

CENTER FOR CREATIVE LEADERSHIP

**AN EVALUATION
OF THE OUTCOMES
OF A LEADERSHIP
DEVELOPMENT
PROGRAM**

**Cynthia D. McCauley
Martha W. Hughes-James**

**Looking at a year-long program for
educational leaders that features
classroom sessions, coaching,
journal-writing, and learning projects**

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Center for Creative Leadership
Greensboro, North Carolina

The Center for Creative Leadership is an international, nonprofit educational institution founded in 1970 to advance the understanding, practice, and development of leadership for the benefit of society worldwide. As a part of this mission, it publishes books and reports that aim to contribute to a general process of inquiry and understanding in which ideas related to leadership are raised, exchanged, and evaluated. The ideas presented in its publications are those of the author or authors.

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Table of Contents

Executive Guide	vii
Findings	vii
Implications	ix
Acknowledgments	xi
List of Tables	xii
Introduction	1
The Development Program	1
Description of Program	1
Rationale for Program Design	4
Relationships	5
Learning projects	5
Journals	6
The Research Study	6
Methods	9
The Sample	9
Data Collection	9
Content Analysis	10
Case Studies	13
Results and Discussion	14
What Outcomes Did the Program Generate?	14
Most important program outcomes	15
Changes others would see	18
Changes in school system	23
Discussion	23
How Did Various Parts of the Program Contribute to Program Outcomes?	25
Classroom portion of program	26
Executive facilitators	27
Reflective journal writing	30
Learning projects	32
Discussion	33
How and Why Do Individuals Vary in Terms of Program Outcomes?	34
Variations in program outcomes among individual participants	35
Factors differentiating subgroups	38
Discussion	41
Summary	44

General Discussion	44
Comparison to Outcomes from Other Evaluation Studies	46
Organizing Framework	47
Program components	47
Individual differences	48
Contextual variables	49
Limitations	50
Implications	51
Leadership Development Programs	52
Evaluation of Leadership Development Programs	54
References	57
Notes	61
Appendices	63
Appendix A—Questions Used in End-of-program Interviews	63
Appendix B—Subgroup Differences: Statistical Analysis	67
Index	85

Executive Guide

This report presents the findings of a study on how a program designed for school superintendents in Florida affected thirty-eight individuals who participated. The Chief Executive Officer Leadership Development Program (CEOLDP) was developed by the Center for Creative Leadership (CCL). Lasting one year, it begins with a six-day classroom experience designed to raise the participants' awareness of their strengths and weaknesses as leaders and to encourage the setting of self-development goals and action plans. For the remainder of the year, subjects work toward their goals as well as implement projects aimed at improvements in their school systems. To facilitate this work, each is matched with an *executive facilitator*, another superintendent who is available as a guide, advisor, and supporter; the participant also keeps a journal. A more detailed description of the program can be found on pages 1-6.

The study focused on three research questions: (1) What outcomes did the program generate for participants? (2) How did various parts of the program contribute to these outcomes? and (3) How and why did individual participants vary in terms of program outcomes? Data to address these questions were collected quantitatively through the administration of psychological instruments, qualitatively through interviews, and idiographically through the examination of case studies.

Findings

Using the three research questions as guides, the following sections summarize our findings:

Program outcomes. Looking at the program as a whole, the participants experienced three types of outcomes as a result of their program experience: (1) They developed strategies and competencies for continuous learning, including self-awareness, reflective thinking, and developmental relationships; (2) they experienced personal changes either in the way they thought about problems or issues, in their habits or behaviors, or in the way they felt; and (3) they accomplished projects more successfully than they would have without the program. (See pages 14-25.)

The contribution of various parts to program outcomes. The different features of the program contributed to its overall success in various ways:

(1) The classroom portion of the program contributed most to increasing participants' self-awareness (e.g., what my preferences are, how others perceive me, what I need to change about myself to be more effective in my work or

personal life). As a result of the classroom experience, participants also gained knowledge in particular management and leadership content areas (e.g., working in groups, planning and organizing, situational leadership) and gained closer relationships with the other superintendents going through the program. (See pages 26-27.)

(2) Executive facilitators contributed to the learning experience by providing advice and expertise to the superintendents, by helping them discover or construct knowledge (e.g., serving as a sounding board, asking questions which stimulate deeper analysis, providing feedback), by keeping them on track with the goals of the program, and by providing support and encouragement. (See pages 27-29.)

(3) The majority of superintendents engaged in journal writing during the year. They found reflective writing helped them in reviewing and learning from their past experiences, in thinking about future situations and strategies for handling these situations, in exploring their feelings, and in keeping themselves organized and goal-oriented. (See pages 30-31.)

(4) In addition to providing a process for linking the program to organizational improvement, *learning projects* served to stimulate changes in the superintendents themselves. An increase in involving others and in reflective thinking were the most frequently cited changes connected to learning projects. (See page 32.)

How and why individuals varied in terms of program outcomes. The variations in program outcomes from person to person reflect that these superintendents are at various points in their careers, have different patterns of strengths and weaknesses, and different back-home situations and issues to handle. In an exploratory analysis, we found four subsets of responses to program experiences (see pages 34-44): Fine-tuning, Self-control, Role Expansion, and New Perspectives.

The Fine-tuning subgroup contained superintendents who were already highly effective in their organizations and who experienced the program as an opportunity to refine some of their ideas and practices. Although these individuals worked on some improvement goals, they did not feel that they had changed much as a result of the program.

The Self-control subgroup contained superintendents who were motivated to improve relationships with others by keeping their negative interpersonal behaviors in check and by not letting others agitate them. These individuals met with limited success in these efforts because they were attempting to change

ingrained behaviors; they continued to encounter difficult problems in their districts, and they did not have a lot of interpersonal support.

The Role Expansion subgroup consisted of those who became more thoughtful, reflective, and goal-oriented in their work and who developed a broader understanding of their role as superintendents. These individuals tended to be newer in their positions. They also were more likely to make fuller use of the learning opportunities afforded by their executive facilitators and journals than did the previous two subgroups.

The New Perspectives subgroup contained superintendents who felt they had definitely changed in their habits and perspectives as a result of the program. Two types of perspective changes were predominant in this subgroup: a greater willingness to share power and a greater value placed on balancing work and personal life.

Although these four subgroups represent qualitative differences among the superintendent's experiences, the program seemed to have a quantitatively greater effect on the latter two subgroups (Role Expansion and New Perspectives). Strategies for increasing the motivation, opportunities, and support for learning in the first two subgroups (Fine-tuning and Self-control) are discussed on pages 53-54.

An organizing framework for analyzing individual outcomes for participants in a leadership development program is shown in Figure 5 (page 48). This figure suggests that a development program leads to valued outcomes to the degree that the program stimulates motivation to learn and provides opportunities and support for learning. However, a program does not occur in isolation. It will have differential effects depending on what the individual superintendent brings to it (e.g., job demands, personality) and on the back-home organizational context in which it occurs (e.g., degree of support for learning and change, turbulence in the organizational environment).

Implications

Several implications were drawn for leadership development programs and for evaluation of such programs. For leadership development programs the implications are: (1) Self-awareness-building programs are enhanced by extending them beyond the classroom to include workplace projects, reflective journal writing, and coaching from an experienced peer; (2) the program we studied (one that focuses on developing awareness of individual strengths and weaknesses, encourages efforts to improve as a leader, and offers tools for supporting those efforts in the workplace) is a very flexible one in that it is useful to indi-

viduals in varying points in their careers with varying needs; and (3) these types of leadership development programs are needed at the top levels of organizations. For the evaluation of such leadership development programs, the implications are: (1) The use of multiple methods (qualitative, quantitative, and idiographic; see page 54) enriches the analysis of program outcomes; (2) evaluation studies should expect highly individualized outcomes because participants in such programs can choose to work on a wide variety of areas; and (3) evaluative studies of these programs are rich opportunities for better understanding the process of leadership development.

Acknowledgments

This research would not have been possible without the gracious cooperation of the superintendents and facilitators involved in the program. We are particularly in debt to the five superintendents who allowed us to conduct case studies of their year in the program. We are grateful for the support and insights from Luther Rogers (formerly with the Florida Department of Education and now head of the Florida Association of District School Superintendents), Linton Deck (director of CCL's Education and Nonprofit Sector Applications Group), and the trainers in the CEOLDP program: Karen McNeil-Miller, Sara King, and Pam Mayer. We also received a great deal of help with the project from fellow researchers: Dianne Young and Bob Shively, who collaborated with us on the case studies; Judith Steed, who was very involved in the data analysis; and Lorrina Eastman, who helped assess the reliability of a number of our coding schemes. Special recognition goes to Patti Hall for helping us to manage the data collection process and keeping our data files in order.

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List of Tables

Table 1:	Data collected for CEOLDP	11
Table 2:	Most important program outcomes	16
Table 3:	Number and percentage of superintendents and facilitators who reported each type of program outcome for superintendents	17
Table 4:	Number and percentage of superintendents who reported each type of change they felt others have seen in them	19
Table 5:	<i>Benchmarks</i> [®] scale definitions.....	20
Table 6:	Average change in <i>Benchmarks</i> [®] scores.....	21
Table 7:	Number of superintendents who moved 1/2 SD (preprogram to postprogram) on <i>Benchmarks</i> [®]	22
Table 8:	Number and percentage of superintendents who reported each type of classroom lesson	28
Table 9:	Number and percentage of superintendents who cited each of the benefits derived from working with an executive facilitator	29
Table 10:	Number and percentage of superintendents who cited each benefit of reflective journal writing	31
Table 11:	Number and percentage of superintendents reporting each type of change from learning projects	32

Index for Tables B1 to B19 in Appendix B (statistical analysis of subgroup differences) may be found on page 67.

Introduction

In this report we will describe the findings and implications of an evaluation study of the Chief Executive Officer Leadership Development Program (CEOLDP), which was designed for school superintendents by the Center for Creative Leadership (CCL). The study examined the outcomes of the program for those who participated, how the components of the program contributed to outcomes, and how participants' characteristics and contexts affected outcomes. The paper is written for a research-oriented audience interested in the evaluation of leadership development efforts.

The research described in this report is based on the four times CEOLDP was conducted between October 1989 and October 1992; during this period a total of forty-one superintendents completed the program, thirty-eight of which are included in this study. Since the end of the study, another session of the program has begun and an additional one is planned.

We will begin with a description of the program and the rationale for its design. The research study and its findings will then be presented and discussed. We will conclude with implications of our findings for leadership development programs and for the evaluation of these programs.

The Development Program

CEOLDP was designed to provide a leadership development experience for public school superintendents in the state of Florida. The Florida Department of Education and the Florida Council of Educational Management (FCEM) have a history of emphasizing development for school principals and the extension of this emphasis to the superintendent level was a natural next step. In 1986 the Florida legislature passed legislation requiring that the FCEM provide a leadership development program for superintendents. Its broad goals were to expand superintendents' leadership capacity and to stimulate their continuing personal and career growth. The Center for Creative Leadership worked with representatives from the Florida Department of Education to design the program.

Description of Program

The program consists of a classroom portion, closely mirroring CCL's public Leadership Development Program (LDP), and a follow-up year back on the job. During this year, superintendents work toward goals set at the end of the classroom portion; work with an assigned *executive facilitator*, an experienced

superintendent who is available to fill various developmental roles (e.g., guide, confidant, advisor, and supporter); and are encouraged to continue introspection and reflection through journal writing.

The classroom portion is a six-day residential experience. Just prior to it, participants complete a number of personality-type measures and their co-workers complete instruments on their perceptions of the participants' skills and behaviors. This is done because one of the major emphases of the program is to increase the participants' understanding of their own preferences and styles, how they affect others, and their strengths and weaknesses as managers and leaders. Additional assessments take place on the first day of class when staff members observe participants in leaderless group-discussion exercises.

The program is intensive in terms of feedback and interaction with others in small groups. A considerable part of it is dedicated to feeding back the results of the various measures and assessments and helping the participants understand and integrate them. Participants also provide feedback to one another about behaviors observed during the week and are given models for framing and understanding various aspects of the managerial role (e.g., decision making, leadership styles, and providing feedback). These models are further illustrated and applied through group-exercise experiences.

At the end of the week, superintendents are encouraged to take what they have learned and use this information in setting specific goals for the following year. A distinction between two types of goals is made. First are *individual goals*; these are similar to those set by participants in public LDPs. Superintendents focus on what they want to change or accomplish for themselves (e.g., be more visible in the district, enter a doctoral program, or improve physical fitness). The staff encourages them to choose goals in the areas of personal growth, career development, family relationships, and community involvement. The second type of goals are called *learning projects*; these are more closely tied to making improvements in their organizations. Superintendents are encouraged to select projects through which they can continue to emphasize their own personal development. For example, one participant's project goal was to ensure the effectiveness of principals who had recently been moved into new schools. He wanted to work on improving his coaching skills in the context of this project. Another participant's goal was to improve the relationship between him and the school board. In the context of this project, he chose to work on improving the way he handled criticism in public. Of the two types of goals, learning projects are more heavily emphasized in the follow-up year. Each superintendent works on two to four projects.¹

The executive facilitators and journal writing help the superintendents learn through their project work. But they can also be used more broadly for learning from any of the issues or problems they face throughout the year. Facilitators are all current or former superintendents and live in various parts of the country. They are matched with participants during the classroom portion of the program (facilitators attend an orientation program during this time). No facilitator has more than one person to work with in a particular program. The matches are made by the head of the CEOLDP program at CCL (who knows the facilitators well) and the person responsible for the program in the Department of Education (who knows the superintendents well). These two individuals make matches on the basis of compatibility and on the basis of which facilitators they deem to have experiences that are most relevant to particular superintendents. After their initial interactions, each participant has the option of asking for a new match if he or she feels that the relationship might not be productive. Two to six weeks following the classroom experience, the facilitator visits the superintendent in his or her district. Beyond this initial site visit, the amount of interaction varies: Some matches have had several additional site visits; some have met at professional meetings or training events; and a few participants visited their facilitators' school districts. All matches continue contact through telephone conversations and correspondence.

Participants are also encouraged to keep a journal during their learning project year. Journals are not only for recording events but also for reflecting on important events and issues: for example, why particular things happened, what were the positive and negative outcomes, how the person felt, what could be learned or done differently, what assumptions needed reexamining. Every few months, participants are asked to send copies of their journals to designated staff members at CCL and to their executive facilitators. They then receive feedback on whether the journal is sufficiently reflective and they are asked questions to stimulate further reflection. The ultimate goal is for participants to become more skillful at learning from their experiences.

For elected superintendents (Florida elects most of its superintendents), there is an additional feature of the program. When they successfully complete it (i.e., attend the classroom portion, utilize their facilitator, engage in journal writing, and make progress on learning project goals), they receive a salary increase of between \$3,500 and \$7,500.² The participant, the facilitator, and CCL staff provide input to the Department of Education about how successful they think the person has been, with the final determination of amount of increase resting with the department.³

Rationale for Program Design

We refer to CEOLDP as a *development* program rather than a *training* program. This means that, instead of being designed primarily to teach a specific set of leadership strategies and skills, it is designed to enhance and support the continuing expansion of leadership capacity. It focuses on providing opportunities and support for understanding one's strengths and potential for personal growth and for making self-directed efforts to improve one's effectiveness as a leader and manager.

CEOLDP starts with CCL's traditional feedback-intensive classroom experience. A basic assumption of this device is that understanding one's strengths and weaknesses is the cornerstone of development. Knowledge of weaknesses points out to managers where they need to exert effort to improve and knowledge of strengths builds the self-confidence needed to maximize utilization of the strengths.

Although participants are expected to gain new insights from the feedback, it is mainly the *motivational* component of the feedback that these classroom experiences are credited with providing (Conger, 1992; Drath & Kaplan, 1984; Van Velsor, 1984). There are several reasons why feedback may be particularly motivating in these programs. First, participants may receive more negative or disconfirming feedback, which is the most important type in motivating change (Conger, 1992; Kaplan, 1990). Unlike performance appraisals or other forms of feedback in the workplace, feedback received during a program from co-workers is anonymous. Also, unlike feedback in the workplace, feedback from program staff and from other participants can be more straightforward and honest because feedback-givers do not have to be concerned about maintaining a long-term positive relationship with the participant. Second, feedback in this kind of program is provided in a supportive climate; such support encourages more acceptance of the feedback and more outlets for dealing with any negative emotions generated by it (Kaplan, 1990; Van Velsor, 1984). Finally, feedback in LDP-type programs is tied to a better understanding of one's motives and preferences (through such instruments as the *Myers-Briggs Type Indicator* [MBTI] or the *California Psychological Inventory* [CPI]). Understanding why one behaves in particular ways boosts motivation to make a change in behavior (Van Velsor, 1984).

However, studies of LDP suggest that additional features could enhance the development that occurs as the result of such programs: for instance, opportunities to experiment with new behaviors and to receive coaching and consultation around improvement efforts (Conger, 1992; Van Velsor, 1984). Also, the designers of all types of management development programs have begun to incorporate additional development strategies that emphasize the following:

providing opportunities to practice new skills and behaviors in back-home job situations, providing consultation and support through relationships, and increased self-reflection and analysis as changes are attempted (Burnside & Guthrie, 1992; Dixon, 1993; Hodgson, 1981; Krug, Ahadi, & Scott, 1990). Initial evaluations of such efforts are positive (Marson & Bruff, 1992; Newell, Wolf, & Drexler, 1988; Prideaux & Ford, 1988; Young, Palus, & Dixon, 1993). In line with these approaches, CEOLDP designers added three components to the traditional feedback experience: a relationship with an experienced colleague, tying learning to challenging back-home projects, and reflective journal writing.

Relationships. Learning through relationships (e.g., with mentors, teachers, bosses, and peers) has been established as an important avenue of management development (Kram, 1988; Kram & Isabella, 1985; McCall, Lombardo, & Morrison, 1988; Schön, 1990). Through these relationships, managers receive advice, counseling, feedback, and support. Attempts to create assigned relationships (as opposed to allowing them to naturally occur) have met with some criticism. However, studies of the benefits of such relationships have found them to affect learning (Chao, Walz, & Gardner, 1992; Noe, 1988), and even critics admit they can be beneficial under the right circumstances (e.g., when there are clear development goals, when training is provided for coaches or mentors, or when third-party consultation is available to the pairs; Kram & Bragar, 1992). In the case of school superintendents, having ready access to a colleague for developmental purposes may be particularly important because their positions are likely to prohibit a developmental relationship with an internal staff member.

Learning projects. Management development programs have long been criticized for their lack of transference to the workplace. In addition, managers report they learn the most from challenging on-the-job experiences (McCall et al., 1988; Wick & León, 1993). These two factors have led to the design of development efforts that bridge the classroom and workplace and emphasize learning by doing. These efforts usually take one of two forms: First, participants in management training programs design and implement projects at the work-site that will allow them to apply or practice concepts and skills taught in the program (they typically return to the classroom to debrief the project experiences; see Marson & Bruff, 1992; Newell et al., 1988); or, second, groups of managers work together on real projects deemed important to the organization (these projects usually focus on solving a problem or helping the organization assess and take advantage of an opportunity and are often referred to as *action-learning*; see Marsick, 1990). The learning projects in CEOLDP are more like the former. However, new projects did not always need to be designed; partici-

pants were encouraged to consider existing projects that they could reframe as learning opportunities.

Journals. Learning from reflection on one's practice is another recognized approach to management development (Cell, 1984; Petranek, Corey, & Black, 1992). Reflective thinking is also a key element of learning from experience and action-learning (Bunning, 1992; Mumford, 1980; Robinson & Wick, 1992). Yet high-pressure, action-oriented organizational cultures allow little time for managers to reflect on their practices, on themselves, and on how they might be more effective (Bunning, 1992; McCall et al., 1988; Robinson & Wick, 1992; Van Velsor, Ruderman, & Phillips, 1989). Journal writing is one means of assisting people in the reflection process: It helps them to see patterns in experiences and interpret and extract the full meaning of events (Cell, 1984; Petranek et al., 1992).

In addition, reflection helps a person probe the assumptions, beliefs, and values that underlie events and issues (Robinson & Wick, 1992). Journal writing triggers self-analysis; reflection fosters self-insight and may reveal a clearer picture of who and what one is (Hixon & Swann, 1993). For continued learning and self-development, managers must be able to reflect, look inward, and analyze their own behavior (Argyris, 1991; Senge, 1992). Journal writing seems especially critical to the program design because it has the potential to build reflective thinking skills, to encourage learning from one's experience, and to provide a way to continue self-analysis once the classroom portion of the program is complete.

The Research Study

Several factors motivated us to undertake a study of the program outcomes for CEOLDP participants. First, the Florida Department of Education was interested in seeing if the program did indeed stimulate positive outcomes for the superintendents who participated. Such evidence is important if there is to be continuing support from the state. Second, CEOLDP was a new program design for CCL and was directed to a population with whom it had not worked a great deal; it was thus in our interest to better understand the program's impact. Finally, a study that enabled us to examine the linkages between program outcomes and individual participant characteristics and contexts would help to build additional research knowledge about the leadership development process.

The study focused on three research questions: (1) What outcomes did the program generate for participants? (2) How did various parts of the program contribute to these outcomes? and (3) How and why did individual participants vary in terms of program outcomes?

The client, of course, is most interested in our answers to the first question. It represents the typical goal of summative evaluation studies. In general, we were interested in whether the program stimulated internal changes in the superintendents (i.e., changes in the way they thought or felt), observable changes in their behavior, and changes in their organizations. Other evaluation studies of programs with features similar to CEOLDP (Marson & Bruff, 1992; Prideaux & Ford, 1988; Van Velsor, 1985; Young et al., 1993) have reported a wide variety of program outcomes with increased self-knowledge and changes in interpersonal behaviors and skills as the most frequently cited types of outcomes. Improved self-management competencies (e.g., handling tension, composure, and time management), administrative skills (e.g., goal-setting and monitoring), and learning strategies (e.g., reflective thinking and seeking feedback) have also been cited as outcomes.

Because the program combined several features designed to affect learning (i.e., feedback, facilitators, journals, and projects), we also wanted to try to understand the outcomes or benefits of each of these by asking the second question about how parts of the program affected outcomes. We could not design a controlled study that would eliminate one or more program features for various subsets of participants, so we relied on participants' own understanding of the benefits of each program component. Although formative evaluation studies often ask participants to evaluate the usefulness of various components of a program or for feedback on how the component might be improved, we found little research to guide us in looking at the outcomes associated with separate program features.

Our third research question focused on variations in program outcomes. We wanted to better understand leadership development by exploring how the characteristics that participants bring to the program, their back-home situations, and what they do in the program influence the magnitude and types of outcomes they experience. Previous research suggested a number of factors to consider. First are individual difference factors that would motivate participants to maximize their learning from a development program. Program participants who have recently experienced a key transition in their job (e.g., a promotion, a move to a new function) or new challenges caused by changes in the organization (e.g., mergers, new strategic directions) benefit more from development programs than those not experiencing these types of changes (Van Velsor, 1984; Van Velsor & Musselwhite, 1986; Young et al., 1993). It has been hypothesized that these individuals see a larger gap between their current skills and abilities and those

needed to meet the demands of their new roles or challenges, thus they are motivated to fill these gaps. Also, those in early stages of their careers may be more motivated to learn and grow than those in late career stages (Noe & Schmitt, 1986; Van Velsor, 1984). Evidence also exists that managers who are in the process of reassessing their careers or personal lives may benefit more than others from a development program (Van Velsor & Musselwhite, 1986; Young et al., 1993).

A second set of factors that may help explain variability in program outcomes are contextual ones that influence the opportunity for participants to make changes in their own behaviors or in organizational processes in the workplace. One factor that decreases this opportunity is the occurrence of a crisis in the participant's work or personal life (Van Velsor & Musselwhite, 1986). Such events may distract the participant from learning goals or cause undue stress, leading to a reliance on old (and comfortable) behavior patterns. Another factor that may frustrate participants' motivation to change is a lack of time, resources, or authority to apply what they have learned from the program to their job situation (Mathieu, Tannenbaum, & Salas, 1992). A positive organizational climate for change can also increase program outcomes; higher efforts to apply learning from training programs and increased changes in behavior have been found to occur in organizations where innovation and independent thought is valued and where risk-taking is encouraged (Baumgartel, Reynolds, & Pathan, 1984; Hand, Richards, & Slocum, 1973). Finally, those participants in organizations that support and encourage individual development efforts have been found to benefit more from their program experience (Hazucha, Hezlett, & Schneider, 1993; Van Velsor, 1984).

These first two sets of factors (individual difference and contextual) have been referred to as *readiness factors* (Palus & Drath, 1994); they influence what kind of learning and development people are prepared to engage in. A final set of factors we examined in relation to outcome variability was how program experiences differed among participants. For example, some participants may be more reflective than others in their journal writing, or some participants may get more input than others from their facilitators.

Although previous research suggests that a number of readiness and program factors may affect program outcomes, there are few studies that directly address this question. Our goal was to add to this research base. However, given the size of our sample and the number of factors which we could examine, our investigation of these factors should still be considered exploratory.

Methods

The Sample

Forty-five superintendents attended the week-long classroom portion of the program. Four dropped out after the classroom segment, and we were unable to collect complete data on three of the remaining forty-one. Thus, this study is based on thirty-eight participants.

The average age of the group is forty-nine years. There is little diversity in terms of race or sex⁴: ninety-two percent are male and ninety-two percent are Caucasian. This is a highly educated group, with sixty-eight percent having Master's degrees and thirty-two percent having Ph.D.s. Their average tenure in the superintendency is slightly over five years; sixteen percent of them had been superintendents prior to their present position. Most of them (seventy-nine percent) are elected as opposed to appointed.

The thirty-eight districts range in size from three to ninety-four schools (median = 14), 1,100 to 110,000 students (median = 11,000), and 78 to 7,000 teachers (median = 675). Their operating budgets range from \$7 million to \$435 million.

Data Collection

At various points throughout the year, we collected data to assess program outcomes, to measure individual characteristics and contextual factors which might affect outcomes, and to analyze program experiences that might vary among participants. Outcome data were collected by asking participants what they had learned after the classroom portion of the program, through interviews with the participants and their facilitators at the completion of the program (the end-of-program interview questions for superintendents and facilitators are shown in Appendix A), and by readministering an instrument that measures participants' leadership skills at the completion of the program (*Benchmarks*®)[†].

Feedback instruments that assessed demographics, personality, leadership skills, and job satisfaction were completed by participants as part of the prework for attending CEOLDP. To this, we added a survey (CEOLDP Research Questionnaire) which assessed additional readiness factors identified in previous CCL research (Van Velsor, 1984; Van Velsor & Musselwhite, 1986). It contained thirty-one items covering four major content areas: individual expectations for the program (e.g., "I believe this program will have positive benefits for me personally," "The timing of this program is good for me"); communication about

[†] *Benchmarks*® is a registered trademark of the Center for Creative Leadership, Greensboro, North Carolina.

and support for the program in one's organization (e.g., "Board members are supportive of my participation in the program," "I understand the state's goals in establishing this program"); perceived professional-development needs (e.g., "There is a gap between my knowledge, skills, or abilities and the demands of my job," "I have spent time recently reexamining my plans for the future"); and organizational climate for change (e.g., "Our school system has experienced an upheaval or crisis in the last year," "I have a staff experienced in implementing change"). The participants rated their level of agreement with each item on a six-point scale ranging from strongly disagree to strongly agree.

Finally, the participants' experiences with facilitators, learning projects, and journal writing were assessed through questions in the end-of-program interviews, by gathering data on the learning projects the superintendents developed, and by rating their learning journals. Table 1 summarizes the data sources used in this study. It organizes the data by when they were collected (prior to the program, at the end of the classroom experience, or at the end of the program) and provides a brief description of the content of each data source. For the psychometric instruments that are widely used, references are provided at the end of the description giving further information about validity and reliability of the instruments.

Content Analysis

Much of the qualitative data collected from interviews and open-ended questions was subject to content analysis. For each set of data (i.e., each set of responses to a specific question) analyzed, we used one of the following procedures for developing content categories, coding data using those categories, and assessing the reliability of our coding:

- (1) The two primary researchers independently looked for themes in the data, discussed the themes they saw, and arrived jointly at an initial content categorization scheme. Both researchers then rated which content categories were present in each participant's data. Ratings were compared and differences discussed. In some cases, new content categories were added or existing categories were combined. Discussion continued until agreement was reached between the two researchers about how each participant's data should be coded. To assess reliability, an independent researcher coded a subset of the data using the developed content categories. The researcher was given definitions of the categories and examples of data that had been coded into each category. For each content category, percent agreement between the independent researcher's coding and the original coding was calculated. These percentages ranged from eighty-three percent to one-hundred percent agreement, depending on the

Table 1
Data collected for CEOLDP

Collected prior to program

Participant Background Form: Provides demographic data on the individual and his or her organization, such as age, education, gender, organizational size, and level.

CEOLDP Organizational Survey: Captures demographic data specific to school systems, such as whether the superintendent is elected or appointed, size of district, whether the system is rural, suburban, and/or urban, and superintendent's experience.

Kirton Adaption-Innovation Inventory (KAI): Measures preference for an *adaptive* or *innovative* approach to problem definition and change (Kirton, 1976, 1987).

Fundamental Interpersonal Relations Orientation–Behavior (FIRO-B): Measures three dimensions of interpersonal behavior: Inclusion, Control, and Affection. Each dimension is scored on both an *expressed* and *wanted* level (Gluck, 1983; Schutz, 1966).

California Psychological Inventory (CPI): Yields scores on eighteen scales: Dominance, Capacity for Status, Sociability, Social Presence, Self-acceptance, Sense of Well-being, Responsibility, Socialization, Self-control, Tolerance, Good Impression, Communality, Achievement via Conformance, Achievement via Independence, Intellectual Efficiency, Psychological Mindedness, Flexibility, and Femininity. This instrument is intended for diagnosis and comprehension of an individual's interpersonal behavior (Gough, 1987; Van Hutton, 1990).

Myers-Briggs Type Indicator (MBTI): A measure of Jungian typology that yields four scores indicating a person's preferences for the following personality dimensions: Extraversion/Introversion, Sensing/Intuition, Thinking/Feeling, and Judging/Perceiving (Myers & McCaulley, 1985).

Benchmarks®: An assessment-for-development tool in the form of a multirater instrument that measures a wide range of characteristics and management behaviors: Resourcefulness, Doing Whatever it Takes, Being a Quick Study, Decisiveness, Leading Employees, Setting a Developmental Climate, Confronting Problem Employees, Work Team Orientation, Hiring Talented Staff, Building and Mending Relationships, Compassion and Sensitivity, Straightforwardness and Composure, Balance Between Personal Life and Work, Self-awareness, Putting People at Ease, and Acting with Flexibility (Lombardo & McCauley, revised by Moxley & Dalton, 1993; McCauley, Lombardo, & Usher, 1989).

Managerial Job Satisfaction Questionnaire (MJSQ): Measures satisfaction with current job on five scales: The Work Itself, Supervision, Co-workers, Pay and Benefits, and Promotion Opportunity.

(continued on next page)

Table 1 (cont.)
Data collected for CEOLDP

CEOLDP Research Questionnaire: A survey designed specifically to study CEOLDP. It assesses factors related to an individual's readiness for a developmental program. It contains thirty-one items in the following areas: Expectations for the Program, Support and Communication, Professional Development Needs, and Climate for Change.

Collected at end of classroom experience

Lessons: On the final day of the classroom portion of the program, superintendents were asked to describe in writing up to five of the most important things they learned during the week.

Learning Project Questionnaire: Completed by superintendent and executive facilitator (with slight modifications for the executive facilitator) on each learning project selected. Nine items assessed domains such as difficulty defining project, influence of facilitator on choice of project, difficulty completing, to what extent superintendent's behavior was required to change, and change required by organization.

Collected at end of program

End-of-program Interviews with Superintendent: Superintendents were asked twenty-four questions that dealt with their perceptions of overall impact from the program, classroom portion of program, learning projects, individual goals, executive facilitator, learning journals, and program improvement. (A copy of the interview guide is in Appendix A.)

End-of-program Interviews with Executive Facilitator: Facilitators were asked twelve questions which assess their perceptions of the superintendent's year-long experience. The majority of the questions were the same as those asked of the superintendent, only modified for the facilitator. The categories of questions include: overall impact of program on superintendent, relationship with superintendent, learning journals, personal benefits, and program improvement. (A copy of the interview guide is in Appendix A.)

Benchmarks®: The superintendents were reassessed using this multirater instrument on sixteen scales (see page 11 for scale names).

Ratings on Learning Journals: A program staff person who was responsible for teaching reflective journal writing during the classroom portion of the program selected journals that exhibited the most reflection, least success in terms of reflection, and most persistence.

content category. This was our primary procedure used for developing content categories and coding the data.

(2) To develop content categories for coding data on relationships with the executive facilitator and on journal writing, a modified procedure was used. A single researcher examined the data for themes and developed content categories. This researcher, with two others, independently rated which content categories were present in each participant's data. For final coding, a content category was considered present in the data when two of the three researchers had coded it as present. Reliability was assessed by calculating percent agreement among each pair of researchers and then averaging across pairs. Again, these percentages ranged from eighty-three percent to one-hundred percent agreement.

Case Studies

In addition to collecting the data above, five of the superintendents were studied in more depth. We used case studies in our research design to help us understand the complex dynamics of individual learning and change that occur with a developmental intervention. They also allowed us to capture the meaningful contexts of participants' lives during their year-long experiences. In this paper, we do not go into great depth on the case studies; rather, we use them to illustrate themes uncovered in our analysis of data related to only our third research question (linkages between program outcomes and individual participant characteristics and contexts).

Our goal in selecting individuals for case studies was to choose those that best represented the entire sample. We selected four men and one woman; three were elected superintendents and two were appointed. To have a variation in tenure, we selected two who were more experienced and three who were less experienced. We also tried to get participants for case studies from various sizes of school systems: Two of the superintendents were from larger districts, one from a medium-size district, and two from smaller districts. Demographic diversity was also important: Two of the participants were from a rural district, two were from a district that was a combination of rural and suburban, and one was from a district that was a combination of rural, suburban, and urban.

We began our case studies by conducting preprogram interviews with the superintendents and by gathering observational data on them during the week of classroom training.⁵ During the year we visited their districts three times (soon after the classroom portion of the program, at midyear, and at the end of the year) to talk to staff and board members and to observe them in their organizational settings. In addition, we talked to them and their executive facilitators on the telephone throughout the year. Each case-study researcher monitored news-

paper coverage of the superintendent's school district and closely read his or her journals. At the end of the year, we sent a written summary of the report to each participant for approval and verification of our impressions and interpretations of the data.

Results and Discussion

Our analysis and interpretation of the data are organized around our three research questions: (1) What outcomes did the program generate for participants? (2) How did various parts of the program contribute to these outcomes? and (3) How and why did individual participants vary in terms of program outcomes? The first two questions are focused on the group of participants as a whole. Various pieces of data collected to address these questions are examined one at a time across the sample. The goal was to understand the types of outcomes associated with the entire program and with various aspects of the program. The third question required both a broader look and a different way of slicing the data. To understand what the patterns of change looked like for each individual and what kind of similarities and differences we saw among the individual participants, we examined the accumulated data for each individual and then compared across individuals or subgroups of individuals. Also, it was in looking at variation among individuals that our case studies were most useful, thus we include examples from these cases in our discussion of this question.

For each of the three questions, we will describe the source of the data, present the results of the data analysis, and discuss our interpretation of the findings. A general discussion which follows this section will integrate findings across the research questions and compare our findings to those from other studies.

What Outcomes Did the Program Generate?

To look at this question, we used qualitative data about overall impact of the program from the end-of-program interviews with superintendents and with executive facilitators plus a quantitative comparison of pre- and postprogram *Benchmarks*[®] scores. In their interviews, both superintendents and facilitators were asked a very general question about program outcomes: "What are the two or three most important ways in which the CEOLDP program has affected you [or, for the facilitators, the superintendent you worked with]?" Responses to this question provided the broadest look at program outcomes. Superintendents were then asked a more specific question about *observable* changes: "If we asked those who work with you what you are doing differently today compared to a

year ago, what would they say?” Finally, to address how the program is seen as affecting the participant’s organization we asked: “How has any aspect of this program helped you bring about changes in your school system?”

Differences in pre- and postprogram *Benchmarks*[®] scores provided another method for assessing observable changes. Scores on this instrument have been shown to predict managerial effectiveness and career progress (McCauley, Lombardo, & Usher, 1989); thus, improvements on *Benchmarks*[®] would also indicate improved effectiveness.

Most important program outcomes. To examine important program outcomes, we first content-analyzed the superintendents’ responses to the question about general program impact and developed thirteen categories of program outcomes. We applied these categories to the facilitators’ responses to the question about general program impact on the superintendents they worked with. One type of response in the facilitators’ data was unique to this group; thus a fourteenth category (View of the Superintendency) was added to adequately describe their data.

The fourteen response categories can be clustered into six types of outcomes: changes in self-awareness (Self-awareness), changes in how the superintendent acts in various situations (Habits and Behaviors), changes in how the superintendent thinks about various aspects of his or her work (Perspectives), changes in the amount of interactions with other superintendents and educational leaders (Relationships), changes in how the superintendent feels (Affect), and changes in ability to focus on a few key priorities (Focus). Table 2 describes each of the fourteen categories in more detail.

Table 3 shows the number and percentage of superintendents and facilitators who mentioned each type of program outcome. Self-awareness, Reflective Thinking, and Relationships with Peers were the most frequently cited areas of change from the superintendents’ perspective. Reflective Thinking was the most frequently mentioned area of change from the facilitators’ perspective. About one-quarter of the facilitators also mentioned one of the following areas: Self-awareness, Working with Others, View of the Superintendency, and Relationship with the Facilitator. Some differences in emphases in the two perspectives are not surprising. Superintendents themselves are probably more cognizant of their own self-awareness changes. Facilitators are more aware of their own relationship with the superintendent than with the superintendent’s relationships with peers. Also, because the facilitators are themselves experienced superintendents with broad views of the roles those in their position play, the expansion of previously narrow views in less experienced superintendents may be particularly noticeable to them.

Table 2
Most important program outcomes

Self-awareness

Self-awareness: Understanding of own personality and motivations, recognition of strengths/weaknesses and the need to improve in particular areas, awareness of others' perceptions of oneself.

Habits and Behaviors

Reflective Thinking: Reflecting on events, their outcomes, and what can be learned from them; being more analytical and thoughtful in one's decisions; thinking through possible outcomes of future actions.

Planning and Organizing: Setting goals and strategies for achieving them, being more organized and systematic.

Working with Others: Being more sensitive to others, handling conflict in a constructive manner, developing better relationships.

Personal Life: Making changes in one's personal life, primarily in the areas of balance and health.

Perspectives

Shared Leadership: Seeing oneself less as the single leader with all the answers and more as one who involves others, seeks knowledge from others, and shares leadership responsibility with others.

Leadership Style: Understanding how styles of managing vary by person and situation.

Learning: Seeing learning as self-directed and continuous.

View of the Superintendency: Seeing one's role as superintendent more broadly to include developing a vision for the future, focusing on educational (not just political) leadership, or staying in touch with the education field.

Relationships

Relationships with Peers: Increased frequency and quality of interactions with other superintendents in the state; the relationships serve as a source of advice, sounding boards, and support.

Relationship with Facilitator: The development of a relationship with an experienced superintendent outside of the state.

Affect

Confidence: Feeling positive about one's ability and the actions one takes.

Renewal: Feeling refocused and recharged.

Focus

Focus: Defining the district's priorities and staying focused on them during the year.

Table 3
Number and percentage of superintendents and facilitators who reported each type of program outcome for superintendents

<i>Area of Impact</i>	<i>Superintendents</i>	<i>Facilitators</i>
<i>Self-awareness</i>	20 (53%)	11 (29%)
<i>Habits and Behaviors</i>		
Reflective Thinking	16 (42%)	17 (45%)
Planning and Organizing	7 (18%)	6 (18%)
Working with Others	3 (8%)	11 (29%)
Personal Life	4 (11%)	4 (11%)
<i>Perspectives</i>		
Shared Leadership	4 (11%)	1 (3%)
Leadership Style	4 (11%)	0
Learning	2 (5%)	2 (5%)
View of the Superintendency	0	10 (26%)
<i>Relationships</i>		
Relationships with Peers	13 (34%)	4 (11%)
Relationship with Facilitator	4 (11%)	9 (24%)
<i>Affect</i>		
Confidence	5 (13%)	8 (21%)
Renewal	2 (5%)	0
<i>Focus</i>	4 (11%)	6 (16%)

Note. Each superintendent reported 1 to 4 program outcomes ($M = 2.3$); each facilitator reported 1 to 5 program outcomes for the superintendent he or she worked with ($M = 2.3$).

Changes others would see. In our content analysis of the superintendents' responses to the question about observable changes, we noted three types of responses: (1) Others would not see any change ($n = 4$); (2) uncertainty about what others would notice as changes ($n = 2$); and (3) specific changes others would see ($n = 32$). The specific types of changes noted were within three broad areas. Two of these areas (Working with Others and Planning and Organizing) were similar to categories derived from the general-impact interview question. A third category (Self-management) was also used in describing this data.

Changes in Working with Others included more delegating (e.g., delegating tasks, giving some of own responsibilities to subordinates, letting others make decisions on their own); getting more input (e.g., seeking input on decisions, listening to others, bouncing ideas off others before acting); developing closer relationships (e.g., isolating self less, being more open); and rewarding others (e.g., giving more praise and recognition, showing more appreciation). Changes in Self-management included increased composure (e.g., controlling negative emotions or reactions, showing patience) and feeling more at ease (e.g., being relaxed and confident). Changes in Planning and Organizing were primarily in the area of setting goals or priorities and emphasizing accountability for achieving goals.

Table 4 shows the number and percentage of superintendents who reported each type of change. The frequency count in any of the specific categories is not particularly high, although most of the changes relate to how the individual works with others. In general, responses to this question were more idiosyncratic than responses to the overall impact question, necessitating the use of a miscellaneous category in each of the three broad areas of change as well as a general miscellaneous category for responses falling outside of these domains.

An additional method for assessing observable changes was *Benchmarks*[®]. (The sixteen scales used on *Benchmarks*[®] are described in Table 5.) For each of the thirty-one superintendents with complete *Benchmarks*[®] data, we subtracted preprogram *Benchmarks*[®] scale scores from postprogram scores. The pre-post comparison was made using both self ratings and average ratings from all the observers who completed *Benchmarks*[®] on the superintendent. The average pre-post differences are shown in Table 6 (the preprogram group means on *Benchmarks*[®] scales are also presented to show the level of ratings before CEOLDP). Average differences significantly greater than zero are noted, indicating an overall positive shift in scores for this group of superintendents. Almost all changes in self ratings were significant. Observers indicated positive changes on six scales: Resourcefulness, Doing Whatever it Takes, Leading Employees, Work Team Orientation, Compassion and Sensitivity, and Self-awareness. On all scales,

Table 4
Number and percentage of superintendents who reported each type of change they felt others have seen in them

<i>Category</i>	<i>n</i>	<i>%</i>
<i>Working with Others</i>		
Delegating	9	24
Getting Input	7	18
Closer Relationships	5	13
Rewarding	3	8
Miscellaneous	3	8
<i>Self-management</i>		
Feeling at Ease	6	16
Composure	3	8
Miscellaneous	2	5
<i>Planning and Organizing</i>		
Goals and Accountability	4	11
Miscellaneous	3	8
<i>General Miscellaneous</i>	4	11

Note. Each superintendent reported 0 to 3 changes seen by others ($M = 1.3$).

pre-post differences in self ratings were larger than differences in ratings from observers.

Another way of looking at the pre-post *Benchmarks*[®] scores is to count the number of superintendents whose average ratings from all observers has shifted at least one-half standard deviation from the pre- to the postprogram administration. (We used the distribution of *Benchmarks*[®] in the preprogram administration to calculate the standard deviation.) The results of this analysis are shown in Table 7. On most scales, more superintendents shifted upward than downward, with Leading Employees, Work Team Orientation, and Self-awareness having the largest number with upward shifts. Very few shifts in either direction were found for Balance Between Personal Life and Work. Seven superintendents did not have a positive shift on any of the scales.

Table 5
Benchmarks[®] scale definitions

Resourcefulness: Thinking strategically, engaging in flexible problem-solving, setting up complex work systems, and working effectively with higher management.

Doing Whatever it Takes: Having perseverance and focus in the face of obstacles.

Being a Quick Study: Quickly mastering new technical and business knowledge.

Decisiveness: Preferring quick and approximate actions to slow and precise ones in many management situations.

Leading Employees: Delegating to employees effectively, broadening employee opportunities, and acting with fairness toward direct reports.

Setting a Developmental Climate: Providing a challenging climate to encourage employees' development.

Confronting Problem Employees: Acting decisively and with fairness when dealing with problem employees.

Work Team Orientation: Accomplishing tasks through managing others.

Hiring Talented Staff: Recruiting and choosing talented people for one's team.

Building and Mending Relationships: Knowing how to build and maintain positive working relationships with co-workers and external parties.

Compassion and Sensitivity: Showing genuine interest in others and sensitivity to employees' needs.

Straightforwardness and Composure: Being steadfast, relying on fact-based transitions, not blaming others for mistakes, and able to recover from troubled situations.

Balance Between Personal Life and Work: Balancing work priorities with personal life so that neither is neglected.

Self-awareness: Having an accurate picture of strengths and weaknesses and a willingness to improve.

Putting People at Ease: Displaying warmth and a good sense of humor.

Acting with Flexibility: Behaving in ways that are often seen as opposites: being both tough and compassionate; leading and letting others lead.

Table 6
Average change in *Benchmarks*[®] scores

<i>Scale</i>	<i>Self</i>			<i>Observers</i>		
	<i>M</i> (Pre) ^a	<i>Avg</i> Change	<i>SD</i>	<i>M</i> (Pre) ^a	<i>Avg</i> Change	<i>SD</i>
Resourcefulness	3.9	.35**	.38	4.0	.09*	.20
Doing Whatever it Takes	4.2	.24**	.33	4.2	.07*	.19
Being a Quick Study	3.8	.44**	.53	4.2	.08	.32
Decisiveness	3.6	.33**	.59	3.7	.02	.32
Leading Employees	4.0	.32**	.36	4.0	.12**	.23
Setting a Developmental Climate	4.1	.20**	.36	4.1	.05	.23
Confronting Problem Employees	3.4	.44**	.57	3.5	.08	.26
Work Team Orientation	3.9	.27**	.46	3.9	.21**	.29
Hiring Talented Staff	4.3	.14	.58	4.1	.04	.27
Building and Mending Relationships	4.0	.28**	.40	4.1	.07	.21
Compassion and Sensitivity	4.0	.17*	.59	4.0	.10*	.23
Straightforwardness and Composure	4.1	.13*	.32	4.2	-.05	.29
Balance Between Personal Life and Work	3.4	.18	.59	4.0	-.04	.29
Self-awareness	3.8	.48**	.40	4.0	.11*	.27
Putting People at Ease	4.2	.24**	.44	4.4	.01	.27
Acting with Flexibility	4.0	.34**	.46	4.1	.07	.23

^aGroup means on *Benchmarks*[®] in preprogram administration of the instrument.

* $p < .05$; ** $p < .01$.

Table 7
**Number of superintendents who moved 1/2 SD
 (preprogram to postprogram) on *Benchmarks*[®]**

<i>Scale</i>	<i>Upward Shift</i>	<i>Downward Shift</i>
Resourcefulness	9	4
Doing Whatever it Takes	7	3
Being a Quick Study	7	4
Decisiveness	5	5
Leading Employees	12	4
Setting a Developmental Climate	9	4
Confronting Problem Employees	8	4
Work Team Orientation	11	1
Hiring Talented Staff	8	4
Building and Mending Relationships	9	3
Compassion and Sensitivity	9	2
Straightforwardness and Composure	4	8
Balance Between Personal Life and Work	1	3
Self-awareness	10	4
Putting People at Ease	3	5
Acting with Flexibility	6	7

The number of people showing downward shifts on Straightforwardness and Composure (8), Acting with Flexibility (7), Decisiveness (5), and Putting People at Ease (5) was unexpected. The Decisiveness scale measures a bias toward action and quick decisions. Some of the changes experienced by superintendents, that is, becoming more reflective, more planful, and sharing leadership with others, might be seen by others as a decrease in decisiveness. Also, ratings on the Straightforwardness and Composure scale and the Acting with Flexibility scale may be influenced by the amount of turbulence the individual is dealing with. During such times, a leader may be less straightforward, composed, and flexible in his or her behavior. In the midst of this program, the state of Florida experienced a fiscal crisis that caused large budget cuts in school districts,

adding to district turbulence for a number of superintendents. The downward shifts on Putting People at Ease are more puzzling; the content of this scale (i.e., showing warmth and a sense of humor) is not related to the content of the program or the general types of outcomes experienced by the superintendents.

There is consistency in the positive findings from the interview and *Benchmarks*[®] data. Many of the changes superintendents expected others to see focused on delegating, getting input, working more closely with others, and rewarding employees; these dimensions overlap with the *Benchmarks*[®] scales Leading Employees and Work Team Orientation, which showed the largest changes from pre- to postprogram. Self-awareness, another *Benchmarks*[®] scale showing a significant positive shift, was not mentioned by superintendents as something others would see as change in them but was the most frequent response to the more general interview question about program outcomes.

Changes in school system. Superintendents' responses to the interview question about how the program helped bring about changes in the school system were also content-analyzed. Four of them did not think the program had helped them create change in their districts. The remaining responses varied widely in content, but the superintendents tended to frame their answers in one of three ways: (1) how their staffs or boards had been affected by changes in the superintendent (e.g., meetings are more of a learning situation, more responsibility has been delegated to staff members, more harmony exists with the board); (2) the positive outcomes of their learning projects (e.g., more students and staff using computer technology, a comprehensive plan is in place, a feedback system has been instituted); or (3) how their projects and achievement of goals were more successful because of the program. In this third type of response, various factors associated with the program were mentioned as contributing to the success of their projects. The three most frequently mentioned factors were (1) goal-setting, planning, and timelines, which got them committed and kept them focused and moving faster; (2) ideas presented in the program and advice from facilitators, which gave them additional knowledge or new approaches to the project; and (3) identification of the projects as learning projects, which got them more involved in the projects than they would normally.

Discussion. Neither the superintendents nor the facilitators felt that the program had absolutely no impact on participants; however, both the interview and *Benchmarks*[®] data indicate that in several, there was very little observable change. But looking across the sources of data and the various questions asked in the total sample, one can see a wide variety of program outcomes. Two distinctions stand out: First, there are only a few outcomes (e.g., Self-awareness and Reflective Thinking) that a considerable number of the superintendents achieved

through their participation in CEOLDP—the remaining types of outcomes were achieved by smaller numbers of superintendents; and, second, most of the outcomes discussed reflected changes in the superintendent (e.g., perspectives, behaviors, and feelings), but there was also a theme of how the program helped get projects accomplished in organizations. Building on these distinctions, we felt that the types of program outcomes found in our data could be placed in a three-category framework: the development of strategies and competencies for continuous learning, personal change in specific areas, and progress on projects.

Regarding the first (the development of strategies and competencies for continuous learning), a self-awareness-building classroom program, journal writing to encourage reflection, and a coaching relationship were key aspects of CEOLDP. It is not surprising then that three of the most frequently cited outcomes were increased self-awareness, more reflective thinking, and developmental relationships. Self-awareness gains were also seen on *Benchmarks*[®]. Somewhat less expected was the degree to which the program served to strengthen the relationships among the superintendents themselves.

These three outcomes can serve to strengthen the superintendents' continuous learning and development, whatever the particular personal development goals are. Self-awareness helps focus participants on areas in need of further development. Reflective thinking and interaction with other superintendents provide vehicles for constructing new knowledge. Another outcome mentioned by only a few participants and facilitators falls within this category: seeing learning as self-directed and continuous. This type of change in perspective allows the superintendent to put a higher priority on personal change and to see more situations as learning opportunities.

As to the second category (personal change in specific areas), there was evidence that most of the superintendents had changed in some ways, both from their own perspective and from the perspective of others. These were expressed as either changes in the way they think, changes in habits or behaviors, or changes in affect. Although we might develop some broad categories describing the general areas of change (for example, Wagner and Sternberg's [1986] tacit knowledge schema of managing self, managing tasks, and managing others would be inclusive of most of the changes in our data), the particular changes described in the interviews were usually quite specific (e.g., isolating self less, delegating more, managing time better, feeling more confident). Also, the majority of superintendents shifted on *Benchmarks*[®] on a few scales rather than on all scales or no scales.

The frequencies of particular types of personal change are low, not surprising given the nature of the CEOLDP program: Feedback is provided on numer-

ous dimensions, a variety of leadership and management concepts are discussed, and facilitators have varying areas of expertise. Couple this with the fact that superintendents enter the program at different career stages, with varying patterns of strengths and weaknesses, and with different demands being placed on them in their work and personal life and one would expect the domains in which these individuals change to vary. (We do not, however, think that all the personal changes are totally idiosyncratic; we return in the third part of the results section [pages 34-44] to the question of patterns of program outcomes that distinguish subgroups of participants.)

Regarding the third category (progress on projects), we found that for some of the superintendents, an additional outcome was that they accomplished a project more successfully because they undertook it in conjunction with the program. The increased success was attributed to the goal-setting and timelines established, the availability of a facilitator for input into the project, and the increased attention they gave to the project.

For most of the superintendents and facilitators, the success of their projects was not one of the most important outcomes; the only mention of this outcome in the general impact question was in the responses we categorized as *Focus*. But when asked directly about changes in the organization, learning projects were a major theme. Although the major emphasis in this type of outcome was taking on and accomplishing these projects (rather than changes in the superintendent), the visibility of the superintendents' involvement with these projects might have contributed to the upward shift on the *Benchmarks*[®] scale, *Doing Whatever it Takes*, since this scale reflects taking initiative, being focused, overcoming obstacles, and moving forward.

These three types of changes are consistent with the goals of the program: Personal changes and progress on projects indicate increased leadership capacity on the part of the superintendents, and developing the tools and strategies needed for self-directed learning is the first step in ensuring that these superintendents will be engaged in continuing personal and career development.

How Did Various Parts of the Program Contribute to Program Outcomes?

In evaluating this question, we think that some links between outcomes and the program content and design are obvious: The feedback-intensive week at CCL contributed to increased self-awareness, facilitators were a source of developmental relationships, journal writing produced greater reflection, and establishing a goal as a learning project helped the superintendent make progress on that project. However, we wanted to look more closely at the four major components of the program to see what outcomes or benefits the superintendents

felt they derived from them. Data for looking at the classroom portion of the program were obtained from the superintendents at the end of that experience. Data for examining the other three components (coaching by executive facilitators, journal writing, and learning projects) were gathered from the postprogram interviews. Although we asked a number of questions in the interviews about each of these components, in this section we focus on the questions most directly related to program outcomes. We will examine the data for each component, then discuss the components as a group.

Classroom portion of program. On the final day of this part of the program, the superintendents were asked to describe in writing up to five of the most important things they learned during the week. These lessons were then content-analyzed. Eleven categories were developed for coding the lesson content, with the first four relating to gaining self-awareness:

Self-insight. They learned more about themselves (e.g., who I am, what my habits and preferences are, and why I am the way I am) and developed a better understanding of their strengths and weaknesses.

How others perceive me. They gained awareness about how other people experienced them as individuals and as leaders and were able to compare their own views of self with others' views of them.

Need to change at work. Building on their self-insights and understanding of how they are perceived by others, some expressed a need to change behaviors in the work setting, particularly how they interact with others (e.g., communicating, listening, praising, and showing sensitivity).

Need to change in personal life. Some also recognized a need for change in their personal lives, particularly in terms of improving health and fitness, closer relationships with family, and a better balance between personal life and work.

Six categories reflected increased knowledge in particular management- or leadership-content areas (these areas reflect much of the content covered in the program):

Groups. They learned about the power of groups, the value of teamwork, the elements of a successful team, and how to use group resources.

Planning and organizing. They gained insights into the importance of setting goals and planning for their achievement and a better understanding of the planning process.

Learning and development. They were reminded that people can change and grow at many points in their lives and gained insights into the importance of various strategies for continuous learning (e.g., self-awareness building, reflection).

Feedback. They expressed greater awareness of the need for feedback from others and learned techniques for giving feedback.

Situational leadership. They learned how various leadership styles are appropriate in different situations.

Decision making. They learned about models for evaluating decision-making situations.

A final category involved developing closer relationships with the other participants in the program:

Peers. They got to know each other better, gained deeper respect for each other, shared issues and concerns, and began establishing a network which could serve as a resource and support system.

The number and percentage of superintendents reporting each type of lesson are shown in Table 8. The three categories mentioned by the largest number of superintendents are all self-awareness lessons. Learning about groups and developing relationships with peers are next highest, cited by about one-third of the superintendents.

In examining the lessons, we also noted that nearly two-thirds of the participants linked their gains in self-insight to staff feedback, peer feedback, or to their scores on a particular instrument (although we did not ask that they identify the particular source of their lessons). Lessons about how one is perceived by others were most often linked (fifty-six percent of the time) to the feedback from co-workers in the workplace rather than to peer or staff feedback. Also not surprising is that lessons about groups were associated with particular group activities or to the extensive work in groups during the week. On the other hand, lessons indicating a need for the superintendent to change were associated with a variety of the program features: feedback, group experiences, and content modules.

Executive facilitators. In the postprogram interview, we asked each superintendent, "What benefits have you derived from the relationship with your facilitator?" Content analysis of this question resulted in four categories (Providing Information, Helping to Construct Knowledge, Holding Accountable, and Supporting) in which there were eight types of benefits:

Experience/expertise. They could take advantage of the facilitator's experience and expertise as an educational administrator and leader. The facilitators provided direct suggestions and advice (on learning projects or other problems), shared with or taught the superintendent particular strategies or techniques, related their own experiences and insights, provided training for the superintendent's staff, pointed out pertinent resources or networks, or sent reading material.

Sounding board. The facilitators reacted to the superintendents' ideas. This is often referred to as being a *sounding board* or bouncing ideas off the facilitator.

Table 8
**Number and percentage of superintendents
 who reported each type of classroom lesson**

<i>Lesson</i>	<i>n</i>	<i>%</i>
<i>Self-awareness</i>		
Self-insight	27	71
How Others Perceive Me	17	45
Need to Change at Work	15	39
Need to Change in Personal Life	6	16
<i>Management/Leadership Content</i>		
Groups	13	34
Planning and Organizing	7	18
Learning and Development	7	18
Feedback	6	16
Situational Leadership	6	16
Decision Making	2	5
<i>Relationships with Peers</i>		
Peers	12	32

Note. Each superintendent reported 1 to 6 lessons ($M = 4.3$).

Stimulate to think. Facilitators encouraged superintendents to think more about what they were doing (or had done) by asking them probing questions, getting them to be more analytical or reflective, encouraging them to explore assumptions and different sides of issues or providing them with a different perspective.

Role model. Facilitators served as role models for superintendents.

Feedback. Superintendents received feedback from their facilitator about strengths, blind spots, areas for improvement, and how others perceived them. The facilitator's basis for the feedback was conversation with staff members or direct observation.

Keeping on track with the program. The facilitators worked to keep the superintendents engaged in the program (e.g., doing journals or making progress on goals). This could be either a more passive monitoring role or a more active catalyst role.

Personal relationship. The superintendents and facilitators developed a trusting personal relationship—a friendship, as they called it. This provided the superintendents with someone with whom they could share problems, vent frustrations, be candid, and call on when needed. The concern and caring expressed by the facilitators in these relationships were particularly important to the superintendents.

Encouragement. The facilitators provided encouragement and affirmation, pointed out the positives, and built confidence in the superintendents.

One way to frame these benefits is in terms of the various ways other people can influence learning: by directly passing on information (experience/expertise), by helping to discover or construct knowledge (sounding board, stimulate to think, role model, feedback), by holding the individual accountable for learning (keeping on track with the program), and by supporting the individual during learning (personal relationship, encouragement).

These categories and the number and percentage of superintendents citing each benefit are shown in Table 9. Access to the facilitator's experience/expertise was by far the most frequently cited benefit, with gaining a personal relationship second.

Table 9
**Number and percentage of superintendents who cited each
of the benefits derived from working with an executive facilitator**

<i>Category</i>	<i>n</i>	<i>%</i>
<i>Providing Information</i>		
Experience/expertise	23	61
<i>Helping to Construct Knowledge</i>		
Sounding Board	5	13
Stimulate to Think	7	18
Role Model	2	5
Feedback	8	21
<i>Holding Accountable</i>		
Keeping on Track	3	8
<i>Supporting</i>		
Personal Relationship	15	39
Encouragement	4	11

Note. Each superintendent cited 1 to 4 benefits ($M = 1.8$).

Reflective journal writing. In the postprogram interview superintendents were asked two, two-part questions about reflection on practice via learning journals: “Did you find journal writing an effective method for getting you to reflect on your own practice? Why or why not?” and, “How did reflection help you as a leader? Did you do anything different as a result of your reflection?” Thirty-five of the superintendents kept a journal during the year-long experience—the three who did not were appointed (as opposed to elected) superintendents. We found variability in the effort and commitment to keeping the journal, as well as in the degree of reflection. Of the thirty-five superintendents, all but four responded that journal writing was an effective method for getting them to reflect on their practice. However, everyone—even the four who did not find journal writing an effective means for reflection—reported anywhere from one to three benefits from reflective journal writing. Content analysis of superintendents’ responses resulted in four categories of benefits:

Learning from past experience. Reflective journal writing forced the superintendents to analyze and evaluate past situations, strategies, and interactions. This type of reflection involved reviewing the past in order to learn more from their experiences. The superintendents described learning and benefitting in several ways. For instance, as a result of reflection, they considered what to do differently; they became aware of what worked and what didn’t. Reflection often helped them to not repeat past mistakes. It also helped them recognize trends and patterns over time, including pointing out negative behaviors they were working to improve.

Improved strategies. Looking into the future and anticipating situations and thinking through the possible outcomes of future actions helped them improve strategies or develop new strategies and approaches. Improved decision making was frequently mentioned as a result of using the journal as a means for being more analytic and thoughtful in decisions. This type of forward-looking reflection helped some participants develop strategies for working with groups of people, such as board members or the union. Superintendents also indicated ways they approached situations or problem-solved differently; for instance, by using committees, setting up advisory groups, and leading meetings differently.

Organized and goal-oriented. Journal writing helped them become more organized, focused, and goal-oriented. Many superintendents felt journal writing helped improve their time management; they talked about being better at planning, organizing, and using resources. Reflection also helped them focus on the goals they were trying to accomplish. Several thought they benefitted by becoming more goal-oriented.

Exploring feelings. Writing in a journal provided a means for them to think about and explore feelings—of their own and of others—by reflecting on relationships, interactions, and ways they affect others. There were two themes in this category: increased sensitivity and keeping emotions under control.

Superintendents became more sensitive and empathetic, valuing people's needs, feelings, and attitudes. They described themselves as more compassionate and understanding. Some especially felt they had increased sensitivity when decision making or goal-setting was involved. For example, the superintendent would evaluate what needed to be accomplished or decided and the various ways the work or decision could affect the people involved. The increased sensitivity enabled them to understand other people's perspectives.

Several superintendents mentioned how reflection helped keep their emotions in check, so that they were less likely to become impatient with others, reactive, or say controversial things. In these situations, the learning journal tended to be a place for the superintendent to release his or her emotions.

The number and percentage of superintendents who cited each benefit of reflective journal writing are reported in Table 10. The largest number cited learning from experience by reflecting on past situations. Benefitting by exploring feelings through reflective journal writing was least frequently reported. Learning from experience, developing strategies and approaches, and examining one's feelings entail a deeper level of self-analysis and reflection on one's practice as a leader. We perceive reflection that results in benefits of becoming focused, goal-oriented, and organized as requiring less introspection and soul-searching than the other benefits.

Table 10
Number and percentage of superintendents who cited each benefit of reflective journal writing

<i>Category</i>	<i>n</i>	<i>%</i>
Learning from Past Experience	22	63
Improved Strategies	16	46
Organized and Goal-oriented	9	26
Exploring Feelings	8	23

Note. Superintendents reported a range of 1 to 3 benefits of reflection ($M = 1.8$).

Learning projects. In the postprogram interviews, each superintendent responded to the two-part question, “Did you feel personally stretched by your learning projects? Did they require you to change your own behavior?” Two did not feel stretched, and four others reported that the projects were only a mild stretch. The majority did report being stretched either because of the time and personal attention the projects required or the new behaviors they necessitated.

In response to the second part of the question, the most frequent ($n = 11$) type of change reported was Involving Others more (e.g., getting people involved in the project, delegating, seeking input, letting go of being the sole person in charge). Engaging in more Reflective Thinking was the second most frequent ($n = 6$). Other changes, each cited by two to four superintendents, were improved Composure (e.g., handling stress and frustration, self-control), more involvement in Educational Leadership (e.g., involvement in curriculum/instructional matters, knowledge of issues in the field of education), more Planning and Organizing, and improved ability in Dealing with Poor Performers (e.g., giving negative feedback to individuals when warranted, firing incompetent employees). Eight responses were more unique to the individual superintendent and were placed together in a miscellaneous category. (These results are shown in Table 11.)

Table 11
**Number and percentage of superintendents reporting
 each type of change from learning projects**

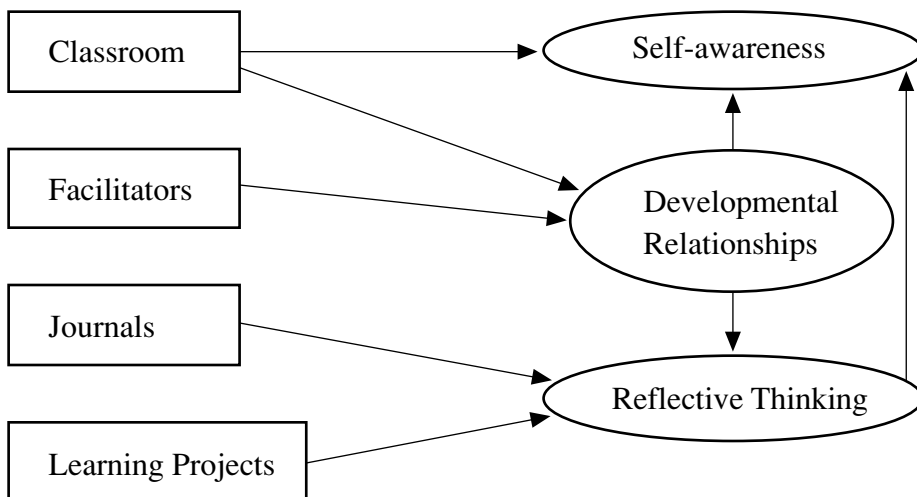
<i>Category</i>	<i>n</i>	<i>%</i>
Involving Others	11	29
Reflective Thinking	6	16
Composure	4	11
Educational Leadership	4	11
Planning and Organizing	2	5
Dealing with Poor Performers	2	5
Miscellaneous	8	21
No Change	5	13

Note. Each superintendent reported either no change or 1 to 3 changes ($M = 1.3$).

Discussion. Examining each program component separately provided additional insights about the linkages between components of the program and the three types of program outcomes identified earlier (i.e., strategies and competencies for continuous learning, personal change, and progress on projects). Our data suggest that the relationship between program components and developing strategies and competencies for continuous learning is not a simple linear one (i.e., feedback-intensive classroom component leads to self-awareness, interaction with facilitators leads to a developmental relationship, and journal writing leads to reflective thinking). Rather, the components are linked to multiple strategies and competencies, and the strategies themselves build on one another. These relationships are illustrated in Figure 1.

Self-awareness was gained not only from the feedback-intensive classroom experience but also from engaging in reflective thinking via journal writing and continuing to receive feedback through the relationships which developed with executive facilitators. Developmental relationships were established not just through executive facilitators but also as a result of attending the classroom portion of the program with fellow superintendents. Although reflective thinking was most clearly associated with journal writing, it was also stimulated by the relationship with the facilitator and from working on learning projects. With all these program features creating opportunities for building self-awareness, reflective thinking, and developmental relationships, it is clear why these are the most frequently cited program outcomes.

Figure 1
Linkages among program components and strategies and competencies for continuous learning



There was also evidence that each of the four program components played a role in the personal changes superintendents experienced. If we think of the personal changes as falling into one of three categories—perspectives, habits and behaviors, and affect—then each component can be linked to one or more of these categories. The classroom portion generally provided new perspectives for the superintendents, although it also stimulated the awareness of a need to make certain behavioral changes. Reflective thinking through journal writing helped superintendents develop new perspectives through continuing analysis and evaluation of their situations and strategies. Their decision-making behaviors and interactions with others could be modified based on their reflection, and their affective responses could be altered by releasing some of their emotions through journal writing. Facilitators engaged superintendents in constructing new knowledge, provided suggestions for and modeled new behaviors, and served as both a place to release negative emotions and to gain self-confidence through encouragement and affirmation. Finally, in some cases, the learning projects stimulated behavioral changes (particularly around involving others).

The third type of program outcome, progress on projects, was affected by keeping a journal (this provided a means for keeping organized and focused on the goals of the project) and by working with a facilitator (who could play an advisory or monitoring role). These linkages, however, were cited by fewer superintendents; thus, we conclude that journals and facilitators have less of an impact on project completion than they had on other program outcomes.

How and Why Do Individuals Vary in Terms of Program Outcomes?

To examine this question, we first looked for subgroups of superintendents with similar themes in the types of program outcomes they experienced as described in their and the executive facilitator's postprogram interviews. We then looked back at the data collected prior to and during the program to see if the subgroups differed on variables which would help explain why their outcomes varied. Given the size of our sample and the lack of diversity in the sample, this inquiry should be considered exploratory in nature. Focusing on how individual participant characteristics and contexts—what they bring to the program, their back-home situations, and their level of involvement in the program—influence the magnitude and types of outcomes the participants experience will help us build additional research knowledge about the leadership development process.

To determine if subgroups existed, we examined the entire interview from the superintendents and executive facilitators, paying particular attention to the questions about program outcomes discussed in the previous sections. We also

looked at other questions that contained outcome information (e.g., concepts or models from the classroom portion of the program that the superintendent is applying, and whether he or she has changed as an individual because of work on individual goals).

Variations in program outcomes among individual participants. Developing the subgroups was an iterative process in which we used a variety of categorizing schemes to cluster participants with similar program outcome themes. Four subgroups emerged from this analysis: Fine-tuning, Self-control, Role Expansion, and New Perspectives. Below we describe the common themes in each subgroup. (These themes are summarized in Figure 2.) To help illustrate the themes, we draw from three of the case studies. Each subgroup contains at least one case-study subject except for the fourth (New Perspectives), in which we selected a superintendent and used data from his year-end interview.

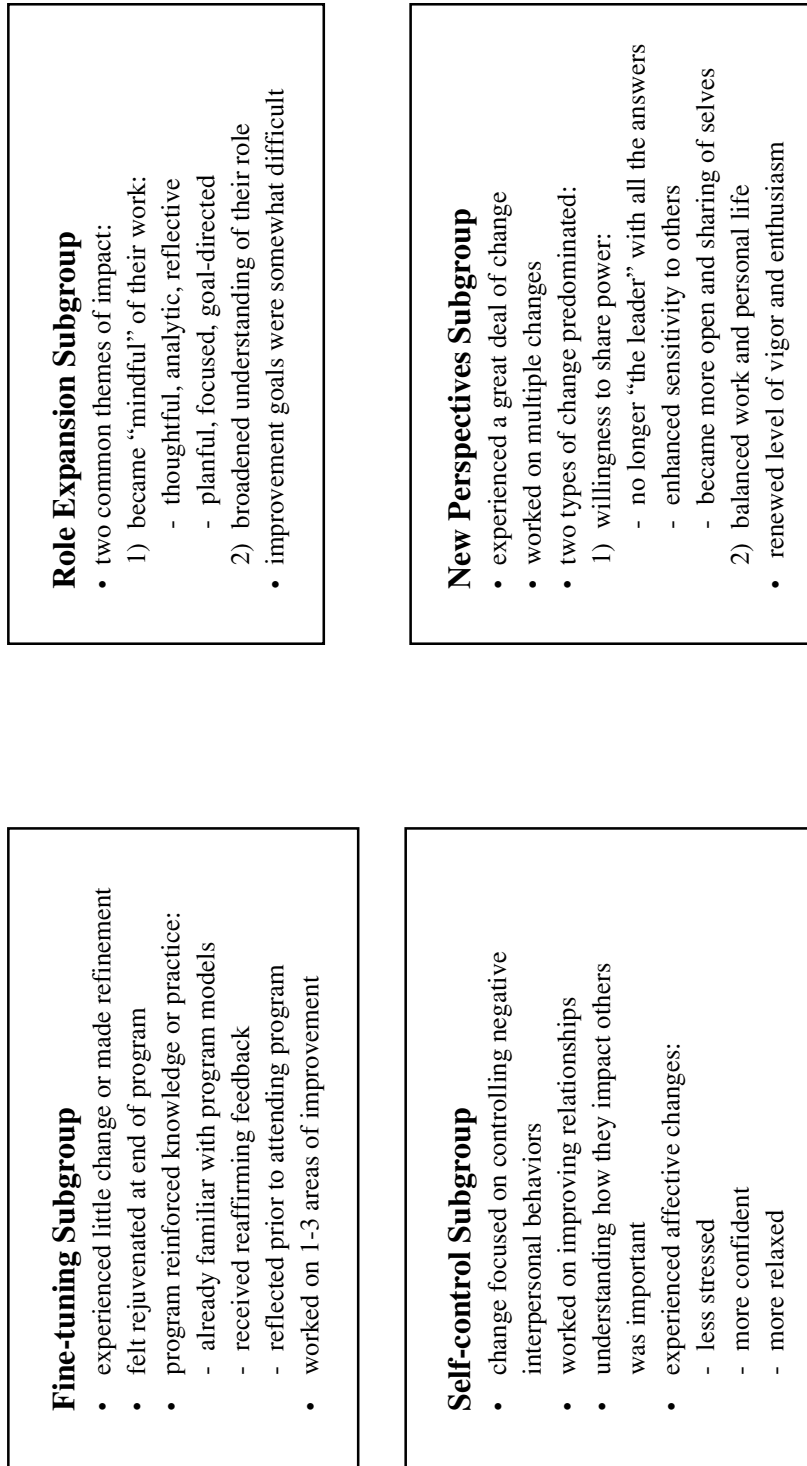
Fine-tuning ($n = 11$). The superintendents in this subgroup did not experience major change as a result of the program; instead, they tended to see it as a refinement process for themselves. The program reinforced things they already knew or did (i.e., the content was already familiar to them, the feedback they received was reaffirming of their self views, or they already tended to be reflective thinkers). However, the program was rejuvenating to them, and during it they worked on one to three areas of improvement.

Thomas was a case-study subject who falls in this subgroup. One of the major ways he was affected was that the program forced him to think about his management style and do a self-assessment of his strengths and weaknesses. From his gain in self-awareness Thomas said, "I found myself more confident of who I am and my skill level." He reported that he was already using most of the models and concepts taught during the year, but the frameworks from the decision-making model and the situational-leadership model helped him conceptualize models to implement.

Self-control ($n = 5$). Members of this subgroup worked on improving relationships with others (primarily with board members), mainly by keeping their own negative behaviors in check (e.g., controlling body language, being patient, being diplomatic, and reflecting before reacting so quickly) and not letting other people agitate them. Understanding how others perceived them or how their behavior affected others was an important stimulus to work on this area. As a result of their efforts, they experienced affective changes: At the end of the program they reported being less stressed, more confident, and more relaxed.

Henry is the case-study subject who is representative of this subgroup. Like most of the people in this subgroup, one of his major change areas was to

Figure 2
Variations in program outcomes: Common themes in subgroups



improve his relationship with the board. After he received feedback from them and his staff on *Benchmarks*[®], he said, “I knew I had problems with the board, but I didn’t know their feelings were that negative about me. Even though we had had rocky times, the system had been improving, so I thought they would attribute some of that success to me.” After he saw how his behaviors affected the board, he established a learning project that involved making changes to improve the relationship. Part of his plan involved modifying his style during board meetings (e.g., keeping his emotions and nonverbal signals more under control, being more patient, and avoiding making antagonizing comments).

Role expansion ($n = 14$). Participants in this subgroup shared two themes. First, they became more mindful of their work. By this we mean that they and their facilitators saw them as becoming more thoughtful, analytic, and reflective and more focused and goal-directed. Second, they broadened their understanding of their role as superintendent (e.g., becoming more of an educational leader than a political leader, seeing the superintendency as an opportunity rather than a burden, and extending their role into the community). The self-improvement goals they undertook were somewhat difficult, requiring many of them to go against the grain of their personalities.

Al, a superintendent who served as a case-study subject, is a member of the Role Expansion subgroup. His executive facilitator described how Al had become more mindful of his work:

Al truly became more reflective. Before the program, he was like many executives, going through the day making decisions and taking actions without much thought afterwards about what they had done. When he visited my district, I saw he was beginning to think about the consequences of his decisions and actions more. He had become aware of other people’s feelings; he was basing decisions more on these things.

It was clear that Al broadened his understanding of his role of superintendent. With the encouragement of his facilitator and his wife, he resumed work on his doctoral studies in educational leadership. In addition, Al’s view of his superintendency has moved from the perception of it as a burden of responsibility to seeing it as what he described as “a real professional development opportunity.” The significant increase in confidence that Al gained in his decision making and in his ability to give open, honest feedback was closely related to this change in his views of his responsibilities as superintendent.

New perspectives ($n = 8$). The members of this subgroup reported that they had changed, that they were different as a result of the program. Although each worked on multiple changes, two types of changes predominated. First were

those which reflected a greater willingness to share power. These required the superintendent to no longer think of himself or herself as the single leader with all the right answers, to increase their sensitivity to others' perspectives and needs, or to be more open and sharing of themselves. Michael, our example for this subgroup, describes how he has changed as a result of the program:

I involve more sources in getting answers. I don't have to have "the answer." I know I need to seek out help from others who know more than me. Principals would say that they don't need to come directly to me for answers all the time, that it's okay to make more decisions on their own, that I've encouraged them to do this. We make more group decisions now, too. We'll get together and bring up issues and make decisions as a team.

The second type of change reflected a more balanced work and personal life. These superintendents reported becoming happier and having a renewed level of vigor and enthusiasm. Michael talked about how his life now reflects more balance between his work and personal life: "I definitely am spending more time with my children and my parents. Getting to my son's football games is important. My wife and I have been spending more quiet time together. We make plans to go out to restaurants so we can really talk to each other. We enjoy the small things in life more."

Factors differentiating subgroups. To explore whether individuals with similar program-outcome themes differed from those in other subgroups with respect to individual characteristics and contexts as well as program experiences, we used the data collection sources listed in Table 1 (see page 11) to compare the subgroups on the following dimensions: demographics and organizational information, readiness for the program, leadership skills, personality, classroom experience, and the extended-year aspects of the program. Separate one-way analyses of variance (ANOVAs) were performed for continuous variables. After testing the overall models and obtaining significance, Student-Newman-Keuls' multiple range tests were used to determine which of the four subgroups differed. Chi-square tests of association were performed for dichotomous variables. An alpha criterion of .15 was selected because of our small sample size and our desire to explore trends in the data. In addition to the quantitative data, we also noted a few differentiating trends in the postprogram interview data. (Quantitative results are reported in Appendix B, which contains tables [B1 to B19] that provide a statistical analysis of subgroup differences.)

Overall, the most obvious differences were in terms of superintendents' experience and size of their districts. There were several differences in readiness factors. We found very few differences in leadership skills (as perceived by

others) and personality. With regard to the extended-year aspects of the program, we also noted several differences between subgroups. What follows is a summary of the trends for each subgroup. (These are summarized in Figure 3.)

The superintendents in the Fine-tuning subgroup were more experienced and from larger school districts (Tables B1 and B3). Four of the eight appointed superintendents were in this subgroup (Table B2). These individuals were less likely to keep learning journals or they reflected less in the journals when they did keep them (Table B19). In terms of relationships with facilitators, they interacted with the executive facilitators as equals or peers and received less feedback from them (Table B18).

Members of the Self-control subgroup were less experienced and from larger school districts (Tables B1 and B3). When these superintendents began the year-long program, they rated themselves as having less back-home support from board members and a less positive climate for change in their school districts (Table B5). On several assessment instruments participants in this subgroup scored significantly higher on personality factors that can lead to problems in working with others (Tables B10 and B11). They rated themselves high on wanting control and on being demanding, headstrong, impulsive, and impatient. In addition, they were rated lower by staff and board members on the leadership dimensions of Building and Mending Relationships and Compassion and Sensitivity. In general, they tended to see themselves as having higher leadership skills than their co-workers saw them as having (Tables B7 to B9).

Participants in this subgroup selected projects to work on during the year that they did not see as very difficult. However, the facilitators perceived these projects as requiring a high amount of change in the superintendents' behavior and school system (Tables B14 and B15). There was no clear pattern in their relationships with their executive facilitators—two had very positive relationships with their facilitators, whereas two others had little interaction with their facilitators (Table B17). Another characteristic of this subgroup seen in the interviews was that throughout the year they were plagued with continuous conflict and trouble in the school systems.

The Role Expansion subgroup consisted of people with less experience and from smaller, less urban school districts (Tables B1, B3, and B4). On self-other feedback instruments they were underraters: They rated themselves lower in terms of leadership skills than their staff and board members rated them (Table B9). In terms of the extended-year aspects of the program, they had facilitators who were more directive toward them, providing input into their choice of projects to work on and giving feedback (Tables B15 and B18). This subgroup also had more reflective journal writers (Table B19).

Figure 3
Trends across subgroups: Differences in individual characteristics, contexts, and program experiences

<p>Fine-tuning Subgroup</p> <ul style="list-style-type: none"> • more experienced superintendents • larger school districts • less active journal writers, less reflective • interacted with facilitators as peers • received less feedback from facilitators 	<p>Role Expansion Subgroup</p> <ul style="list-style-type: none"> • less experienced superintendents • smaller, less urban school districts • lower ratings from self than co-workers on leadership skills • facilitators were more directive • received more feedback from facilitators • more reflective journal writers
<p>Self-control Subgroup</p> <ul style="list-style-type: none"> • less experienced superintendents • larger school districts • less back-home support from board • less positive climate for change • higher on personality factors that can lead to difficulty working with others • higher ratings from self than co-workers on leadership skills • plagued with continuous conflict and trouble in districts 	<p>New Perspectives Subgroup</p> <ul style="list-style-type: none"> • more experienced superintendents • smaller school districts • more back-home support from board • more positive climate for change • workload less likely to distract from program • more positive relationships with facilitators • more reflective journal writers • struggled with internal conflicts

Participants in the New Perspectives subgroup were experienced superintendents and from smaller districts, with support from their boards and positive climates for change back home (Tables B1, B3, and B5). They were least likely to think that their workload would distract them from the program (Table B5). Members of this subgroup tended to have very positive relationships with their facilitators and also had more reflective journal writers compared to the Fine-tuning and Self-control subgroups (Tables B17 and B19).

Another characteristic of members of this subgroup seen in the interviews was that they seemed to have been struggling with internal conflicts (e.g., thinking about retirement, personal life problems, or disappointment with certain groups in their districts) when they started the program; thus, they were particularly primed for reflection.

Discussion. We were able to find subgroups of superintendents who had similar patterns of program outcomes. These patterns reflected differences in both magnitude (i.e., the degree of change) and types of outcomes. The Fine-tuning subgroup was largely defined by the degree of change they experienced; although members also shared similar affective outcomes in terms of feeling rejuvenated, the particular changes they chose to work on were more idiosyncratic. The remaining three subgroups differed more clearly in terms of the types of outcomes they experienced. However, our sense was that the changes the members of the Self-control subgroup experienced were not of the magnitude as those experienced by members of the Role Expansion and New Perspectives subgroups. The changes the Self-control subgroup experienced were focused primarily in improving particular relationships whereas the changes experienced in the other two subgroups seemed to be broader, affecting a larger portion of their lives. Also, the changes made in the Self-control subgroup appeared to be more on the surface rather than in deeper areas such as motivations or perspectives. Finally, magnitude was a distinguishing feature of the New Perspectives subgroup; their language, in terms of amount of change, was the opposite of that expressed in the Fine-tuning subgroup.

We also found that the four subgroups differed from each other in terms of individual characteristics, their back-home contexts, and how they experienced various program components. We think that these differences help explain the differences in program outcomes. Following is a discussion of these differences by subgroup:

For the appointed superintendents in the Fine-tuning subgroup, the program may have been less of a motivation to learn because they did not receive compensation for successful completion of the program. Also, members of this subgroup tended to be more experienced and may have perceived less need to

change. That, coupled with receiving feedback that was reaffirming of their self-views, may not have created motivation to learn or change. Thomas, who received high marks on leadership dimensions from staff and board, did not recognize a skill-job demand gap when he entered the program.

The participants' level of experience may have also been a factor in their relationships with executive facilitators. In many cases the superintendent and facilitator had similar experience (and in some cases the superintendent was more experienced), providing less opportunity for the facilitator to provide knowledge and expertise to the superintendent. Thomas noted, "I'm one of the most experienced of all the superintendents going through the program. My facilitator and I were already in the same circle. We have mutual associates, we've had similar types of districts. I've been a superintendent longer than he has."

Finally, individuals in this subgroup tended to be from larger school districts—ones predisposed to be turbulent, chaotic organizational environments. Thomas encountered numerous issues during the year, in addition to the typical controversies that are often part of a superintendent's position, that detracted from the potential impact of the program for him. Much of the trauma and turmoil in his district was related to the state's financial situation, causing Thomas to spend a great deal of time cutting the system's budget and reducing personnel, reorganizing the district, and taking on more responsibility at the state level. Thomas noted the difficulty this presented when participating in a developmental program: "The ebb and flow, or the vibrancy of our organization is such that it's difficult to be in a stable situation to practice what I've learned. . . . The last eighteen months have been the most difficult in my many years of superintendency."

The members of the Self-control subgroup had many factors working against their taking full advantage of a developmental program. During the classroom portion of the program, the negative feedback they received did seem to motivate them initially since they set goals to improve relationships and worked on the goals to some extent. However, the organizational environment was not conducive to change: They were plagued with trouble and conflict in the system throughout the year. They also had less back-home support. A turbulent environment and less support interfered with the changes they were attempting, as did their own personalities. Part of their relationship problems were the result of their personalities (controlling, headstrong, impatient), and to improve relationships meant going against their natural tendencies.

Controversies in Henry's district that occupied board time and drew the attention of the community (e.g., student aggression toward teachers, parental

objections to classroom material) are illustrations of how turmoil can detract from the program because of the attention it demands. The lack of back-home support and low climate for change in his school district also presented additional challenges: His learning project to improve his relationship with the board would probably have been much more successful if board members had agreed to work with him, becoming a partner in the effort and supporting, encouraging, and rewarding his attempts to change.

Superintendents in the Role Expansion subgroup were offered several opportunities to learn and develop, and they seemed to take advantage of them as well as the tools for learning and development (reflective journal and facilitator). They were likely to be new superintendents with job demands that offered many developmental opportunities of their own. Al, for instance, used his executive facilitator's support and experience to help him deal with some situations he was encountering for the first time. Al's facilitator described how he helped him with one predicament:

The person he had in charge of the operations part of the system (buses, school buildings, etc.) wasn't working out. Al called me to ask what he should do. I suggested that he put the individual that he wanted to make his assistant superintendent into that position on a temporary basis as an opportunity to learn about running that part of the system. He ended up doing just that and eventually rearranging some of his staff. I'm not sure he would not have done all this without the program, but I know it made him feel better about the process to have someone to talk to about it and make suggestions.

In addition, these superintendents had relatively few opportunities in the past to be exposed to the leadership models and concepts presented in the program. Thus, exposure to new knowledge gave them a chance to learn. Al, for instance, learned about the situational-leadership model and set a personal goal to learn in more detail how to apply the Hersey-Blanchard leadership styles model for the professional development of his district directors.

As newer superintendents, it was perhaps their first occasion to receive comprehensive feedback (both self-report and other) on their leadership skills, providing them motivation to select and work on the somewhat difficult self-improvement goals they undertook. Prior to Al's participation in CEOLDP, he had received relatively little feedback—either positive or negative.

Members of the New Perspectives subgroup tended to have organizational environments that encouraged learning and change. They were less likely to experience the amount of turbulence found in other subgroups, and this gave them an opportunity for more learning from a developmental-program interven-

tion. They also reported high levels of back-home support and positive climates for change in their districts. The internal conflicts that many of them were struggling with may have motivated them to use the year-long experience, journal, and executive facilitator as learning opportunities. For instance, Michael was dealing with a health problem during part of his time in the program. He reported that his illness gave him a lot of thinking time, which helped him see the importance of his change efforts.

The superintendents' positive relationships with their facilitators also served as a support for their growth and development. Michael's facilitator described his role as "one of being a mentor, cosuperintendent/peer, developer of a respectful professional association. I was a listener, advisor—always telling him 'free advice is often worth what you pay for it' but always getting him to analyze problems from different dimensions." Michael spoke highly of his facilitator and noted that "this relationship was the greatest benefit to me"; he described their relationship as "a great match, couldn't have been better."

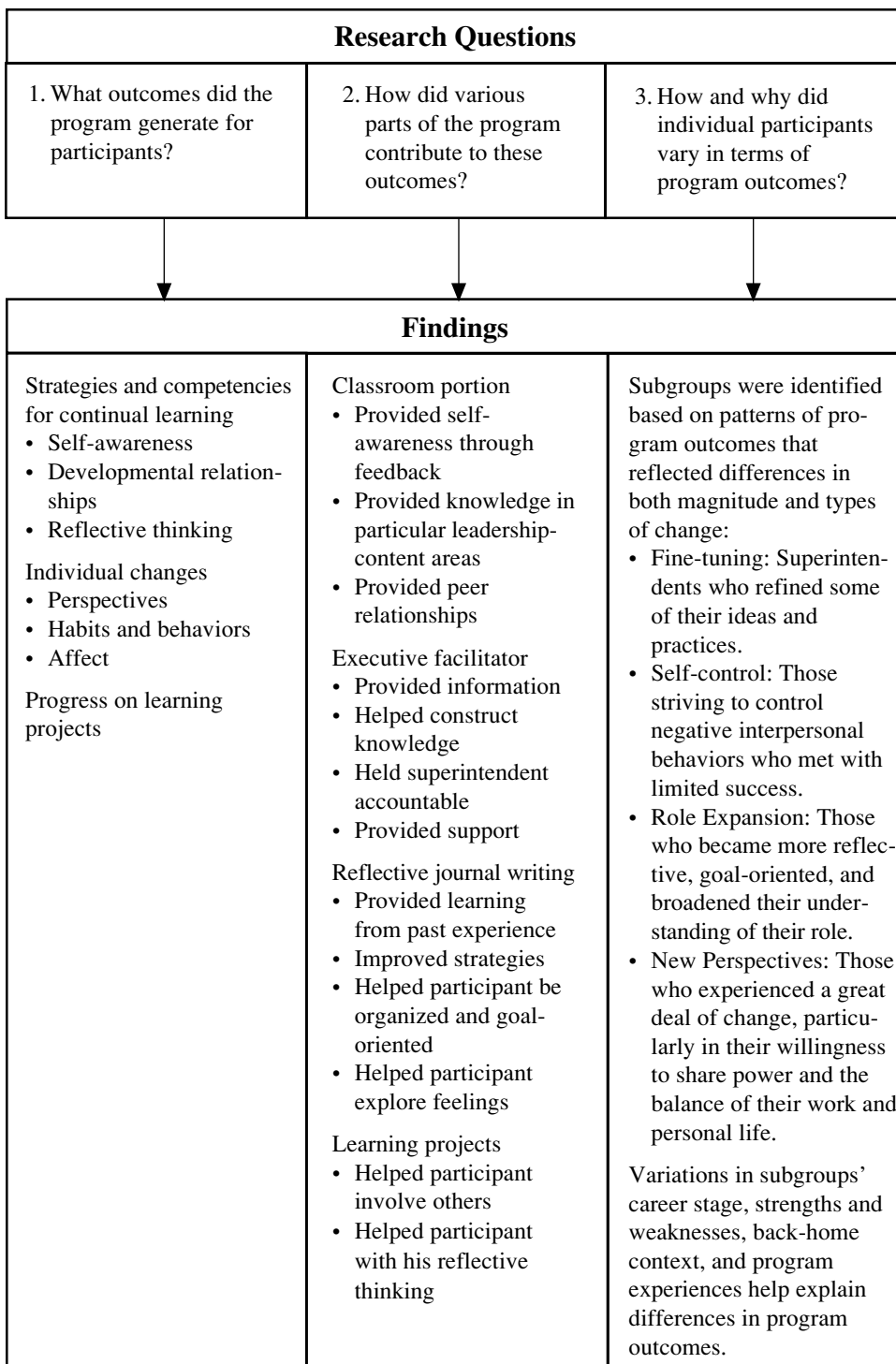
Summary

The study focused on three research questions: The first addressed whether the program stimulated internal changes in the superintendent, observable changes in behavior, and changes in their organizations; the second helped us understand the outcomes of the various program features; the third, which focused on variations in program outcomes, helped us to understand leadership development by exploring how participants' individual characteristics, contexts, and their level of involvement in the program influenced the magnitude and types of outcomes they experienced. The questions and our findings for each are summarized in Figure 4.

General Discussion

We found it useful to examine program outcomes by looking both at the total group's data in response to particular questions and at individual patterns in the data across questions. The first method allowed us to see many different kinds of outcomes as well as what particular outcomes were more prevalent. Looking for subgroups of individuals with similar patterns of outcomes sometimes obscured certain types of outcomes. For example, developing closer relationships with fellow superintendents was an important outcome clearly seen in response to our overall impact question. Yet, in looking for subgroups with similar patterns, this outcome did not seem to be related to others in a consistent way

Figure 4
Relationship of research questions to findings



such that it became a defining feature of a subgroup. However, searching for subgroup patterns did allow us to see how responses across the end-of-year interviews were connected and how various outcomes tended to be interrelated. It also provided a useful framework for understanding how individual differences and contextual variables played a role in program outcomes. To further summarize our findings on outcomes, we will compare program outcomes found in this study to those found in evaluations of similar programs, present an organizing framework for integrating our results across research questions, and conclude with thoughts about the limitations of the study.

Comparison to Outcomes from Other Evaluation Studies

One way in which the results of this evaluation study is similar to those from other studies (Marson & Bruff, 1992; Prideaux & Ford, 1988; Van Velsor, 1985; Young et al., 1993) is the variety of program outcomes reported. It is also similar in that the development of more self-awareness or increased self-understanding is a frequently cited outcome. What this study adds is evidence that this increase in self-awareness is, in many cases, noticed by co-workers.

The areas or domains in which change is reported or seen by others are also similar to those from other studies: interpersonal behaviors, self-management competencies, administrative skills, and learning strategies. Within domains, there appears to be differing emphases from study to study, depending to some extent on the focus of the program. For example, engaging more in reflective thinking was a learning-strategy outcome which was more prominent in this study than in others; this is not surprising since reflective thinking was emphasized a great deal in this program. Two specific types of outcomes that were reported in other studies but which appeared less frequently as a reported outcome of this program were an increase in feedback-seeking behavior and more focus on the development of subordinates. Because executive facilitators often continued to provide feedback to superintendents, there may have been less felt need on the part of superintendents to seek out more feedback. Less mention of focusing on the development of subordinates might be the result of program content (which placed less emphasis on the topic) or of this being a less important need in their immediate situations (i.e., their direct subordinates were often experienced administrators, and many felt that there were excellent training-and-development programs in their state or region for principals and other school administrators). We should mention that in other parts of the interview, several superintendents mentioned teaching concepts they learned in the program to their staffs, and several had CCL trainers deliver programs for them.

Two types of outcomes that were more prominent in this study than in others was viewing leadership more as a shared responsibility and broadening one's view of one's professional role. Developing a shared leadership perspective may have been aided in this program because the school-site management movement was beginning to gain momentum in Florida. School-site management gives greater responsibility and accountability to principals of individual schools; it is, in effect, a move toward decentralization and greater involvement of school-site personnel in running their schools. Developing a shared leadership perspective also occurred more frequently in superintendents with smaller districts. These superintendents may have had less of an opportunity in the past to develop this perspective because they were able to run much of the school operations by themselves and may have felt some pressure to do so.

Broadening one's view of one's professional role may have been more prominent in this program because a number of the elected superintendents did not have an extensive background in educational administration. Although they were at the top of their organizations, they may have been launching a new career. Also, the superintendency can be a very isolated position. The increased interaction with others who are in the same role is a unique aspect of this program.

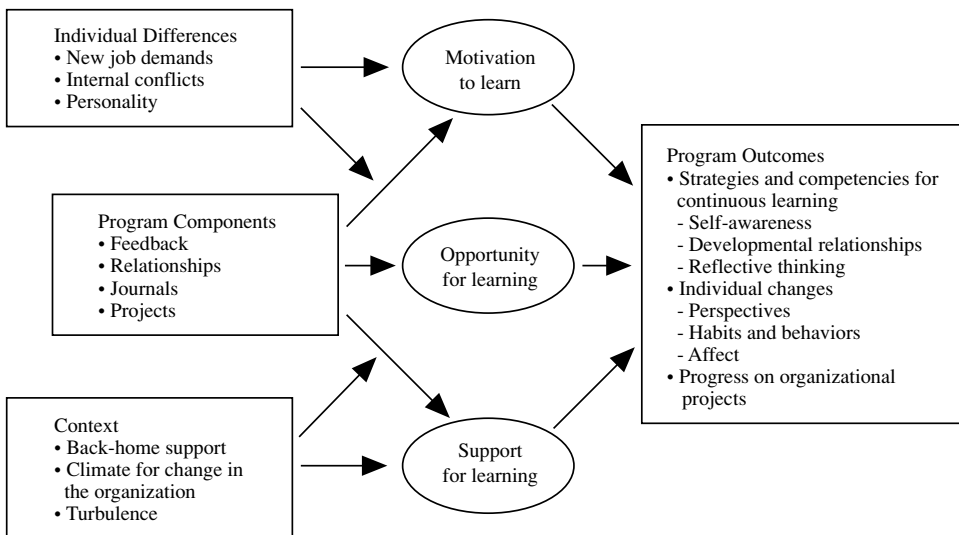
Organizing Framework

Figure 5 summarizes some of our findings across the three research questions and provides an organizing framework for thinking about how programs can lead to outcomes. At the right are the types of program outcomes generated in response to our first research question (What outcomes did the program generate for participants?). At the left are the program components examined in our second question (How did various parts of the program contribute to these outcomes?) and the individual differences and contextual factors that explained some of the variations in program outcomes, which was the focus of our third question (How and why did individual participants vary in terms of program outcomes?). This framework is not unique; others (Baldwin & Ford, 1988; Noe, 1986; Palus & Drath, 1994; Van Velsor, 1984) have used individual and contextual factors, program components, and outcomes as organizing features in models of training and development. Throughout our discussion, we have also used the concepts of motivation to learn and grow, opportunity to learn, and continuing support for learning and change efforts to explain how program components and individual factors affect outcomes; thus we portray these in Figure 5.

Program components. Previous research (Conger, 1992; Van Velsor, 1984) as well as our own findings suggest that program components can influ-

ence motivation, opportunity, and support. In CEOLDP, feedback was used as the primary motivator; superintendents received feedback during the classroom portion of the program from self-reports, from board members and staff in their school districts, and from peers. This feedback helped some participants see areas in which they needed to improve. Some also continued to receive feedback throughout the year from executive facilitators. The program also attempted to influence the elected superintendents' motivation to learn by offering a monetary incentive upon the successful completion of the program.

Figure 5
Framework for analyzing program outcomes



The program provided many opportunities for participants to learn and improve. In the classroom portion of the program, they learned about themselves and about leadership models and concepts (e.g., decision making, utilizing group resources, situational leadership, giving and receiving feedback). They also participated in numerous experiential exercises throughout the week that were related to the concepts and models. Those who made use of journal writing had the further opportunity to learn by reflecting on their own practice. Participants also used their executive facilitators as a source of new knowledge and strategies. Finally, support for individuals attempting personal or organizational change was provided by the executive facilitators and through their peer network.

Individual differences. Individual differences can also be understood in terms of motivation and opportunity to learn. Individuals newer to the superinten-

gency might be more motivated to learn because they still see themselves as needing to grow into their roles, whereas experienced superintendents may be more confident that they have mastered their roles.⁶ Less experienced superintendents also have richer learning opportunities in their work settings via new job demands. They appear to be more willing to use tools (i.e., reflective journals and executive facilitators) that help them learn from their encounters with these new demands. Other studies have consistently reported this trend of transitions to new roles being a factor in increasing program outcomes (Van Velsor & Musselwhite, 1986; Young et al., 1993).

Superintendents struggling with internal conflicts related to their careers, with their roles as leaders, or with integrating their personal and professional lives may also be more motivated to change and grow. As with those less experienced, they also may be more willing to engage in reflective journal writing and in relationships with their facilitators—not so much to learn from their practice and grow into their roles but rather to develop new frameworks and perspectives that will help them resolve their conflicts. Again, these conclusions are consistent with other research (Van Velsor & Musselwhite, 1986; Young et al., 1993). In contrast to some of the previous research, we did find this type of personal reexamination occurring in late career. Superintendents nearing retirement were often thinking about the next phase of their life; it is as if they are returning to a career exploration stage, which Noe (1986) has hypothesized increases the impact of training programs. Interestingly, we did not find that a standard measure of job satisfaction predicted program outcomes. The type of internal struggles motivating reexamination appear to be at a deeper level than the dissatisfaction one might have with the kind of work he or she does, with co-workers, or with the tangible benefits of the job.⁷

Personality factors have not been included in many evaluation studies, and we did not find many personality factors that affected outcomes. However, superintendents who had a pattern of being more controlling, opinionated, impulsive, and impatient did express a desire to improve relationships when they saw how their own styles affected others. This motivation did not always translate into major changes in attitudes or behaviors, partially because changes in ingrained interaction styles driven by personality are difficult to achieve without continuing coaching and support (Kaplan, 1990).

Contextual variables. The impact of three contextual variables—supportive back-home relationships, climate for change, and environmental turbulence—can also be understood in terms of their impact on opportunities and support for learning. Superintendents with positive back-home relationships often have more support for learning. For instance, if board, staff, or family members are

aware of the participant's goals and change efforts, they can be supportive or even engaged as partners in the process. It is also easier for the participant to implement organizational-change projects when organizational members are open to change and have had successful experiences dealing with change. These findings are basically consistent with other research (Hazucha et al., 1993; Van Velsor & Musselwhite, 1986).

We have included turbulence in our framework as a contextual variable although we did not directly assess it in this study. Our sense of the importance of this factor came from its being mentioned in the interview (although we did not directly ask about it) and from our case studies. Turbulence seemed to be a factor in why superintendents from large districts and those with difficult board relationships were sometimes distracted from their change efforts. The stress generated in these situations may discourage them from experimenting with individual or organizational changes. But our sense is that this is a complex factor because we also found instances of a great deal of turbulence facing some superintendents in the Role Expansion and New Perspectives subgroups, but these individuals did not seem to be distracted. In fact, some made statements in the interviews that fit with our intuitive notion that participating in a development program can provide extra support during times of turbulence and may actually help the manager learn from these challenging situations:

I think the program helped me deal more positively with these [crises].
I tried to make it a positive experience, didn't try to hide it from others.

[The program] provided me with a sense of renewal and professional support during a year that was difficult for me personally and professionally. It was the best training as a superintendent I have ever had—maybe because it came at a time when I really needed it.

A more careful examination of how program experiences interact with environmental turbulence should be on our research agendas.

Limitations

This study was based on the program experiences of thirty-eight participants. Though small, this sample is not particularly problematic from the perspective of evaluating the outcomes of CEOLDP because we included almost everyone who participated in the program. This small sample also made it possible for us to look at each individual and try to understand his or her pattern of outcomes. However, the sample size did limit the power of our statistical analysis of subgroup differences. We tried to compensate somewhat for this by increas-

ing the probability level we would use for indicating that an effect was significant. The downside of this practice is that we increase our risk of reporting significant differences which will not be replicated in future studies, particularly since we examined subgroup differences on a large number of variables. Thus, it is important that our analysis of subgroup differences be viewed as exploratory.

The sample was also not diverse. It was a predominantly (eighty-four percent) white-male sample. In addition, all the participants in the program were in the same position and the majority of them were elected to that position (a practice that is rare outside of the state of Florida). Generalizing the findings from this study to other populations is thus problematic. However, we have noted where our results are supported in studies that have used more diverse samples. It is our sense that the four subgroups found in this sample (i.e., Fine-tuning, Self-control, Role Expansion, and New Perspectives) would likely be found in other samples. What is probably not generalizable is the proportion of our sample which fell within each subgroup. Also, other subgroups would likely be identified in more diverse samples.

Another limitation is our lack of a control group, particularly in examining the changes on *Benchmarks*[®]. We do not know to what degree individuals might change on the *Benchmarks*[®] dimensions in the course of a year without the CEOLDP intervention. However, we believe that significant changes on *Benchmarks*[®] were in part a consequence of the program. This belief was bolstered by the facts that the dimensions with the largest differences on *Benchmarks*[®] were consistent with the types of changes reported in the interviews and the dimensions with the largest differences were more related to course content than those with little change (e.g., Hiring Talented Staff and Being a Quick Study).

A final limitation of using pre-post difference scores on *Benchmarks*[®] as evidence of change is that this approach assumes raters' understanding of the concepts they are rating has not changed between administrations of *Benchmarks*[®], and raters have not recalibrated the response scale between administrations (e.g., behaviors previously rated as "4" are now rated as "3"). Since we cannot test these assumptions, we should not rely solely on the *Benchmarks*[®] data but rather interpret it within the context of the totality of the outcome data.

Implications

We have drawn several implications for leadership development programs and for the evaluation of such programs based on findings from this study as well as our attempts to integrate our results with other research in the field.

Leadership Development Programs

One of the more obvious implications to us is that self-awareness-building leadership development programs are enhanced by extending the program beyond the classroom to include workplace projects, reflective journal writing, and coaching and support from an experienced peer. These program features help to ensure that increased self-awareness leads to self-improvement efforts by providing tools that enhance these efforts and a sense of greater accountability for achieving improvements. The program features also serve to bridge what is learned in the classroom with the day-to-day problems experienced in the workplace. Finally, they provide a sense that development is continuous: Self-awareness is not just gained through a one-shot program but through continuing reflection and feedback from coaches. Learning occurs by means of one's experiences and can be enhanced by systematic selection of experiences and reflection on them. Networks with others are a valuable source of knowledge and support for change.

A second implication is that the type of leadership development program we studied—one that focuses on developing awareness of individual strengths and weaknesses, encouraging efforts to improve as a leader, and offering tools for supporting those efforts back in the workplace—is very flexible. In other words, such a program can be useful to individuals with varying needs, at differing points in their careers, facing an array of issues in their organizations. The program's flexibility is based primarily on two factors: First, it focuses more on tools and strategies for continuous learning than on specific content and, second, when it does focus on content, the content is on general models in several broad domains (e.g., leadership style, decision making) that are more geared toward stimulating thinking than providing solutions. For those who do not perceive that they have strong developmental needs, the program provides feedback on numerous dimensions. And by strongly emphasizing continuous development, it stimulates these individuals to at least work on refinement in one or two areas. For those who identify an area where improvement is needed, it makes focusing on that area possible. For those new to their positions, the program is an opportunity to maximize the natural learning that is occurring on the job. For those late in their careers, it can be a reenergizing experience or an opportunity to assess their careers and think about the next stage of their lives. The feedback, reflection, and support provided by the program allows participants to examine the issues they face in their jobs more closely, issues that often vary from one organization to the next.

It must be pointed out, however, that although most participants find leadership development programs like CEOLDP beneficial, the value they

receive varies. Those who are most likely to benefit greatly are people who are new to their positions, who are experiencing some internal conflict in their work or personal lives, and who have supportive back-home environments: In other words, those people who come to the program with higher motivation, opportunity, and support for learning benefit the most from the additional motivation, opportunity, and support provided by the program. For those who benefit less from these types of programs, we must think about how the program itself might be more of a stimulant for development. In the context of the CEOLDP, this means thinking about what programmatic efforts might have been stronger developmental stimulants for those in the Fine-tuning and Self-control subgroups.

For members of the Fine-tuning subgroup—those superintendents who tended to be more experienced and satisfied with their current level of performance—the program tended to reinforce what they already knew and did not provide them with much new knowledge. A program that offers more challenging content would provide a stronger development stimulant for them. This could include exposing them to new models and concepts that are more complex and advanced, rather than the more general leadership-and-management models they are familiar with. Another programmatic effort that might provide a stronger developmental experience would be for those in the Fine-tuning subgroup to serve in the role of executive facilitator for others in future programs because we found that executive facilitators also benefitted from their involvement in CEOLDP. For example, they reported that the experience increased their own reflection, self-insight, self-confidence, ability to be a role model or coach, and flexibility in working with others. Sharing the lessons of one's own experience and trying to help someone else in their efforts to improve and make changes may represent a new experience and provide a developmental opportunity for many in the Fine-tuning subgroup.

For the Self-control subgroup, the awareness of the need to make changes was present, and individuals attempted to improve. The changes often involved improving relationships with others, which meant working on aspects of their personality (e.g., being controlling, opinionated, impulsive, and impatient) that negatively affect other people. Changes such as these might be best achieved in an individualized intervention that includes more intensive feedback and more coaching and support than afforded by the current program (see Kaplan, 1990, for a description of such an individualized approach). A person attempting to alter styles driven by personality needs a coach who understands the dynamics of executive development and is experienced in guiding individual change efforts. In this case, the coach would be readily available and would spend a greater

amount of time with the superintendent than the executive facilitator would be expected to do. This type of intervention attempts to change the negative aspects of the individual's personality by approaching the root of the problem through intensive examination of his or her identity and character. In addition, the individualized approach provides continuous feedback from multiple perspectives on the progress he or she is making.

The participants in the Self-control subgroup were also lacking in the necessary support and appropriate climate for implementing changes in their school districts. The change efforts they undertook often dealt with improving relationships with board members. For these people, intervention at the organizational level that involves the board and superintendent may be most effective. Training for the superintendent-board team would give them a team-building experience, exposing all of the team members to the same models and frameworks, while enhancing their individual performance and increasing the team's effectiveness. This is just one example of how lack of a supportive back-home situation may interfere with efforts at personal improvement.

A final implication for us is that leadership development programs are needed at the top levels of organizations. Kaplan, Drath, and Kofodimos (1985) have documented some of the obstacles to self-development for top-level managers: lack of negative feedback because of the power of their positions, less acceptance of criticism because of a strong need to be competent, jobs that allow little time for introspection, and a history of successes that decreases the willingness to tamper with their winning formula. But we observed a desire for development programs from the top (a number of the superintendents themselves were champions for the program in their state). And the program provided opportunities to overcome many of the obstacles to self-development for top-level managers: It allowed negative feedback to reach them, established trusting relationships in which criticism could be accepted, provided encouragement to rearrange priorities so that they could make time for reflection and introspection, and emphasized and supplied the resources for continuous learning. These programs can also create networks among top managers, who often feel they do not have peers within their organizations to use as sounding boards, confidants, or support systems.

Evaluation of Leadership Development Programs

To best understand the outcomes that participants experience as a result of a leadership development program, a variety of methods, perspectives, and data analyses is invaluable. To assess program outcomes, we used a qualitative method (interviews), a quantitative method (ratings of leadership skills), and an

idiographic method (case studies). We chose to use multiple methods because, if the different methods yielded similar findings, we would have a stronger case for program impact (see Patton, 1990, for a discussion of the advantages of method triangulation). But we also came to value the various methods for the different information they provided. Interviews provided richer information about the types of outcomes but were less useful for assessing the magnitude of the outcomes. Changes in ratings of leadership skills provided a useful measure of magnitude but did not pick up on all the possible types of change. Case studies provided us with insights on why program outcomes varied for individuals, while our analysis across all participants helped us assess the commonality of patterns we saw in the case studies.

Just as multiple perspectives are useful for individual feedback, they are also useful for assessing program outcomes. Participants themselves could provide insights about how their thoughts and feelings have changed as well as how they had changed their behavior. Co-workers provided verification or disconfirmation of the behavioral changes. Facilitators were less in a position to observe behavioral changes but were better at assessing changes in frameworks or in amount of thoughtful reflection. For those participants who used their journals as tools for reflection, CCL staff members who read the participants' journals could also detect when deeper introspection and changing frameworks were likely occurring.

Finally, multiple cuts at the data are also useful for understanding the program and its outcomes. We found that different research questions required different analytical strategies rather than building on and refining a single analytical strategy. With the qualitative research, having each researcher analyze the data separately then share and try to integrate their interpretations contributed to a richer understanding of it.

A second implication for program evaluation is that evaluation studies should expect highly individualized outcomes from programs which build self-awareness and encourage efforts to improve based on that enhanced self-awareness. These expectations would be different for knowledge-building or skill-building programs (e.g., programs for improving communications skills, negotiation skills, or knowledge of innovations in education; Phillips, 1990). In these types of programs, one would expect improvements from many of the participants in the specified content area. In contrast, a participant in a development program can choose among a wide variety of potential areas to work on: Thus, the content to master will vary widely from person to person. Therefore, we should not expect across-the-board leadership-skill improvement from participants; rather we should look for changes in focused areas for each participant.

This suggests that we should be sure to build in open-ended questions in our evaluation designs and perhaps customize for participants some of the efforts to collect evaluation data based on the areas in which each participant has focused during the development program. We should also be careful in comparing results (particularly quantitative results) across evaluation studies. For example, when thirty percent of participants in one study report improved ability to delegate and only five percent report the same improvement in another study, it may say less about the program than about the developmental needs and back-home contexts of the participants.

A final implication is that studies which evaluate leadership development programs are rich opportunities for better understanding the process of leadership development. To take advantage of these opportunities, we should include assessments of individual differences and contextual variables. Standard measures of the readiness factors need to be developed. The role of some factors (e.g., new job demands, back-home support for development) are better documented and understood than others (e.g., turbulent environments, personality traits). Also, since each participant brings a pattern of readiness factors, we need to know more about how individual factors act in combination.

In summary, our work with CEOLDP has shown that development programs that extend beyond a single classroom experience can be valuable for top-level leaders. CEOLDP proved to be very flexible, but this does not preclude investigating other interventions that would provide additional development opportunities for various subgroups of leaders. Evaluation of this program provided additional insights into the leadership development process but only began the important work of examining the various individual and contextual variables that play a role in leadership development.

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Notes

¹These examples of learning projects represent a subset of those that were developed and implemented in the manner the program had hoped they would be. “Learning” and “project” were not always connected for all the superintendents. Some superintendents selected projects that were important for their districts, but which were not connected to any learning goals on their part. We also found that for many superintendents, their goals developed in the individual goal-setting session and their learning projects were unrelated. In programs subsequent to the research study, an effort was made to better link individual improvement goals, learning, and project work by modifying the goal-setting process. At the end of the classroom portion of the program, superintendents are encouraged to review what they have learned about themselves over the course of the week, to pick some areas in which they want to improve and set some preliminary goals in those areas, and to begin thinking about organizational-level projects in which they could put to use some of the skills, behaviors, or perspectives needed to make progress on their self-improvement goals. These goals and projects are finalized a month later when they meet with their executive facilitators.

²In the vast majority of school districts in the U.S., school superintendents are appointed by the district school board. However, the majority of Florida superintendents—particularly those in smaller, less urban districts—are elected by the public. Appointed superintendents work under a contractual agreement with their boards which determines their compensation package. The state has no role in this contract. However, because elected superintendents are public officials, the state sets minimum compensation levels for them and has more leeway in supplementing their compensation packages.

³In CCL-implemented programs, the practice of providing a monetary incentive for program completion is rare. Having CCL staff members provide a client organization with their assessments of participants is also a rare exception to our normal policy of strict confidentiality of participant information. However, in enrolling in this program, the superintendents were made aware of the incentive and the need for input from CCL staff into this decision.

⁴Because there were only three females in our sample, we have opted to use the male pronoun when describing the experiences of individual participants in order to protect the individuals’ identities.

⁵Case studies were conducted by the authors and two additional researchers: Dianne Young, a research associate at CCL, and Robert Shively, a professor in the Babcock Graduate School of Management at Wake Forest University.

⁶We make this comment about new versus experienced superintendents based on our interviews with them. However, we found no statistical difference among the subgroups on an item from the CEOLDP Research Questionnaire, “There is a gap between my knowledge, skills, or abilities and the demands of my job.” It may be that individuals at various levels of mastery of a job see a gap; the more expert one becomes, the more one sees that there is more to learn. It may be more important to ask how that perceived gap affects the individuals’ confidence and performance. Superintendents new to their roles may experience gaps that more directly affect their confidence and performance, thus motivating them more to fill these gaps.

⁷We did not find any subgroup difference on the *Managerial Job Satisfaction Questionnaire* (MJSQ). However, on the CEOLDP Research Questionnaire, we had one satisfaction item, “I am quite satisfied with my current job.” We did find that the Self-control subgroup scored lower than the other three groups on this item. This overall satisfaction item may be influenced by any number of factors not captured on the MJSQ. For the Self-control subgroup, it may have been influenced by the less positive climates for change in their districts. However, neither the single item nor the MJSQ scales captured the type of internal struggles that many members of the New Perspectives subgroup appeared to be experiencing.

Appendix A

Questions Used in End-of-program Interviews

Interview with CEOLDP Participants

Listed below are the questions we would like to address in our interview with you. We hope you have time to look over them and perhaps make a few notes to yourself before your scheduled time with us. It is important to keep in mind the purpose of these interviews: We want to have a better understanding of how participating in CEOLDP has helped you and how we can work to improve the program in the future. Your frank and honest responses to these questions will help us in this endeavor. These interviews are completely separate from the program certification process and will have no bearing on any evaluations made in that process. Your responses will be strictly confidential.

Overall Impact

1. What are the 2-3 most important ways in which the CEOLDP program has impacted you?
2. If we asked those who work with you what you are doing differently today compared to a year ago, what would they say? How much would you attribute these differences to the CEOLDP program?
3. Has any aspect of this program helped you bring about changes in your school system? How?

Classroom Portion of Program

4. What was the highlight of your week at CCL? Was there a low point?
5. Are there any ideas, concepts, or models that you were exposed to during the week at CCL that you now try to apply in your own setting? What are they and how are you using them?
6. Do you have a closer relationship with the other superintendents who went through the program with you? Have these relationships been of benefit to you?

Learning Projects

7. What do you think CCL was trying to accomplish by getting you to design and work on “learning projects”?
8. Would you have set your learning project goals and worked toward them without participating in CEOLDP? How did participating in the program help you make progress on these goals?
9. In retrospect, were these the most appropriate goals to set?
10. Which of your learning projects was most difficult to make progress on? Why?
11. Which of your learning projects was easiest to make progress on? Why?
12. Did you feel personally stretched by your learning projects? Did they require you to change your own behavior?

Individual Goals

13. Would you have set your individual goals and worked toward them if you had not attended CEOLDP? How did CEOLDP help you make progress on these goals?
14. What got in the way of your working on these goals?
15. Do you think you have changed as an individual because of your work on these individual goals? How?

Executive Facilitator

16. How much and what type of interaction did you have with your executive facilitator during the year?
17. What benefits have you derived from the relationship?
18. Was there anything that got in the way of the relationship being more successful? Were there any ways your executive facilitator could have been more helpful?

Learning Journals

19. What was your routine for keeping a journal? What helped and what got in the way?

20. Did you find journal writing an effective method for getting you to reflect on your own practice? Why or why not?
21. Did you develop other methods for structured reflection?
22. How did reflection help you as a leader? Did you do anything different as a result of your reflection (e.g., use different leadership styles)?
23. Will you continue to write in the journal? