadership Style, Principal's Decision-Making Strategy, Teacher's Occupation Perception, and Teacher's Job Satisfaction (n = 706)

* $p < .001$. ** $p < .0001$.

teachers' occupation perceptions, on the dependent variable, teachers' job satisfaction. This technique allows the researcher to estimate the direct and indirect effects of variables in systems of structural equation models. Figure 2 depicts the results of testing the model reported in Figure 1 (using AMOS 3.61 of SPSS 8.0) with maximum likelihood as the method of estimation. The model shows an almost perfect fit with the data, $\chi^2(1, N = 706) = .439, p =$

.507; goodness of fit index = 1.000; adjusted goodness of fit index = .996; root mean square residual = .003.¹

The most salient finding is that teachers' occupation perceptions strongly affect teachers' satisfaction ($\beta = .51, p < .0001$). Teachers' occupation perceptions are influenced by principals' transformational leadership ($\beta = .33, p < .0001$) and by participative decision-making style ($\beta = .25, p < .0001$). Principals' transformational leadership affects teachers' satisfaction both directly ($\beta = .31, p < .0001$) and indirectly through teachers' occupation perceptions ($\beta = .17, p < .0001$). The principals' participative decision-making style affects teachers' satisfaction only indirectly through teachers' occupation perceptions ($\beta = .13, p < .001$). Principals' transactional leadership affects teachers' satisfaction negatively ($\beta = -.13, p < .001$). The model explains 54% of the variance of teachers' satisfaction. It reveals that teachers' satisfaction increases as they perceive their principals' leadership style as more transformational and less transactional.

Analysis of the model by gender and religion revealed that female teachers derived more satisfaction from their work than did their male colleagues ($\beta = .07, p < .05$), and Jewish teachers were more satisfied than non-Jewish teachers ($\beta = .06, p < .05$). With regard to transactional leadership, male teachers perceived their principals more as transactional leaders than female teachers did ($\beta = -.17, p < .0001$), and non-Jewish teachers viewed their principals more as transactional leaders than Jewish teachers did ($\beta = .23, p < .0001$).

DISCUSSION

The most interesting finding of this study is the effect teachers' perceptions of their occupation have on their job satisfaction. Their perceptions of occupational prestige, self-esteem, autonomy at work, and professional self-development contribute the most to job satisfaction. This finding supports previous research that revealed a significant positive relationship between aspects of the teaching occupation and job satisfaction (Goodlad, 1984; Poulin & Walter, 1992). This variable serves as a mediating variable between principals' leadership style and teachers' satisfaction. In this study, teachers reported feeling highly or very satisfied when their work gave them "a sense of self-esteem," provided them with "opportunities for self-development," gave them "a feeling of success," and allowed them "to participate in determining school practices." Such expressions of feelings about their work support theories of teacher job satisfaction, such as the two-factor theory that originated in the work of Herzberg et al. (1959). These researchers argued

that the motivators, which refer to intrinsic aspects of teaching such as teachers' self-growth, personal development, and recognition, tend to promote job satisfaction. Hygiene factors, which relate to external aspects of work such as poor working conditions, tend to result in teachers' dissatisfaction (Graham & Messner, 1998; Sergiovanni, 1967). Future studies should investigate the concept of teachers' job satisfaction by distinguishing its constituents, as has been done in numerous studies, such as Dinham and Scott (1998). In the present study, overall job satisfaction, incorporating self-fulfillment aspects with both internal and physical aspects of the work, was examined. Further research should be pursued to clarify the concept of job satisfaction because as reported by L. Evans (1997), there is a "heterogeneity among teachers with respect to what they found satisfying and/or satisfactory" (p. 327).

Limitations

Like all research, this study has certain limitations. First, a couple of factor loadings were below .5 and thus considered weak. Therefore, it is recommended that future research use instruments based on items that have higher factor loadings. Second, as indicated earlier, researchers suggested that transactional leadership, and especially the subfactor management by exception, entails some negative connotation in its scale items (e.g., Silins, 1994; Yukl, 1999). This is evident also in the phrasing of the scale items that compose this subfactor (e.g., "The principal focuses his or her attention on finding exceptions, deviations, and weaknesses in teachers"; "The principal does not hesitate to remark on mistakes and errors that call for his or her intervention"). Consequently, the definition of transactional leadership may present a problem of face validity that may influence the reliability of this construct. It is suggested that future research take into account this shortcoming of the instrument to improve the construct's reliability. Last, with regard to the generalizability of the sample, it should be realized that because the sample was carried out only in the northern part of Israel, any attempt to generalize the study's findings, conclusions, and implications to the whole population of teachers in the entire country should be approached with caution. Further research that will incorporate factors that ensure that the sample is representative will contribute to studying teachers' job satisfaction in relation to principals' behavior.

The model of the study demonstrates that the teachers' perceptions of their principals and of their occupation contribute significantly to the explanation of the variance in job satisfaction. However, teachers' perceptions are subjective, and it may be that their perceptions are affected by variables that were not examined in this study. With regard to the dichotomies of the leadership

styles and of the decision-making strategies, it is important to note that the context within which each principal acts may affect his or her adoption of the leadership style and decision-making strategy. For example, principals might be autocratic on some matters and participative on others, or with certain individuals as opposed to others. It would also be interesting to examine whether the same principals adopt different approaches depending on the context within the school (e.g., a young, growing school versus an old, established one) and outside it (e.g., a stable and supportive environment versus a fluid and demanding environment).

The data analysis indicated gender and religion differences with regard to both job satisfaction, though the magnitude was relatively low, and to teachers' perceptions of the principal as a transactional leader. An analysis of the model revealed that female teachers expressed greater job satisfaction than did their male peers, thus supporting earlier studies (Chapman & Lowther, 1982; Kagen, 1983; Watson, Hatton, Squires, & Soliman, 1991). In addition, Jewish teachers expressed higher levels of job satisfaction than did the non-Jewish teachers. Perceptions of principals as transactional leaders were higher among male teachers and non-Jewish teachers and lower among female teachers and Jewish teachers. Before discussing the implications of these findings, it is important to note that there is mutual dependence between the two variables, gender and religion. As indicated, the overwhelming majority of the Jewish teachers (almost 90%) were women, whereas a very large majority of the non-Jewish teachers (about 70%) were men. Therefore, there is great similarity between the findings regarding gender and those related to the religion differences. These findings are not surprising as the poor infrastructure conditions of the non-Jewish schools, as compared to the Jewish schools, present a troubling reality of the school (Al-Haj, 1995). In addition, male teachers among the non-Jewish population choose this occupation as a last resort because of their inability to get a job that would fit their academic credentials and qualifications. Under these circumstances, the male, non-Jewish teachers feel frustrated and express greater dissatisfaction from their job. Support for the finding regarding the greater satisfaction of female teachers as compared to their male counterparts was also found in a study about the inner world of Israeli secondary school teachers (Kremer-Hayon & Goldstein, 1990). Examination of additional personal and school site variables in relation to the study variables is recommended for future research to deepen our understanding about teachers' job satisfaction in Israel and in comparison with other countries.

