On-the-Job Experiences of Vocational Administrators that Develop Leadership Capabilities

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Abstract

Telephone interviews were conducted with 69 vocational administrator-leaders in 12 states to explore the perceived importance of on-the-job experiences as a means of leadership development. Information was gathered about (a) the types of on-the-job experiences in administrators' past that were perceived to be effective in their leadership development, (b) the aspects of those experiences that made them effective, (c) the leader qualities that were improved, and (d) recommendations for on-the-job experiences that would help prepare future leaders. Certain types of on-the-job experiences appear to be effective for developing selected leader qualities and should be used to help prepare future leaders.

The leadership training activities supported by the National Center for Research in Vocational Education (NCRVE) were initially focused on stimulating, facilitating, and evaluating the effectiveness of delivering formal (classroom) educational programs. Finch and his associates (Finch et al., 1992) created case studies and a simulation for administering a postsecondary vocational institution (Finch, 1992). Seventeen leadership development programs for graduate students and in-service practitioners were partially supported in institutions around the country and then evaluated. Evaluations demonstrated that the programs significantly improved the leader attributes and leadership behaviors of participants (Moss, Leske, Jensrud, & Berkas, 1994). Then, utilizing the knowledge gained from the evaluations, a transportable leadership development program, equivalent to a 9-quarter credit graduate-level course, was prepared and made available to teacher educators and staff development personnel as a resource for conducting their own leadership programs (Moss, Schwartz, & Jensrud, 1994).

Authorities agree, however, that most leadership development of administrators takes place on-the-job rather than in seminars or classrooms (Bray, Campbell, & Grant, 1974; Hall, 1976; Howard, 1995; Kotter, 1988; Yukl, 1994). Consequently, in 1994, the NCRVE program of research on leadership began to explore the importance of on-the-job

experiences as a means for sustaining and supplementing the leadership training begun in formal classroom programs, as well as a means for impacting vocational educators who have not had an opportunity to attend those programs. The basic question to be addressed was: How can the potential benefits to leadership development of experiential on-the-job learning be maximized? Leadership in this context was thought of as the process of perceiving when change is needed and influencing the group by such *noncoercive* means as persuasion and example in its efforts toward goal setting and goal achieving. Individuals who are seen as leaders enjoy the power of influence *voluntarily* conferred. By contrast, individuals appointed to administrative positions have power of authority as a result of holding their positions. To be leaders, administrators must also earn followers by developing and displaying the qualities (attributes) their subordinates ascribe to leaders. Administrators may, or may not, be leaders (Moss & Liang, 1990).

Until late in the 1980s, the specific characteristics and impact of on-the-job experiences had been virtually unexplored (Griffiths, Stout, & Forsyth, 1988; McCauley, 1986). Then, in 1988, McCall, Lombardo, and Morrison (1988) reported a study based upon interviews with nearly 200 senior business executives about the on-the-job experiences that had the greatest impact upon their careers and what had been learned from them. Two fundamental conclusions were reached by the authors.

First, *on-the-job learning was most likely to occur when managers were faced with challenging situations.* These situations placed the manager in dynamic settings full of problems to solve and choices to make under conditions of risk and uncertainty. Challenging situations were developmental because they provided motivation to learn and because they offered opportunities to act and to learn from the results of the action. Second, the McCall et al. (1988) study concluded that *what was learned from the challenging on-the-job experiences was not technical managerial skills, but consisted primarily of leadership qualities* such as handling relationships, temperament, basic values, and personal awareness.

These conclusions were confirmed by Valerio (1990) in her study of 41 New York Telephone Company managers. The managers, whose performance history showed them to be highly successful, were interviewed in depth about the three key events that they believed had changed the way in which they managed and the lessons learned. The five most frequently described kinds of events were those involving increases in scope of responsibility, special projects, exposure to positive and negative role models, learning from negative experiences, and start-up operations. The kinds of things learned from the key events were primarily leadership knowledge and skills such as motivating, developing and rewarding subordinates, working cooperatively with others, delegating work, decision-making, organizing and prioritizing, and risk taking.

Several researchers then went on to provide examples of on-the-job experiences that are effective at building leadership skills. McCall (1988) reported 16 experiences, including the reasons why they were effective, and the leadership qualities executives stated they learned from the experiences. Lombardo and Eichinger (1989) documented five broad categories of experiences that executives indicated are potentially developmental: challenging jobs, other people (mostly bosses), hardships, coursework, and off-the-job experiences. The authors then detailed 88 specific experiences that executives can use to

help them have a greater variety of leadership challenges and to assist them in learning from the challenges. In a companion report, Eichinger and Lombardo (1990) recommended 22 ways that staff managers could develop leadership skills.

Thus, research conducted in business settings has shown that on-the-job experiences are potentially effective for building the leadership capabilities of administrators and that the nature of those experiences is significant in determining their effectiveness. Unfortunately, little is known about the ways that on-the-job experiences in educational settings contribute to educational administrators' leadership capabilities. Research related to leadership development in public education settings has focused on the study of formal leadership programs and their impact on participants with little consideration given to how leadership may be developed on-the-job (Griffiths, Stout, & Forsyth, 1988). Moreover, it is very risky to presume that what has been found in business is also true of education. Differences in context, and possibly in population characteristics, could mean that business and education have disparate criteria for success as a leader, provide opportunities for dissimilar types of on-the-job experiences, and result in learning different leadership qualities from the experiences.

Consequently, the research questions posed to guide the procedures of this study were built directly on the results of research from the corporate world and responded to the need to determine the ways in which those findings apply to vocational education. The five research questions were:

First, *what are the characteristics of on-the-job experiences that vocational administrators who are also effective leaders (administrator-leaders) consider most helpful to their development as leaders? Are there differences that relate to gender?* The intent of the question was to focus on experiences that occurred on-the-job, in the work setting, that were *not* a part of some degree and/or licensure program. However, we agreed not to arbitrarily discard or discourage any other kinds of experiences that members of the sample chose to interpret as on-the-job, e.g., internships required by degree programs. Characteristics included (a) types of experiences, e.g., a new position, (b) whether the time the experience occurred in the administrator's career was considered important, (c) who initiated the experience, and (d) developmental aspects of on-the-job experiences that were perceived to make them effective for building capacity as a leader, e.g., the risk of failure.

Second, *what leader qualities are perceived to be improved by the on-the-job experience?* Leader qualities meant those attributes—the characteristics, knowledge, skills and values—possessed by individuals that predispose them to behave as leaders (Moss & Liang, 1990). Of particular interest were the 37 leader attributes assessed by the Leader Attributes Inventory (LAI), which previous studies have shown to possess excellent face, content, concurrent and construct validity (Moss, Lambrecht, & Jensrud, 1990b). However, we decided to use all the attributes that sample members felt were leader qualities.

The third and fourth research questions inquired about relationships among types of experiences, developmental aspects of experiences, and leader qualities that were built as a result of the experiences. The third question was *what developmental aspects are associated with various types of on-the-job experiences?* In other words, are there relationships between types of experiences, e.g., work with a supervisor, and aspects of the experiences that make them particularly effective as developers of leadership capacity?

Fourth, *what developmental aspects of on-the-job experiences are associated with improved leader qualities?* That is, are there relationships between the aspects of experiences at work that make them effective, e.g., freedom to make decisions, and the particular leader attributes that are learned, e.g., sensitivity and respect?

Fifth, *what types of experiences do vocational administrators who are leaders recommend for preparing future administrator-leaders?* This question asked current administrator-leaders to make recommendations about the kinds of on-the-job experiences that they believed would best strengthen the leadership capabilities of future administrators.

Method

Sample Selection

In a single earlier study, all of the chief vocational administrators in 12 states ($N = 329$) were asked to participate in providing data to norm both the Leader Effectiveness Index (LEI; Moss, Lambrecht, Finch, & Jensrud, 1994a) and the LAI (Moss, Lambrecht, Finch, & Jensrud, 1994b). The names of the 329 administrators were secured from official documents provided by the education departments in each of the 12 states. In that norming study, chief vocational administrators were defined as chief line administrators in specialized public secondary vocational institutions (e.g., principals, directors), and both specialized and comprehensive public postsecondary institutions (e.g., presidents, directors, deans). The 12 states, selected because of their reputations for strong secondary or postsecondary vocational programs, were Arkansas, Colorado, Florida, Georgia, Illinois, Iowa, Maryland, Ohio, Oklahoma, Oregon, Tennessee, and Wisconsin.

Each of the 329 chief vocational administrators was asked to complete the LAI (self-report) and to have five subordinates who (a) knew her/him well at work, and (b) as far as possible, included females and persons from minority groups, to rate the chief administrator on both the LEI and LAI. After appropriate follow-ups, complete sets of instruments were returned for 220 (71%) chief vocational administrators.

From among the 220 chief vocational administrators for whom complete data had been received, the 78 with the highest scores on the LEI (indicating the most effective leaders among the 220) were identified. Selecting the 78 most effective leaders for the sample helped insure that sample members had experiences that were beneficial to their leadership development.

The LEI yields a single measure that reflects the effectiveness with which six tasks of leaders in vocational education are being performed. The six leadership tasks are to (a) inspire a shared vision and establish standards that help the organization achieve its next stage of development; (b) foster unity, collaboration, and ownership, and recognize individual and team contributions; (c) exercise power effectively and empower others to act; (d) exert influence outside of the organization in order to set the right context for the organization; (e) establish an environment conducive to learning; and (f) satisfy the job-related needs of members of the organization as individuals. Studies reported in the *Leader Effectiveness Index Manual* (Moss et al., 1994a) indicate that the instrument's test-retest reliability is .95, the internal consistency as measured by Cronbach's alpha is .92, and the interrater reliability (of 3 to 5 raters) is .86. Two studies, also reported in the *Manual*, assessed the instrument's construct validity. Both studies showed that the six leadership tasks included in the LEI represent the criteria actually used by vocational educators when they ordinarily judge the effectiveness of a leader's performance, and that the single score yielded by the instrument accurately reflects raters' overall assessment of a leader's effectiveness.

The 78 administrators were sent letters asking if they were willing to participate in a study to examine on-the-job experiences as a means for developing leadership capabilities. The letter was followed by a phone call to determine their willingness to be interviewed over the telephone for about 30-45 minutes. When administrators agreed to participate in the study, they were told that they would be asked to describe two incidents that had the greatest impact on the development of their leadership capabilities. Since thoughtful, considered responses were desired, each person needed time to think about the two incidents; therefore, the interview was not conducted immediately. Rather, a time was scheduled for a later day, usually within two weeks, for the actual interview. The initial phone call was followed by a fax confirming the interview date and time and restating the request for two critical incidents. A total of 69 chief vocational administrators agreed to be interviewed and to relate two on-the-job incidents that most affected their development as leaders. The other 9 administrators had various reasons, mostly lack of time, for not wishing to participate.

Instrumentation and Interview Procedures

The interview technique was selected as the primary approach to collect field data because of its ability to assist in interpreting the significance of particular variables (Borg, & Gall, 1989; Richardson, Dohrenwend, & Klein, 1965). It was chosen over other techniques and quantitative instruments because of its flexibility and adaptability (Kerlinger, 1986). The interview used in this study can, in part, be labeled as moderately structured (Stewart & Cash, 1985), because probing questions followed each major question. Probes were a mixture of open-ended and closed-ended questions. This follow-up technique allowed the freedom to delve into different interviewee answers similar to nonstructured interviews, but also provided a schedule for the interview. As with structured interviews, the technique can be replicated fairly easily; it produces data that can be analyzed and compared; and it does not require highly trained interviewers. In effect, the moderately structured interview was selected based on a decision to utilize the strengths and not the weaknesses of both structured and nonstructured interviews (Stewart & Cash).

Though Kerlinger (1986) described the face-to-face interview as "perhaps the most powerful and useful tool of social scientific research" (p. 379), it is also costly, time consuming, and subject to compromises made to improve the social context of the interview (Frey, 1983). Consequently, we utilized the telephone to minimize cost and time.

A key element of the interview schedule was a Behavioral Event Interview (BEI). The BEI was developed by David McClelland (1978) and colleagues at McBer and Company. The technique is based on the critical incident technique created by Flanagan (1954), who had job incumbents write behavioral descriptions of critical incidents they experienced in their work. However, a problem with the critical incident technique was that the written incidents were not detailed enough to determine what a job incumbent was thinking, feeling, and specifically doing. As a result, the BEI was developed so that a particular critical

incident could be explored until behaviors, thoughts, and feelings were adequately reported (McClelland). Though BEI respondents may initially only discuss behaviors they believe are critical, additional probing can reveal other relevant behavior. Klemp (1979) maintained that through the use of extensive probing, interviewers can elicit descriptions of behaviors that were actually performed in the event, rather than more selective recollections of behaviors.

The BEI has had a very successful history of use in a variety of settings, including business, industry, education, and the military (Goleman, 1981; Huff, Lake, & Schaalman, 1982; Schmidt, Finch, & Faulkner, 1992; Spencer, 1979). It helped interviewers focus on meaningful dynamic behaviors that leaders judged to have had an impact on their leadership development.

The interview schedule created by the researchers for this study contained eight major questions, each of which was to be posed in the following order: (a) Provide a brief overview of the on-the-job incident. (b) What made the incident developmental? (c) When, in your career, did the incident occur? (d) Who or what initiated the incident? (e) How did the incident unfold? (f) What leadership qualities were improved or developed? (g) What other things were important about the context? (h) What on-the-job experiences would you recommend to help develop future administrator-leaders? Each of the eight questions was followed by interviewer probes. The intent of the probes was to clarify responses, gain fuller descriptions, obtain specific examples, and capture the administrator's thinking and feelings during the incident.

The BEI requires that interviewers have a common understanding of the questions to be asked, the manner in which rapport can be established with an interviewee, and effective use of follow-up probing questions. The research team therefore sought the assistance of a specialist in the BEI interview process who shared instructional materials about how to conduct such interviews. The entire research team met at a single site to role play interviews with administrator-volunteers. These interviews were observed and taped for self-critique and critique by the entire group. When the team judged by consensus that a satisfactory level of interviewing expertise had been achieved by each team member, the individual interviews with chief vocational administrators in the sample were scheduled.

Conducting Telephone Interviews

Telephone interviews were conducted with 69 chief vocational administrators. Table 1 shows the administrators' gender and type of employer. All interviews were audiotape-recorded (with the administrator's permission) for later transcription. A total of 140 incidents were described—one administrator provided only one incident while three administrators each described three incidents. We conducted all interviews and found that the original estimate of 30-45 minutes per interview was generally accurate, although some interviews were longer. Interviews were transcribed in their entirety once completed.

TABLE 1
Number of chief vocational administrators by gender and type of employer

Gender	Type of Employer			Total
	Secondary	Technical College	Community College	
Female	9	10	7	26
Male	17	12	14	43
Total	26	22	21	69

Summarizing, Coding, and Analyzing Interviews

After each interview was completed, the interviewer prepared a write-up for each incident. The write-up used the language of the interviewee and read in the first person. Its purpose was to organize and present information about the incident in a more easily understandable sequence and format than the transcript, thus facilitating the coding and analysis processes (Mentkowski, O'Brien, McEachern, & Fowler, 1982). Information in the write-up was organized into sections which paralleled the eight major questions on the interview schedule. In order to ensure their completeness and accuracy, write-ups were checked against the original audio-tapes of the interviews by a researcher who did not conduct the interview.

After about 20 interviews had been completed, we met to discuss the coding scheme. Based upon the questions in the interview schedule, the language of the interviewees as recorded in the write-ups, and, where necessary for interpretation, the leader attributes contained in the LAI (Moss et al., 1994b), a coding sheet was prepared. The coding sheet became the formal guide for interview analysis. As Boyatzis (1982) noted, "the coding system attempts to explain how an interview should be assessed to determine the presence or absence, or degree of presence, of a particular characteristic" (p. 51).

The researcher who conducted the interview did the first coding of that interview from the prepared write-up. Each interview was then coded by a second researcher using the same write-up. Thus, each interview was coded independently by two persons who were familiar with the interviewing and write-up processes, as well as with the coding scheme. The two coders met to compare the assigned codes. Where assigned codes differed, the rationale for the coding was discussed until agreement was reached.

The coded interviews were entered into The Ethnograph V4.0 (Seidel, Friese, & Leonard, 1995) software package to obtain summary data about the frequency of each type of code as well as listings of the text passages for each code type. Cross tabulations were carried out to examine relationships between types of experiences, their developmental aspects, and the leader qualities that were improved.

Results

Characteristics of Most Helpful On-the-Job Experiences

When interviewees were asked to provide a brief overview of on-the-job experiences most helpful in building their leadership capabilities, 185 experiences were identified. The five most frequently reported types are shown in Table 2. All experiences took place in educational work settings, and were not a part of degree or licensure programs. A somewhat greater proportion of women than men reported experiences that resulted from moving to a new position with new or increased responsibilities and from dealing with personnel problems like conflicts and firings. Although not one of the five most frequently reported experiences, it should be noted that 5% of the experiences identified by interviewees occurred during employment in business and industry before they became educational administrators, while another 6% of the experiences took place as a part of formal training programs in education. Timing, that is, when the 185 experiences occurred during their careers, was considered significant by only 30% of the interviewees. There was no difference between men and women on this characteristic.

TABLE 2

Types of most helpful experiences by gender

Experiences	% Total	Gender	
		% Women	% Men
Special start-up assignment	12	13	12
New position with new or increased responsibilities	10	13	8
Handling personnel problems—Conflicts and firings	9	13	6
Mentor counseling and advocacy	9	8	10
Working with a supervisor	7	6	7

Note. Values represent percentages of the 185 most helpful experiences reported by women ($n = 77$) and men ($n = 108$).

Another explored characteristic of most helpful on-the-job experiences was who initiated them. Of the 185 experiences identified, 37% were initiated by the interviewee, and 30% by his/her superior; the remainder were initiated by peers, subordinates and miscellaneous others. Forty-five percent of the men's experiences were self-initiated, while only 24% of women's experiences were self-initiated. Conversely, 44% of women's experiences were originated by superiors, while only 21% of men's experiences were created by supervisors.

Perhaps the most important characteristic of the most helpful on-the-job experiences is their developmental aspects. That is, what was there about the experiences that made them effective for building leadership capabilities? Interviewees identified 385 developmental aspects present in the 185 most helpful experiences. Obviously, more than one aspect was usually operating in each experience. For the purpose of categorizing the 385 developmental aspects, the research team classified them as either *motivating* aspects or *facilitating* aspects. Table 3 presents the developmental aspects as they were reported by interviewees, the frequency (in percents) with which they were reported, and a comparison of the frequency (percents) with which they were stated by men and women.

TABLE 3

Developmental aspects of most helpful experiences by gender

Developmental Aspects	% Total	Gender	
		% Women	% Men
Motivating Aspects			
Interesting, enjoyable, exciting experience	5	3	6
Challenge—Risk of failure	6	4	7
Challenge—New/complex tasks and problems	15	16	14
Job overload and stress	3	5	2
Barriers (e.g., lack of higher level support or resources, resistant or incompetent subordinates)	5	6	4
Facilitating Aspects			
Negative experience or failure	4	5	3
Opportunity to plan and reflect (feedback)	5	5	6
Assessment of personal strengths/weaknesses	5	4	5
Chance to learn new ideas, practices, insights	15	14	16
Opportunity to apply knowledge and skills	11	11	10
Confidence building and encouraging	7	9	7
Exposure to positive role models	7	8	6
Exposure to negative role models	3	2	3
Freedom to make decisions and mistakes	4	5	3
Exposure to other cultures	3	2	4
Other	1	1	1
No relevant response	1	0	2

Note. Values represent percentages of the 385 developmental aspects reported by women ($n=152$) and men ($n=233$).

Table 3 shows that the challenge of new and/or complex tasks and problems, and the challenge represented by risking failure were the two most frequently named motivational developmental aspects. As one interviewee put it:

> It was a challenge. There was a lot of money that we had to raise. We had to have this gorgeous facility to meet standards. We had to hire a physical therapist—who are high dollar (professionals). Every place we went people said, "You can't do this. You can't find faculty, and you can't do this at a Vo-Tech, and you can't, can't, can't..."

Women appeared to be motivated more frequently than men by stress and job overload. Men were more frequently motivated than women by the risk of failure and the interesting, exciting features of the experience.

The four most frequently reported facilitating developmental aspects are (a) the chance to learn new ideas, practices, insights, (b) the opportunity to apply and practice skills and knowledge, (c) confidence building and/or encouragement received, and (d) exposure to positive role models. The following two quotations are illustrative.

> It allowed me to put my human relations, human assessment, and human development skills to the ultimate test, and to literally hone them down through trial and error.

> It gave me more confidence to step out and I felt on a sounder footing because I had more depth of knowledge in other disciplines that I did not have when I came here.

Leader Qualities Perceived to be Improved by On-the-Job Experiences

Interviewees made a total of 677 statements about 41 different leader qualities that they perceived to have been improved as a result of the 185 experiences. The 41 different leader qualities are attributes—characteristics, knowledge, skills and values—possessed by individuals that have been presumed by interviewees to predispose leadership behavior (see Table 4). With the possible exception of motivating others, there appears to be no important differences between men and women in perceived improvements in leader qualities. Some of the flavor of interviewee responses can be gained from two quotations.

> Because I needed to present proposals either in outline form or in writing, I learned business language and improved my organization and communication skills, especially as they relate to written communication.

> There are a lot of administrators out there who don't have the desire to do a good job. You have to be willing to put a whole lot of time in. You have to like people, and along with being fair and consistent, you have to respect people. You have to respect their beliefs and their input.

TABLE 4

Leader qualities perceived to be improved by on-the-job experiences by gender

Leader Qualities	% Total	Gender	
		% Women	% Men
Energetic with stamina	0	0	1
Insightful	3	4	2
Adaptable, open to change	2	2	2
Visionary	2	3	2
Tolerant of ambiguity and complexity	1	0	1
Achievement-oriented	1	1	2
Accountable	1	2	1
Initiating	2	2	3
Confident, accepting of self	4	4	4
Willing to accept responsibility	2	2	2
Persistent	1	0	1
Enthusiastic, optimistic	1	0	1
Tolerant of frustration	1	0	1
Dependable, reliable	0	0	0
Courageous, risk-taker	1	2	1
Even disposition	0	1	0
Committed to the common good	3	2	3
Personal integrity	1	2	1
Intelligent with practical judgment	1	1	1
Ethical	1	1	1
Communication (listening, oral and written)	7	7	7
Motivating others	3	2	5
Networking	4	5	3
Planning	4	5	3
Delegating	3	2	3
Organizing	4	2	3
Team building	5	5	6
Coaching	2	3	2
Conflict management	2	2	2
Time management	1	0	1
Stress management	0	0	0
Appropriate use of leadership styles	5	4	5
Ideological beliefs appropriate to the group	1	1	1
Decision-making	3	2	4
Problem solving	1	2	1
Information management	1	1	1
Administrative (management) knowledge and skills	6	7	5
Broader perspective of the organization	5	6	5
Status in the organization	1	1	1
Unspecified interpersonal skills	6	7	5
Other	1	0	2

Note. Values represent percentages of the 677 responses reported by women ($n = 257$) and men ($n = 420$). Zero percent indicates less than 4 responses overall, less than 2 responses for women, and less than 3 responses for men.

Developmental Aspects Associated with Types of On-the-Job Experiences

Cross tabulations revealed that some developmental aspects were perceived to occur relatively frequently with certain types of experiences. Table 5 presents the developmental aspects that occurred at least 8 times and in at least 8% of the experiences of a given type. Note that the empirical relationships shown in Table 5 are also associations that might reasonably and logically be expected. In light of the number of different developmental aspects that are associated with it, special start-up assignments appears to have the greatest potential for improving leader qualities on-the-job.

TABLE 5

Percent times that development aspects were associated with types of experiences

Developmental Aspects	Types of Experiences				
	Special Start-up Assignments	New Position: Increased Responsibilities	Personnel Problems	Mentoring and Advocacy	Formal Training
Risk of failure	8	—	—	—	—
New or complex tasks and problems	17	24	13	—	—
Opportunity to plan and reflect	9	—	—	—	—
Chance to learn new ideas, practices, insights	11	15	—	18	30
Opportunity to apply knowledge and skills	11	14	13	—	—
Confidence building-encouraging	8	—	—	—	—
Exposure to positive role models	—	—	—	24	—
Freedom to make decisions-mistakes	8	—	—	—	—

Note. Other associations occurred less than 8 times or less than 8% for that experience.

Leader Qualities Associated with Developmental Aspects

It is reasonable to expect that the developmental aspects of an experience are instrumental in improving leader qualities. But what aspects are associated with what leader qualities? Table 6 presents the results of a cross tabulation between developmental aspects and leader qualities. It shows the particular leader qualities that are related to each of five developmental aspects. All other possible relationships have not been shown because they

were reported less than 10 times or less than 5% of the time. The challenge of new and/or complex tasks and problems is related to more improved leader qualities than any other developmental aspect. In addition, communication (listening, oral, written), and sensitivity, respect are associated with more developmental aspects than any other leader qualities. In fact, communication and sensitivity, respect were perceived as being improved more frequently than any other leader quality (see Table 4).

TABLE 6

Percentage of time that leader qualities were associated with developmental aspects

Leader Qualities	Development Aspects									
	Challenge: Risk Failure	Challenge: New & Complex Tasks	Barriers	Negative Experience or Failure	Opportunity: Plan-Reflect	Assessment: Strengths and Weaknesses	Chance to Learn New Ideas, Practice, Insights	Opportunity: Apply and Practice Skills	Confidence Building	Exposure to Positive Role Models
Confident, accepting of myself	—	5	—	—	—	—	5	5	7	—
Communication	11	7	9	—	10	8	6	8	7	—
Sensitivity, respect	6	5	10	11	—	—	5	6	—	—
Networking	—	—	—	—	—	—	5	—	—	—
Planning	—	—	—	—	—	—	5	—	—	—
Organizing	—	—	—	—	—	—	—	—	6	—
Team-building	—	5	—	—	7	7	5	6	—	—
Appropriate leadership styles	—	5	—	—	8	—	5	5	—	—
Administrative knowledge, skills	—	5	—	—	—	—	5	6	—	8
Broader perspective of organization	—	—	—	—	—	—	5	5	6	—
Unspecified interpersonal skills	—	—	—	—	7	—	6	8	—	—

Note. All other associations occurred less than 10 times and/or less than 5% of the time that the developmental aspect was reported.

Table 7 combines findings contained in Tables 5 and 6. It shows how the two sets of relationships lead from on-the-job experiences through developmental aspects to improved leader qualities. The table includes all the complete sets of relationships that appear to be justified by the data in the study. In other words, given the experiences and perceptions of the interviewees in the sample, Table 7 answers the question: What leader qualities are most likely to improve if selected on-the-job experiences are undertaken?

TABLE 7
Relationships among on-the-job experiences, developmental aspects, and improved leader qualities

On-the-Job Experiences	Developmental Aspects	Improved Leader Qualities
I. Special start-up assignments	IA. Challenge of risking failure	IA. Communication (listening, oral, written) Sensitivity, respect
	IB. Challenge of new and/or complex tasks or problems	IB. Confident, accepting of self Communication (listening, oral, written) Sensitivity, respect Team building Appropriate use of leadership styles Administrative/management knowledge and skills
	IC. Opportunity to plan and reflect	IC. Communication (listening, oral, written) Team building Appropriate use of leadership styles Unspecified interpersonal skills; orientation to people
	ID. Chance to learn new ideas, practices, insights	ID. Confident, accepting of self Communication (listening, oral, written) Sensitivity, respect Networking Planning Team building Appropriate use of leadership styles Administrative/management knowledge and skills Broader perspective of the organization Unspecified interpersonal skills; orientation to people
	IE. Opportunity to apply and practice skills and knowledge	IE. Confident, accepting of self Communication (listening, oral, written) Sensitivity, respect Team building Appropriate use of leadership styles Administrative/management knowledge and skills Broader perspective of the organization Unspecified interpersonal skills; orientation to people
	IF. Confidence building	IF. Confident, accepting of self Communication (listening, oral, written) Organizing Broader perspective of the organization
II. New position with new and/or increased responsibilities	IIA. Challenge of new and/or complex tasks or problems	IIA. (See IB, above)
	IIB. Chance to learn new ideas, practices, insights	IIB. (See ID, above)
	IIC. Opportunity to apply and practice skills and knowledge	IIC. (See IE, above)
III. Handling personnel problems: Conflicts and firings	IIIA. Challenge of new and/or complex tasks or problems	IIIA. (See IB, above)
	IIIB. Opportunity to apply and practice skills and knowledge	IIIB. (See IE, above)
IV. Mentor counseling and advocacy	IVA. Chance to learn new ideas, practices, insights	IVA. (See ID, above)
	IVB. Exposure to positive role models	IVB. Administrative/management knowledge and skills

Types of Experiences Recommended for Future Leaders

After fully describing their own most helpful on-the-job experiences, the sample of administrator-leaders was asked to recommend the types of experiences that would best develop the leadership capabilities of future administrators. Table 8 presents the five most frequent responses. Note that only one type of experience recommended by interviewees for future administrator-leaders, mentor counseling and advocacy, was also on the list of their own most helpful types of experiences (see Table 2). The following two quotations are illustrative of interviewee statements:

> I think it would be very beneficial to develop some kind of a mentor system, where up-and-coming leaders spend a certain amount of time with somebody who has already demonstrated the traits and abilities that you're looking for.

> As a matter of fact, the State Department is getting ready to do another one of these [leadership] programs and I think that it would be relatively simple to replicate to continue to develop leadership programs for up-and-coming leaders in the state.

Also noteworthy are the differences in recommendations by gender. Men favored employer-sponsored internships, while women favored the remaining four types of experiences.

TABLE 8
Types of experiences recommended for future leaders by gender

Experiences	% Total	Gender	
		% Women	% Men
Mentoring, counseling, and advocacy	17	21	15
Formal training (leadership academy)	14	17	12
Using simulations and case studies	9	12	7
Special assignments: Miscellaneous	8	10	6
Internships sponsored by employer	7	3	9

Note. Values represent percentages of the 156 recommended experiences reported by women (*n* = 58) and men (*n* = 98). Remaining experiences were widely distributed among various types.

Conclusions

Within the limitations imposed by the nature and size of the sample as well as the instrumentation, the results of the study show that on-the-job experiences can certainly be viewed as a promising means for developing future administrator-leaders. Vocational administrators participating in the study, who were themselves effective leaders, all had vivid, positive memories of experiences which they said significantly affected their development as leaders. Further, they advocated on-the-job activities that they believed could be used effectively in developing future leaders for vocational education.

While recognizing the benefits that may accrue from on-the-job experiences, it is also important to note that all on-the-job experiences do not appear to be equal in their potential for leadership development. Two characteristics of effective experiences have been revealed by this study and by the industry study conducted by McCall et al. (1988). First, on-the-job learning is most likely to occur when individuals are placed in a variety of challenging situations with problems to solve and choices to make under conditions of risk. These situations (a) motivate individuals to learn, (b) provide opportunities to gain new ideas and knowledge and to practice skills and apply knowledge, and (c) encourage new insights through reflection on prior actions. Second, individuals gain their experiences in a supportive environment with supervisors who provide positive role models and constructive support and mentors who provide counsel and advocacy.

Some examples of challenging situations include the provision of new or increased responsibilities; special start-up assignments, such as initiating a new program or project; and handling personnel problems, such as hiring and firing.

Just as all on-the-job experiences are not equal in their potential for leadership development, not all leader qualities are developed equally well by on-the-job experiences. The most important kinds of outcomes for both men and women appear to be growth in leadership skills, knowledge, and values. These outcomes most typically include improvement in communication (listening, speaking, writing), sensitivity to and respect for others, team building skills, appropriate use of leadership styles, self-confidence, networking, and planning. In addition, it is common for on-the-job experiences to further develop administrative/management knowledge and skills specific to the context, as well as to broaden the administrator's perspective about the organization.

There are relatively few gender differences in the helpful on-the-job experiences of administrator-leaders. Women more frequently depend upon their supervisors to initiate the experience and they have relatively more experiences than men with new positions that have new and increased responsibilities, and with experiences that require handling personnel problems. Of the 41 reported leader qualities improved, the only one on which there are gender differences is that men develop their ability to motivate others more frequently. On the other hand, men and women administrator-leaders differ considerably on their recommended experiences for developing future administrator-leaders. Men suggest internships (employer sponsored) more often, while women recommend mentoring and counseling, formal training programs, using simulations and case studies, and miscellaneous special assignments more frequently.

Discussion

While the results of this research are quite consistent with the findings of studies conducted in industrial settings, the industry studies generally reported that experiences occurring *early* in the administrator's career were among the key influences of leadership development. In this study, timing was considered an important characteristic in only 30% of the most helpful experiences. It seems reasonable to suggest that there should be no restrictions on when the on-the-job experiences are provided, but that it is probably most useful to plan for them as early in a person's administrative career as possible.

Vocational administrator-leaders participating in the study were not asked to identify examples of education program-related experiences through which they developed their leader qualities. Thus, only 6% reported formal training programs (i.e., leadership academies) and the use of simulations/case studies as significant experiences in their own leadership development. Yet, the use of formal training programs and simulations/case studies were recommended for preparing future administrator-leaders 23% of the time. Perhaps this is because formal leadership preparation programs have only recently become available to vocational educators, and their value is only now beginning to be appreciated. In any event, formal leadership preparation programs should *not* be considered a substitute for appropriately challenging on-the-job experiences, but only as a very useful supplement to them.

The recommendations of chief vocational administrator-leaders for the types of experiences that would be helpful to future leaders also appear to have underemphasized the opportunities for some of the same types of challenging on-the-job experiences that they felt were most beneficial to themselves, i.e., providing new or increased responsibilities, and handling personnel problems. Perhaps the administrators failed to recognize many of the opportunities for leadership development that they can plan and provide for individuals within their own institutions. What appears to make for challenging assignments are when (a) it is necessary to overcome barriers to their satisfactory conclusion; (b) the scope, novelty, time limits, etc. of the assignments stretch abilities to the fullest; and/or (c) other persons involved are resistant or incompetent.

Given that men were more likely than women to be the initiators of their developmental experiences, administrator-leaders may need to be more aggressive in identifying and providing appropriate on-the-job developmental opportunities for women preparing for leadership roles.

A previous study (Moss & Jensrud, 1994) has shown that male and female vocational administrator-leaders need the same leader qualities to be maximally effective, but that, as department heads, women actually possessed slightly more team building skills and were significantly better at motivating others and using appropriate leadership styles than men. The present study revealed that more men than women thought they had improved their motivational skills as the result of their on-the-job experiences. It might be hypothesized that the on-the-job experiences were perceived by men who were now chief vocational administrators to have strengthened some of their earlier deficiencies.

Finally, almost all of the leader qualities perceived as improved by the administrator-leaders in the study are consistent with the specific leader attributes contained in the LAI (Moss et al., 1994b). But, in addition to leader attributes, the interviewees reported that

they gained administrative/management knowledge and skills and a broader perspective of the organization from their on-the-job experiences. This is certainly not unexpected; in fact, it is almost inevitable and desirable in light of the administrators' complete job responsibilities.

An Implication for Practice

The need for high quality leadership in vocational education is certainly as critical today as it has ever been. Some would argue that with the major education reform initiatives currently underway, quality leadership is even more important than at any time in the past. Further, many believe that it is a managerial obligation for administrators to help prepare their successors.

The study shows that successful vocational administrator-leaders perceive on-the-job experiences as having had a significant impact upon their development as leaders. They advocate similar experiences for preparing future leaders. An implication for practice is evident. Chief vocational administrators have within their control the ability to plan and to provide on-the-job leadership development experiences that are appropriate for their subordinates. A great deal of thought goes into designing effective classroom learning experiences, and it will probably need as much effort and creativity to take full advantage of opportunities for on-the-job experiences. State departments of education and teacher education departments can assist chief vocational administrators by conducting workshops that (a) acquaint administrators with the principles that make on-the-job experiences effective, (b) develop administrators' ability to recognize leadership development opportunities as they occur within their institutions, and reinforce their willingness to take advantage of those opportunities, and (c) begin to plan special on-the-job experiences that are appropriate for their institutions and their subordinates.

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Postsecondary Technical and Occupational Instructors' Perceived Use of Student Assessment Information

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Abstract

This descriptive study examined instructors' use of assessment methods in a random sample of Ohio postsecondary technical and occupational classrooms and laboratories. Instructors tended to use information from paper and pencil tests the most in making instructional decisions, followed by information from performance assessments and informal observations. Postsecondary instructors rarely used information from standardized tests, portfolios, and essay methods. Instructors neither agreed or disagreed on the potential constraints faced while conducting assessment activities. More than four-fifths of the instructors reported a positive attitude toward assessment and more than one-half considered themselves to be very competent in assessment.

Since the 1970s the public, elected officials, state agencies, and the media have become more interested in education. This interest has been due, in part, to the achievement of students which does not compare well with counterparts in other countries. Hudgins (1993) stated that although costs have been rising for higher education, student achievement has flattened out and sometimes even declined. Postsecondary institutions have not shown legislators or the general public a strong and obvious correlation between investment in postsecondary education and return. Recently, there was a call for establishing performance assessment systems in education to meet the accountability needs within and outside educational circles (Jarosik & Phelps, 1992).

Additional evidence needs to be provided to indicate that students have more than *seat time* to account for the learning that takes place in classrooms and laboratories. How technical and occupational instructors use assessment information, and whether its use is effective, can play a major role in enhancing and documenting instruction and learning. Our review of the literature revealed very little about the assessment practices of postsecondary instructors. Research conducted on the quality and effectiveness of general education instructor training in measurement and assessment has implied that these individuals may not be acquiring the skills necessary to use assessment skills effectively. If true for general education instructors, what are the assessment skills needed by technical and occupational instructors? Information on the assessment skills needed and the use of assessment information by technical and occupational education instructors is not available. Thus, we sought to determine the assessment activities used by instructors in making