Implications and Conclusions

The findings of this Israeli sample support the research work conducted elsewhere, which showed that teachers prefer to work with a principal who exhibits a transformational type of behavior rather than a transactional one. (This finding, however, should not be surprising because principals who act as transformational leaders seem to maximize the autonomy that teachers have long had. Given that the challenge for education is more in the area of how teachers can better coordinate their work rather than how they can maximize their autonomy, the finding regarding the teachers' preference for transformational principals seems to reinforce organizational structures and functioning that may be becoming increasingly obsolete.) The study calls our attention to the inner world of teachers. It suggests that to increase teachers' level of satisfaction at work, we need to pay attention to factors related to all aspects of the teaching occupation, especially those titled "professional," as they refer to the characteristics of teaching as a vocation. Teachers' perceptions of their occupation are highly significant in affecting their satisfaction from the job. This implication should be acknowledged by decision makers at the top level, such as governmental officers, and on the more local level, by supervisors and principals. The more the teachers perceive their teaching job as a profession and central to their lives, the more they will be satisfied with it. Moreover, to improve the general feeling of all teachers, school principals need to be more aware of how strongly their role and behavior affect teachers' perceptions about their occupation—and their job satisfaction. Through transformational leadership and participative behavior, principals can develop and foster positive feelings and attitudes of teachers regarding their vocation. Viewing teaching as an occupation that confers a sense of self-esteem and professional prestige will lead the teachers to consider it as central to their lives and will thus increase their satisfaction from their work. Teachers' satisfaction from the job is highly important for the nexus between teachers and students, for satisfied teachers will be more enthusiastic about investing time and energy in teaching their students. Hence, this study may provide the first step in a line of research relating principals to teachers to students. This could be accomplished through collecting data from the principals about their leadership styles, decision-making approaches, and demographics and how these variables affect the views of teachers about their satisfaction and, ultimately, the students and their learning as described in a self-reported survey. This next step in this line of research is especially valuable today, when the expectations of all the parties involved in the learning process are more elevated than ever before.

NOTE

1. The goodness-of-fit index (GFI), developed by Jöreskog and Sörbom (1981), is based on the ratio of squared discrepancies to observed variances. It measures "how much better the model fits as compared to no model at all" (Jöreskog & Sörbom, 1993, p. 122). GFI range is between 0 and 1, where 1 indicates a perfect fit. The adjusted goodness of fit index (AGFI) takes into account the degree of freedom available for testing the model. The AGFI is bounded above by 1, which indicates a perfect fit. The root mean square residual (RMR) is the square root of the average squared amount by which the sample variances and covariances differ from their estimates obtained under the assumption that the model is correct. An RMR of 0 indicates a perfect fit. GFI and RMR are measures of goodness of fit per se, whereas AGFI is an index of parsimonious goodness of fit that takes into account the number of free parameters required to achieve a given level of fit (Loehlin, 1992, p. 75).

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Teachers' Multiple Roles and Skill Flexibility: Effects on Work Attitudes

Zehava Rosenblatt

This study investigated the mediating effect of teachers' skill flexibility (the mastery and utilization of various skills) on the relationship between holding multiple roles (extrateaching school roles) and work attitudes (burnout, tendency to quit, and organizational commitment). In this study, skill flexibility was composed of three components: skill utilization, skill variety, and multiskilling orientation. SEM path analysis revealed that skill utilization mediated the effect of holding multiple roles on all three work attitudes, and skill variety mediated the effect of holding multiple roles on burnout. Multiskilling orientation added little explanation to the final model. Skill flexibility components also mediated the effects of demographic variables (age, education, nationality, and school size) on all three work attitudes. These results contribute to the conceptualization of skill flexibility, which has been relatively underresearched in the organizational literature. Implications for teachers' work design are discussed.

One of the most noted challenges to organizations in recent years has been how to adjust to the rapid pace of change. Environmental changes in consumer tastes and demands, legal requirements, demographic mobility, technological development, and economic fluctuations all call for constant organizational learning and adjustment in order to survive. In educational systems, schools are continuously undergoing changes in areas such as learning technology, social integration, and organizational structures (Levin, 1993). To help schools adjust to such changes, teachers often take on new roles and need to constantly acquire and utilize new skills—in short, to be

Author's Note: The author wishes to acknowledge the technical assistance of Daniel Peled and the editorial assistance of Helene Hogri in the preparation of this article. This article is dedicated to the memory of Meir Rosenblatt.

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skill flexible. The purpose of this study was to examine teachers' perceptions of skill flexibility and its effect on work attitudes.

The association between change and skill flexibility has been demonstrated in a multicountry study on change in teachers' work life (Rosenblatt, 1999). In that study, skill flexibility was defined as the use of various teaching methods and contents and the development of new competencies. Reports of educational changes in the countries covered showed that, almost without exception, changes required the development of new skills among the teachers involved. The educational initiatives required teachers from the countries in the study to develop new skills. Although the teachers displayed varying levels of skill flexibility, there was a relationship between skill flexibility and two other variables, participation in change and positive feelings toward change.

To mobilize change and at the same time advance their own careers, teachers need to assume roles other than teaching, both pedagogical and administrative. Extrateaching roles require technological, administrative, and social skills in addition to those needed for routine teaching roles. Multiple roles in education can be found in various nonteaching school positions held by teachers. Although schools' internal hierarchies are relatively flat, there are various positions that teachers can fill, either as entry-level jobs on the way to full administrative careers or as "quasi-administration" positions (Castallo, Fletcher, Rossetti, & Sekowski, 1992, p. 318). These positions include department chairs, coordinators, supervisors, and coaches. Although the rewards, training, and in some cases licensing attached to these positions vary among school districts and position levels, they all share the need and opportunity for teachers to use various skills. Another avenue for the development and practice of nonteaching skills is through teachers' involvement in various school programs (e.g., computer education, gifted programs, drug education, social integration).

To illustrate ways teachers can develop new skills in multiple roles, the Israeli educational system, the site of this study, serves as a case in point. This educational system has been undergoing continuous political, pedagogical, structural, and demographic change. Politically, the Israel Ministry of Education changes back and forth between conservative-rightist and liberal-leftist philosophies. These changes, reflecting different ideological orientations, result in a similar pendulum effect for school programs and pedagogy. In addition, educational administrators are experimenting with new programs designed to support two conflicting objectives: enhancing excellence and promoting equal opportunities. Structurally, the Ministry of Education has been experimenting with new school forms designed to decentralize the overburdened central governmental system. These new organizational forms

include open school registration and school-based management. In addition to the new organizational and governance structures, the Israeli student body is becoming more heterogeneous in recent years due to the large number of immigrants from Russia and Ethiopia. This has resulted in massive social problems added to the ongoing tensions between national (Israeli Jews, Israeli Arabs), religious (orthodox, conservative, secular), and ideological (kibbutz, urban) groups (Adler, 1989; Elboim-Dror, 1989; Gaziel, 1993, 1994).

These characteristics of the Israeli system—particularly the constant planned and unplanned changes and the pluralism of the student body—reflect the need for teachers to adjust and cope by developing new skills and competencies. New pedagogical programs require the mastery of novel teaching and instruction skills. New structures such as site-based management call for teachers to assume active roles in management and participate in decision making, thus developing administrative skills. Integration of students from various backgrounds requires teachers to use counseling and other social skills. Clearly, teachers—like employees in any organization—need to become flexible to adjust to changes, and this flexibility involves the development and utilization of various skills.

Skill Flexibility

Any adjustment to change involves flexibility, which is “a ready capability to adapt to new, different, or changing requirements” (*Webster’s Universal College Dictionary*, 1970). Applied to organizations, flexibility is a positive attribute contributing to organizational effectiveness. Staw, Sandelands, and Dutton (1981) suggested that organizations need to resort to nonrigid (flexible) responses to cope effectively with threatening change, particularly when change is radical. To a large extent, organizational adjustment depends on its members’ capacity to adjust. Among other ways, organizational responses are achieved when the workforce can learn and apply new skills. There are various ways employees can be flexible at work: for example, “flexiplace,” “flexitime,” “contingent work,” and other methods of “work externalization” (Pfeffer & Baron, 1988). This study focuses on what is perhaps the most challenging feature of employees’ adapting to change, skill flexibility.

The notion of skill flexibility refers to “the mastery of various skills, and the ability to switch easily from one job to another while using different skills as required” (Atkinson, 1984, p. 28). Skill flexibility, then, is mainly concerned with skill variety and skill utilization.

In one of the few studies in which skill flexibility was applied to school teaching, Rosenblatt and Inbal (1999) defined two types of skill flexibility:

(a) the ability to teach more than one subject matter and (b) holding at least one nonteaching role in school (multiple roles). Both types of skill flexibility were positively related to work performance (measured by principals' evaluation); and the latter type was also directly and positively related to organizational commitment, directly and negatively related to powerlessness, and indirectly and negatively related to burnout and intention to quit. Based on these results and on interviews with school principals, the authors concluded that skill flexibility generally enhanced schools' effectiveness. This study draws on those conclusions, focusing on the interrelations between the two concepts.

This and other reports on the effects of skill flexibility derive their theoretical foundations from five lines of inquiry: (a) job enrichment, (b) job enlargement, (c) skill variety, (d) skill utilization, and (e) multiskilling training. A careful examination of studies in these five areas shows that the primary notion underlying most of them is employees' skills, particularly the extent to which skills are varied and utilized.

Job enrichment research. The earliest and most prevalent theory featuring job enrichment is Herzberg, Mausner, and Snyderman's (1959) motivational theory. Motivation, according to this theory, is a function of work factors such as responsibility, advancement, and recognition. These work factors imply the acquisition and utilization of "vertical" skills involving, for example, leadership, entrepreneurship, administration, and self-regulation. Research on job enrichment shows that vertical skills are associated with higher job satisfaction (Newman, Edwards, & Raju, 1989), generally confirming Herzberg and colleagues' original theory. In the teaching profession, job enrichment has been associated with lower burnout (Cunningham, 1983; Farber, 1991).

Job enlargement research. In contrast to job enrichment, job enlargement can be referred to as utilization of "horizontal" skills, that is, multiple-task work that requires skills of a similar level of complexity and responsibility (Buhler, 1990). Here flexibility involves variety of tasks, not skills. Yet recent research on job enlargement identified *knowledge enlargement*, defined as "adding requirements to the job for understanding procedures or rules relating to different products sold by the organization" (Campion & McClelland, 1993, p. 339). Knowledge enlargement in this research involved not only added tasks but higher basic skills (reading, writing, math, and problem solving). In teaching, job enlargement often consists of creating positions and tasks that are added to regular teaching work (Firestone, 1994). Studies on the effects of job enlargement programs show that when added tasks are interde-

pendent, motivation is increased (Wong & Campion, 1991). Furthermore, knowledge enlargement has been related to increased satisfaction (Campion & McClelland, 1993). Studies in education also point to positive effects of job enlargement. Firestone (1991), for example, showed that the instruction of teachers whose jobs were enlarged became more diversified. In another study, Conley and Levinson (1993) found that adding nonteaching roles, such as mentor roles or curriculum development, helped to better utilize teachers' skills.

Skill variety research. Hackman and Oldham's (1975, 1980) Job Characteristics theory has been widely used to describe the effect of skill variety, together with four other job characteristics (task identity, task significance, autonomy, and feedback), on work outcomes. According to this theory, the five core characteristics, when properly designed, create conditions for better psychological and performance outcomes. This theory has been largely supported, particularly with respect to job satisfaction (Hogan & Martell, 1987; Kelly, 1992). In education, the Job Characteristics theory has proven to be a useful diagnostic tool (Barnabé & Burns, 1994). Researchers investigating work restructuring efforts who apply Job Characteristics theory showed that these efforts improved teacher motivation, satisfaction, and participation (Frase & Sorenson, 1992) and generally contributed to school effectiveness (Rosenbach, Gregory, & Taylor, 1983). Of the five job characteristics, skill variety is the closest notion to skill flexibility. Skill variety has been defined as "the degree to which a job requires a variety of different activities in carrying out the work, which involve the use of a number of different skills and talents of the person" (Hackman, 1977, p. 115). In a meta-analysis, Fried and Ferris (1987) found that skill variety had the strongest positive relationship of all five job characteristics with internal work motivation (in 22 studies) and also had a relatively strong negative relationship with absenteeism (in 3 studies).

Skill utilization research. Skill utilization has been defined as "the degree of match or congruence between an individual's skills and the level of skill required by his or her job" (O'Brien, 1983, p. 462). Whereas skill variety mainly refers to the range of tasks performed where multiple skills are involved, this concept taps the match between tasks and employees' skills. Skill utilization has been found to be strongly related to job satisfaction among federal government employees (Ting, 1997). This relationship was expanded when O'Brien (1983) found a significant increment in job satisfaction variance when skill utilization entered the model following skill variety. Others have also found skill utilization to be related to increased job satisfaction (Humphreys & O'Brien, 1986; Kopelman, 1985; Nachmias, 1988). Simi-

larly, in a study on Israeli Jewish and Israeli Bedouin teacher populations, skill utilization was positively correlated with job satisfaction and negatively correlated with burnout (Meir, Melamed, & Abu-Freha, 1990).

Multiskilling training research. Multiskilling is “the process of increasing the skill repertoire of workers in such a way as to improve the ability of an employee to work in more than one narrowly defined occupational specialty” (Cordery, 1989, p. 13). Multiskilling is mainly concerned with training, namely, providing employees with the opportunity to acquire a range of distinct and organizationally relevant skills. In addition, it provides a system of job/task rotation and encourages a compensation or reward system that is closely linked to the acquisition of additional skills. Cordery (1989) found multiskilling (measured through employee orientation) to foster humanization of work, reduce organizational conflict, lower labor costs, enhance productivity, and improve working conditions. The downside of multiskilling, though, is the costs incurred in training for multiple skills. Studies on the implementation of multiskilling in service-related sectors have shown it to have a favorable effect on employees. For example, multiskilled health care workers reported more interesting jobs, greater job security, and more feelings of enhanced contribution to the hospital than uni-skilled employees (Vaughan, Fottler, Bamberg, & Blayney, 1991).

To summarize, the five lines of research presented above seem to revolve around employees' use of skills. Whether jobs are enriched or enlarged, and whether individual skills are utilized or varied, the focus is on using skills flexibly in conjunction with organizational needs. Employees whose jobs are optimally designed in these terms become skill flexible.

Work Attitudes

Most studies on skill flexibility in its various forms (including the holding of multiple roles) have concluded that it has a positive effect on work attitudes. Based on published research, there are three possible effects of skill flexibility (or the lack thereof) on work attitudes. These attitudes include burnout, a tendency to quit, and organizational commitment, and are explained in the following paragraphs.

Burnout. Burnout is one of the most widespread stressors in work (Shirom, 1989). According to Maslach and Jackson (1981), the burnout syndrome is composed of three symptoms: depersonalization, exhaustion, and lack of actualization. Researchers found that burnout is related to intention to

leave (Weisberg, 1994) and to actual job leaving (Jackson, Schwab, & Schuler, 1986). As performers of service work that involves heavy interaction with people, teachers are particularly vulnerable to burnout symptoms (Burke & Greenglass, 1995; Friedman, 1991). Common sources of burnout in educators are role-related problems such as work overload, role conflict, and role ambiguity (Maslach, Jackson, & Leiter, 1996; Schwab & Iwanicki, 1982). In a recent study, Rosenblatt and Inbal (1999) found burnout to be related to teachers' multiple roles through the mediating effect of school commitment and sense of powerlessness. In other words, teachers who held nonteaching jobs were less burnt out when their school commitment was high and their sense of powerlessness was low. These results suggest that holding multiple roles in school has the potential of elevating school commitment and a sense of control over one's life, leading to the enhancement of teachers' self-efficacy, work interest, and self actualization and, thus, eliminating some of the negative symptoms of burnout.

Tendency to quit. Tendency to leave the job (voluntary turnover) might create a critical problem when the "leavers" are of better quality than the "stayers." As observed by Murnane, Singer, Willett, Kemple, and Olsen (1991) and Hart (1994), teachers who quit their jobs are generally of greater ability than the average teacher. "Brain drain," or exit of the more qualified employees (Rosenblatt & Sheaffer, 2001), is often caused by, among other things, lack of job variety (Martin, 1992) and skill underutilization (Rosenblatt & Sheaffer, 2001). In line with this argument, the tendency to quit was found to be inversely related to holding nonteaching roles (through the mediating effect of school commitment and powerlessness) in Israeli high schools (Rosenblatt & Inbal, 1999). Whereas salaries and working conditions have been found to be the most important determinants of quit decisions for teachers (Brewer, 1996; Useem, 2001), failure to get an administrative position might be considered an indirect reason as well, because these positions are usually associated with increased pay and improved conditions. Shortage of administrative positions is more likely to occur in schools than in any other sector due to schools' flat hierarchical structures and consequently limited career ladders. Possession of multiple roles or skill flexibility may therefore be expected to attenuate teachers' tendency to leave.

Organizational commitment. Organizational commitment, according to Mowday, Steers, and Porter (1979, p. 226), is "the relative strength of an individual's identification with and involvement in a particular organization." Furthermore, commitment to school is one of the critical indicators of school effectiveness (Kushman, 1992; Rosenholtz, 1989). In teaching, the commit-

ment of experienced teachers has been linked to workplace conditions that directly affect the performance of core tasks, such as discretion and autonomy (Rosenholtz & Simpson, 1990). As organizational commitment is highly correlated with job satisfaction (Clugston, 2000), and as skill flexibility indicators (variety, skill utilization, job enrichment) are associated with job satisfaction (e.g., Cunningham, 1983; Hogan & Martell, 1987; O'Brien, 1983), it is very likely that skill flexibility will also be related to organizational commitment. This assumption is supported by Rosenblatt and Inbal's (1999) study, in which holding multiple roles in school was found to be positively associated with organizational commitment.

In addition to the above, all three work attitudes are also expected to be affected by personal demographic factors. For example, males are likely to have a higher tendency to leave than females because teaching is often considered a female-dominated profession of relatively lower prestige (Rosenblatt, Talmud, & Ruvio, 1999). Also, in a study of job-related stressful events among teachers, the findings indicated that younger males were more prone to burnout than the other teachers in the sample (Russell, Altmaier, & Van Velzen, 1987).

Research Hypotheses

The aim of this study is to take the research on skill flexibility, multiple roles, and work attitudes one step further. Although, as shown above, previous studies demonstrated that holding multiple roles at school was related to improved work attitudes, the causal link between these two sets of variables was not established. Based on previous studies on skill flexibility (in the areas of job enrichment, job enlargement, skill variety, skill utilization, and multiskilling orientation), it is proposed that the effect of teachers' multiple roles on work attitudes is mediated by their skill flexibility. In other words, holding a nonteaching role is expected to positively affect work attitudes when the teachers feel that their skills are well utilized and varied and when their attitudes toward multiskilling are positive. Four research hypotheses are thus proposed (see the schematic illustration in Figure 1):

Hypothesis 1: Holding multiple roles will be associated with improved work attitudes (lower burnout and tendency to quit and higher organizational commitment).

Hypothesis 2: Holding multiple roles will be associated with higher skill flexibility indicators (skill variety, skill utilization, and multiskilling orientation).

Hypothesis 3: Skill flexibility indicators will be associated with improved work attitudes.

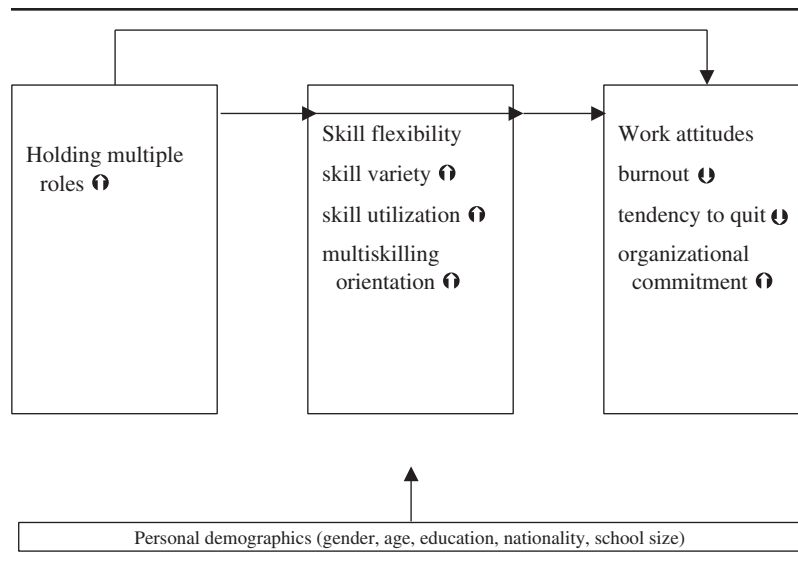


Figure 1: Path Model Depicting the Mediating Effects of Skill Flexibility and Personal Demographics on Holding Multiple Roles and Work Attitudes

Hypothesis 4: Skill flexibility indicators will mediate the association between holding multiple roles and work attitudes, as stated in Hypothesis 1.

Personal demographic variables in this model were treated as independent variables, the assumption being that demographic and occupational characteristics contribute to one's work attitude. The objective was to examine the contribution of these variables over and above the contribution of the study's main variables, namely holding multiple roles and skill flexibility. No specific hypotheses in regard to demographic variables were proposed.

METHOD

Population and Sample

The population studied was secondary school teachers in the northern part of Israel. The sample included 200 teachers from 12 schools selected on a voluntary basis. Half of these schools had 9th- to 12th-grade classes, and half had 7th- through 12th-grade classes. The schools were affiliated either with

the Israeli Jewish or the Israeli Arab educational subsystems (10 and 2 schools, respectively), roughly representing national population proportions. In each school, educators and students were of the same nationality (Israeli Jewish or Israeli Arab). Teachers were selected in each school on a voluntary basis in proportion to school size (an average of about 17% of the teacher population in each school) and to gender distribution (an average of 65% females per school, taking into consideration the higher male proportion in Israeli Arab schools).

Demographic statistics on the participating teachers are presented in Table 1. Seventy teachers were male and 129 were female (1 respondent neglected to mention his or her gender). In regard to nationality, 160 (83%) were Israeli Jews and 32 (17%) were Israeli Arabs (8 neglected to mention their nationality). The mean age of all sampled teachers was 39.8 ($SD = 9.1$), and mean education in schooling years was 16.7 ($SD = 1.8$). School size was measured by number of students divided by 1,000, resulting in a mean of 1.02 ($SD = 0.65$). These demographic characteristics were generally similar to other samples of Israeli teachers from the same part of the country (e.g., Rosenblatt & Inbal, 1999; Ruvio & Rosenblatt, 1999).

Variables and Measurement

Holding multiple roles. This variable was defined as "holding at least one official role in school in addition to teaching" (Rosenblatt & Inbal, 1999). Multiple roles were measured dichotomously: 1 (holding multiple roles) and 0 (not holding multiple roles, i.e., teaching only). Of all the respondents, 103 (52%) were classified as holding multiple roles. The roles ($n = 114$) held by these teachers (in addition to teaching) were homeroom teachers (39, 34%), subject-area or grade-level coordinators (55, 48%), and counseling (20, 18%). Eleven teachers held more than one extrateaching role.

Skill variety. This variable was part of Hackman and Oldham's (1975) core Job Characteristics theory. It is composed of three items from the Job Diagnostic Survey. These items are (a) How much variety is there in your job? (b) the job requires me to use a number of complex or high-level skills, and (c) the job is quite simple and repetitive (this item is reverse scored). The response range for skill variety was 1 (*low*) to 5 (*high*), and the median reliability over 46 samples (Fried & Ferris, 1987) was $\alpha = .69$. In this study, reliability was $\alpha = .60$.

TABLE 1
Descriptive Statistics, Internal Consistencies, and Intercorrelations of Study Variables

	1	2	3	4	5	6	7	8	9	10	11
1. Skill variety	(.60)										
2. Skill utilization	.45****	(.78)									
3. Multiskilling orientation	.00	.21**	(.72)								
4. Burnout	-.30****	-.26****	.17**	(.88)							
5. Tendency to quit	-.10*	-.29****	-.02	.40****	(.84)						
6. Organizational commitment	.32****	.47****	.16**	-.40****	-.30****	(.86)					
7. Age	.10***	.20***	.06	.01	-.07	.06	—				
8. Education (years)	.25****	.06	-.12	-.13*	.08	.04	.09	—			
9. School size (number of students/1,000)	-.12*	-.18**	-.30****	-.08	-.02	-.25****	.15**	.14**	—		
10. Nationality ^a	-.13*	-.06	.05	.25****	.10	-.02	-.02	-.20**	-.33****	—	
11. Gender ^b	-.07	-.00	-.02	-.11	-.11	-.06	-.13*	.14**	.22****	-.43****	—
12. Holding multiple roles ^c	.21***	.22***	.11	-.01	.01	.19**	.12	.05	.05	.04	-.04
<i>M</i>	3.7	3.8	3.2	6.5	1.6	3.5	39.8	16.7	1.02		
<i>SD</i>	0.8	0.7	0.5	3.8	0.8	0.7	9.1	1.8	0.65		

NOTE: Cronbach's alphas appear on the diagonal in parentheses. $N = 186$ to 200 (except interactions with multiskilling orientation, for which $N = 134$ to 141).

The variance in sample size is due to missing data.

a. 0 = Israeli Jew ($n = 160$), 1 = Israeli Arab ($n = 32$).

b. 0 = male ($n = 70$), 1 = female ($n = 129$).

c. 0 = no ($n = 97$), 1 = yes ($n = 103$).

* $p < .10$. ** $p < .05$. *** $p < .01$. **** $p < .001$.

Skill utilization. This variable consisted of five items and was developed by O'Brien (1982, 1983). The items asked the respondents to estimate the extent to which their jobs provided opportunities for (a) learning new jobs, (b) working in the way they thought best, (c) using their abilities, (d) using their training, and (e) using their experience. Response range for skill utilization was 1 (*low*) to 5 (*high*), and reliability, as previously reported, was $\alpha = .78$ (O'Brien, 1983). Similarly, in this study, reliability was $\alpha = .78$.

Multiskilling orientation. A scale designed by Cordery, Sevastos, Mueller, and Parker (1993) to measure employees' attitudes toward a functional flexibility program was slightly adjusted for this study to fit a teacher population. Five items were used in the current study, prefaced with "multiskilling will lead to . . .": "better promotion prospects," "a better chance to use skills," "greater responsibility," "increased work satisfaction," and "increased autonomy in doing the job." The scale for each item ranged from a low of 1 to a high of 5. In this study, the reliability was $\alpha = .72$.

Burnout. An instrument developed by Maslach and Jackson (1981) to measure burnout for human services professionals was adapted for this study with teachers. This measure was previously used with an Israeli sample of teachers (Rosenblatt & Inbal, 1999) in which the reliability rate was $\alpha = .84$. Sample items include "I feel emotionally drained from my work," "I feel used up at the end of the workday," and "I feel fatigued when I get up in the morning and have to face another day on the job." The scale is composed of two rating factors: frequency and intensity. For each item, the frequency factor was multiplied by the intensity factor, yielding a product that ranged from a low of 1 to a high of 25. The final burnout score was composed of the averages of these products across all items on the scale. Only two of the three content dimensions of the original scale were used (depersonalization and exhaustion), as the third dimension (no actualization) did not yield an acceptable reliability score. In this study, reliability of burnout was $\alpha = .88$.

Tendency to quit. This variable was measured by five items with a scale that ranged from a low of 1 to a high of 5. The measure was developed by Walsh, Ashford, and Hill (1985). Sample items include, "I am starting to ask my friends/contacts about other job possibilities," "I am thinking about quitting my job," and "I intend to leave this school within the next six months." It was adopted for a teachers' population by Rosenblatt and Ruvio (1996) and by Rosenblatt and Inbal (1999), who reported reliability rates of $\alpha = .84$ and $\alpha = .90$, respectively. In this study, reliability was $\alpha = .84$.

Organizational commitment. This variable was measured by nine items with a scale that ranged from a low of 1 to a high of 5. These nine items were developed by Mowday, Steers, and Porter (1979) and adapted for Israeli teachers by Rosenblatt and Ruvio (1996) and by Rosenblatt and Inbal (1999), who reported reliability coefficients of $\alpha = .83$ and $\alpha = .90$, respectively. In this study, reliability was $\alpha = .86$. Sample items include, "I am willing to put in a great deal of effort beyond that normally expected in order to help this school be successful," "I talk up this school to my friends as a great school to work in," and "I feel very little loyalty to this school" (reverse coded).

Demographic variables. The following demographic variables were included in the study: age (in years), education (in years of schooling), school size (number of students divided by 1,000), nationality (0 = Israeli Jew, 1 = Israeli Arab), and gender (0 = male, 1 = female).

The reliability coefficients (Cronbach's alpha) for the scales used in this study are reported in Table 1 on the diagonal. These estimates reached acceptable levels as indicated by Nunnally (1976).

RESULTS

The means, standard deviations, intercorrelations, and measures of internal consistency (Cronbach's alpha) are presented in Table 1. These averages for the dependent variables suggest that the teachers in this study were moderately committed to their institutions ($M = 3.5$, $SD = 0.7$), were likely to remain in their positions ($M = 1.6$, $SD = 0.8$), and were not experiencing burn-out ($M = 6.5$, $SD = 3.8$).

In addition, these teachers perceived that there was a moderate amount of variety in their work: that they were able use several skills in their present roles ($M = 3.7$, $SD = 0.8$) and that they were able to use their skills and experience the way they thought best ($M = 3.8$, $SD = 0.7$). Teachers also perceived a flexible program to moderately enhance their chances for promotion, more responsibility, increased autonomy, or work satisfaction ($M = 3.2$, $SD = 0.5$).

The correlations between the dependent, mediating, and independent variables are predictive of the path analysis. For example, organizational commitment was positively related to the mediating variables (to skill variety, skill utilization, and multiskilling orientation at $r = .32$, $p < .001$; $r = .47$, $p < .001$, and $r = .16$, $p < .05$, respectively). These correlations suggest that teachers who are committed to their work perceive more variety in their work, better utilization of their skills, and some opportunities to enhance their skills. In addition, teachers experience less commitment in larger

schools ($r = -.25, p < .001$) and increased commitment when holding more than one role ($r = .19, p < .05$).

As another example of the relationships between a dependent measure and mediating or independent variables, burnout was negatively related to skill variety and to skill utilization ($r = -.30, p < .001$; $r = -.26, p < .001$, respectively) and positively related to multiskilling orientation ($r = .17, p < .05$). These relational estimates indicate that teachers perceive less burnout when their work is varied and their skills are utilized; however, they reported experiencing burnout when they perceived multiskilling as positive. Other correlations indicate that Israeli Arab teachers perceived more burnout than Israeli Jewish teachers ($r = .25, p < .001$), but teachers with more education experienced less burnout ($r = -.13, p < .10$).

There were significant relationships with the final dependent variable, tendency to quit, and some other variables in the study. These correlations indicate that teachers who tended to quit perceived that their skills were underutilized ($r = -.29, p < .001$) and that they performed fewer tasks in their roles ($r = -.10, p < .10$).

It is interesting to note that the direction of all but one of these correlations was as hypothesized. This exception is found in the direct relationship between burnout and multiskilling orientation. It was hypothesized that this association would be an inverse relationship, but burnout was correlated with positive attitude toward multiskilling. In fact, it should be noted that the multiskilling orientation variable was poorly related to the other skill flexibility variables.

To test the path relationships associated with the study model, a series of structural equation modeling were run using maximum likelihood estimation in LISREL 8 (Joreskog & Sorbom, 1993). These modeling analyses were conducted to examine the associations between skill flexibility, holding multiple roles, and work attitudes. Demographic factors were added as independent variables. All variables in the model were measured (as opposed to latent). The correlation matrix was used in all analyses. As the fit coefficients of the initial model were poor, insignificant paths were omitted. The final proposed model offered a good fit to the data, where $\chi^2 = 28.19$ ($df = 24$), $p = .25$, goodness-of-fit index (GFI) = .97, adjusted goodness-of-fit index (AGFI) = .93, and root mean square error of approximation (RMSEA) = .031. The final model yielded a χ^2 difference from the first model of 22.43 ($df = 22$, $p = .43$), indicating that the simultaneous contribution of all the omitted paths was not significant. Because of the significant correlations between skill utilization and skill variety, burnout and organizational commitment, burnout and tendency to quit, and organizational commitment and tendency to quit, these four sets of variables were allowed to correlate (error correlation = .33,

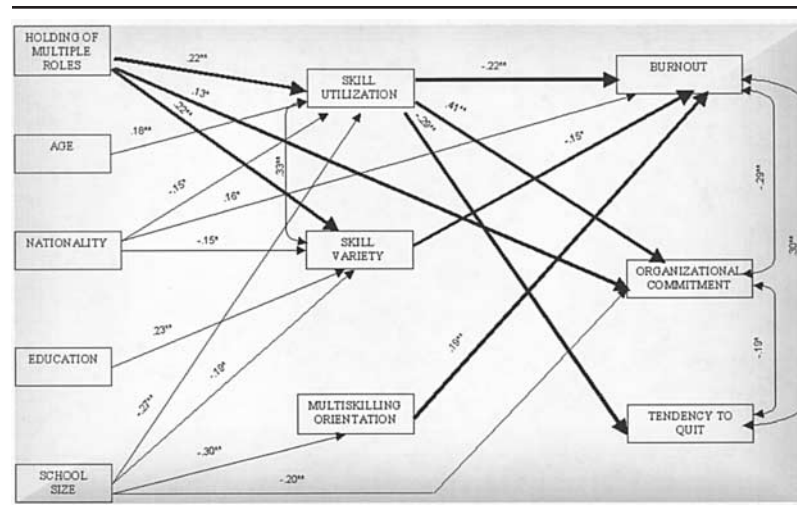


Figure 2: Effects of Holding Multiple Roles and Personal Background on Teachers' Work Attitudes, Mediated by Skill Flexibility Indicators

-.29, .30, and -.19, respectively). The path diagram representing the model considered most meaningful, in light of the overall findings of the research, is shown in Figure 2.

Results indicate that teachers who held multiple roles felt that their skills were utilized and varied ($\beta = .22, p < .01$) and were more organizationally committed ($\beta = .13, p < .05$) than teachers who did not. Two skill flexibility variables—skill utilization and skill variety—served as mediators: Skill utilization mediated the relationships between holding multiple roles and all three work attitudes, whereas skill variety mediated between holding multiple roles and burnout only. The third skill flexibility variable, multiskilling orientation, was not related to holding multiple roles, was only (negatively) related to school size, and mediated between school size and burnout.

These results partially support the study hypotheses. Hypothesis 1 (holding multiple roles will be positively associated with work attitudes) was supported with respect to organizational commitment but not burnout or tendency to quit. Hypothesis 2 (holding multiple roles will be positively associated with the three indicators of skill flexibility) was supported in regard to skill utilization and skill variety but not multiskilling orientation. Hypothesis 3 (the three indicators of skill flexibility will be positively associated with work attitudes) was fully supported in regard to skill utilization (all three work attitudes were predicted by this variable) and partially supported in regard to skill variety and multiskilling orientation (only burnout was

predicted by these variables). The extent of support for Hypothesis 4, according to which skill flexibility indicators are expected to mediate the effect of holding multiple roles on work attitudes, can be derived from the above (fully supported in regard to skill utilization, partially supported in regard to skill variety, and unsupported in regard to multiskilling orientation).

The inclusion of demographic variables in the analysis revealed that these had significant effects within the model. Age and education were positively associated with skill utilization and skill variety, respectively: Skills of older teachers were better utilized and skills of better educated teachers were more varied. Nationality was associated with both skill utilization and skill variety: Skills of Israeli Arab teachers were less utilized and less varied than those of Israeli Jewish teachers. Nationality was also associated with burnout: Israeli Arab teachers were more burnt out than Israeli Jewish teachers. School size was associated with three components of skill flexibility: Teachers in larger schools reported that their skills were less utilized and less varied and their multiskilling orientation was lower than those of teachers in smaller schools. School size also had a direct effect on organizational commitment: Teachers in smaller schools were more committed than teachers in larger schools. School size, then, was the strongest predictor of skill flexibility and work attitudes of all demographic variables.

DISCUSSION

On the basis of previous research (Campion & McClelland, 1991; Hackman & Oldham, 1975; O'Brien, 1983; Rosenblatt & Inbal, 1999), a model was postulated suggesting that teachers' skill flexibility (skill utilization, skill variety, and multiskilling orientation) explained the effect of holding multiple roles on work attitudes (burnout, tendency to quit, and organizational commitment). The model also included demographic characteristics as independent variables. Findings confirmed the study's conceptual model and most of the hypotheses in regard to skill utilization and skill variety. The model, arrived at with a series of SEMs, provided a good fit to the data.

The results of the study further the understanding of how holding multiple roles contributes to work attitudes. Previous research pointed to the organizational and personal advantages of skill flexibility (Cordery, 1989) and empirically showed a link between multiple roles and teachers' work attitudes (Rosenblatt & Inbal, 1999). This study expanded this research by specifying the design elements underlying this link and proposing a path model in which these design elements (indicators of skill flexibility) explain how work attitudes are influenced by holding multiple roles. Holding other school roles in

addition to teaching may afford teachers the opportunity to exercise their skills, whether they were previously latent, underutilized, or acquired on the job.

In addition to offering a path model, the results of this study also contribute to the conceptualization of skill flexibility. This concept has received relatively little attention by organizational researchers in general and by educational-administration researchers in particular. Yet a careful examination of various studies on job design shows that skill flexibility is a powerful notion underlying various job design concepts. This study highlighted this notion and its three major components: skill variety, skill utilization, and multiskilling orientation.

The study outcomes, then, have implications for research on teachers' work design. Most studies that have used Hackman and Oldham's (1975, 1980) Job Characteristics framework measured job design by the Motivation Potential Score (MPS), representing a multiplicative formula of five core job characteristics. With the MPS index, it was not possible to distinguish the differential effects of individual components. Moreover, a meta-analysis (Fried & Ferris, 1987) showed that this multiplicative index was a less satisfactory predictor than an additive one. This study filled the gap by concentrating on skill variety and demonstrating its differential effect.

The findings regarding the effect of skill utilization and skill variety are in step with O'Brien's (1982, 1983) assertions of the added value of skill utilization over skill variety. Together, the two concepts add a unique dimension to the Job Characteristics model: a dimension related to the extent and depth of skills used on the job. Findings of O'Brien's (1982, 1983) studies, as well as those of the present research, show that work attitudes are better predicted by these two notions than by one of them alone. It is concluded, therefore, that the two notions strengthen the construct validity of the Job Characteristics model.

Of the three indicators of skill flexibility, multiskilling orientation was the only one totally unrelated to holding multiple roles and positively (in contrast to the hypothesized direction) related to only one work attitude, namely burnout. It was also unrelated to the other two indicators of skill flexibility (skill variety and skill utilization), which were strongly correlated with each other. Evidently, multiskilling orientation represents a dimension of skill flexibility different from the other two components. Whereas multiskilling orientation reflects teachers' general opinions about additional training, skill utilization and skill variety represent their work experience. Also, taking into account the positive direction found between multiskilling orientation and burnout, it is possible that, when asked about enhancing and adding to their skills in potential, teachers tend to consider aspects such as additional time for

training activities and changing their teaching strategies even though they like the experience of being able to exercise different skills. This speculation about a dual approach to skill flexibility needs to be tested in future studies.

The results pertaining to the effects of holding multiple roles allude to a need to clarify the conceptual difference between job enrichment and job enlargement. Holding multiple roles seems to represent a classic case of job enrichment, in particular when teachers assume administrative or managerial roles. However, a close examination of the additional roles held (homeroom teachers, subject-area and grade-level coordinators, counselors) shows that teachers not only needed to use enriched skills (e.g., responsibility for other teachers' work or performance) but also experienced job enlargement (e.g., when training novice teachers). Because most of the roles teachers normally assume represent a mix of the two types of job design, it is hard to classify extrateaching role-holding in terms of the traditional enrichment-enlargement distinction. The differences between these two forms of job design are probably more blurred than is usually believed.

In addition to multiple roles, demographic variables were found to affect work attitudes through the mediating effect of skill flexibility, in particular skill variety and skill utilization. Of all demographic variables, school size had the strongest effect in the model, being negatively related to all three skill flexibility variables. These results are corroborated by Griffith's (1998) assertion that "in larger organizations it is more difficult to identify members' skills and fully employ their skills, experience and specialized knowledge" (p. 74). Similarly, Rosenblatt and Inbal (1999) reported that holding multiple roles in smaller schools promoted efficiency in human resource management. It follows that smaller and perhaps more intimate schools provide existing staff with more opportunities to function in various roles.

The findings regarding the effects of nationality show that Israeli Arab teachers had initial lower scores in skill utilization and skill variety and higher burnout than Israeli Jewish teachers. These findings reflect some of the differences between the two separate educational subsystems in Israel. Israeli Arab schools suffer from several structural disadvantages: fewer educational support services, less diversified secondary education, and limited financial means at principals' disposal (Adler, 1989; Mar'i, 1989; Mazawi, 1999). In addition, these schools are affected by the traditional and more conservative culture characterizing the Arab society. Abu Saad and Hendrix (1993), for example, showed that rural Arab schools in Israel were characterized by a rigid and highly controlled environment. They stated that "schools tend to operate on a rigid time schedule with emphasis placed on completion of the prescribed amount of material. The instructional method is mainly lecture. Communication for the most part is unilateral and downward flowing

from teacher to student" (p. 29). As a result, teaching patterns in the Israeli Arab sector are relatively conservative and less diversified than in the Israeli Jewish sector. It follows that Israeli Arab teachers have less opportunities to develop and utilize diversified skills at work.

Only one demographic variable, gender, had no effect whatsoever on work attitudes. Future studies in education need to investigate whether the presumed differences between female- and male-dominated occupations are becoming blurred in a world where women have more occupational opportunities.

Whereas skill variety and skill utilization were each predicted by most demographic variables, multiskilling orientation was only (inversely) predicted by school size. This finding might imply that teachers in smaller schools expect that multiskilling training can lead to more opportunities to use and develop their various skills than teachers in larger schools, in which work is more compartmentalized. Finally, lack of significant relationships between multiskilling orientation and other demographic variables (age, education, and gender) was also noted by Cordery et al. (1993).

Recent literature on human resource strategy emphasizes the importance of competency-based human resources for gaining and sustaining a competitive advantage (Coff, 1997; Kochanski & Ruse, 1996). This study has contributed to the application of this approach to educational administration by bringing to the fore the value of human assets and competencies in educational institutions and specifying some of the ways such competencies can be enhanced. Educational leaders could use the results of this study to help in the design of teaching jobs so as to create fulfilling work and to promote better integration between the teaching and the administrative functions within schools, thereby enhancing cooperation between teachers and school management.

Finally, although this study was conducted in Israel, its implications are universal. As in the case of the Israeli educational system, many other educational systems are undergoing organizational and pedagogical changes that reflect on teachers' work lives (Popleton, Menlo, & Williamson, in press). The results of this study highlight the way teachers adjust to such changes by developing and applying skill flexibility.

CONCLUSIONS

Skill flexibility is becoming increasingly important in organizations. The results of this study focus on educational organizations and demonstrate the effects of three skill flexibility indicators on work attitudes. These results

show that schools can become "flexible firms" (Atkinson, 1984) by employing teachers who assume different school roles as needed. Based on the results of this study, school management can redesign teachers' work in such a way that it nurtures existing skills and develops potential ones so as to improve work attitudes and contribute to school effectiveness.

The study results, then, can be readily implemented by applying human resource strategies designed to enhance skill flexibility. The most typical strategy for this purpose would be *job rotation*. Applying job rotation to a school's role system offers teachers opportunities not only to use existing capabilities but to develop others. Teachers should have the opportunity to rotate among extrateaching roles such as program coordinators, department heads, and so on, to use the full range of skills these roles offer. In this way, a school can utilize to maximum advantage the pool of potential skills available within its workforce. At the same time, this strategy enhances the development of career ladders for the teaching staff. The effects of job rotation on knowledge and skill outcomes have been studied by Campion, Cheraskin, and Stevens (1994), who saw rotation as an alternative to enrichment and recommended further research on its influence on job design.

Another recommended structural intervention, derived from the positive effect small school size had on all three indicators of skill flexibility and on school commitment, is the creation of "schools within schools" (Griffith, 1998). According to this strategy, the benefits of small schools are achieved within large schools with the help of physical boundaries, curriculum differentiation, and different administrative support staff.

Yet another strategy to enhance organizational flexibility is to do so through the pay and remuneration system. This strategy, termed *financial flexibility* by Atkinson (1984), aims at widening differentials between skilled and unskilled employees. Financial flexibility reinforces the motivation of employees and encourages them to learn new skills as a way to increase skill flexibility. In education, the employment of this strategy has been reported by Firestone (1994) as "knowledge and skill-based pay." Firestone showed that paying teachers for skills was compatible with an outcome focus and with norms supporting individual experimentation and personal growth.

Any work redesign effort that includes multiple roles and skill flexibility needs to consider implications for role-related stressors, in particular role conflict, role ambiguity, and role overload. Studies show that work attitudes are negatively affected by these role malfunctions. For example, role ambiguity and role conflict were found to negatively affect burnout among teachers (Jackson et al., 1986) and blue-collar employees (Kelloway & Barling, 1991) and to negatively affect job performance of Israeli workers (Fried, Ben-David, Tiegs, Avital, & Yeverechyahu, 1998). Role conflict was found to

positively affect intent to quit (Himle, Jayaratne, & Thyness, 1989), and role overload has been related to work stressors (Parasuraman & Alutto, 1981). Moreover, a study on public sector professionals (nurses and engineers) showed that opportunity to grow (implying gaining new skills) was a strong predictor of role conflict (Bacharach, Bamberger, & Conley, 1990). It follows that when roles are combined to create a challenging multiple-role design or a multitasked job, caution must be taken to avoid inconsistencies, ambiguities, and work overload.

Other considerations in employing the above-mentioned strategies are the levels of teacher participation and commitment attached. It is imperative that programs enhancing skill flexibility include work autonomy and participatory methods to achieve long-term motivation (Cordery, 1989) and to ensure commitment to results and higher quality of decision making (Bartunek, Greenberg, & Davidson, 1999; Hoy & Tarter, 1993). Finally, it is important to design work in a way that ensures its long-term effects and avoids diminishing effects often observed in work redesign programs (see Griffin, 1991) on work attitudes and other outcome variables over time.

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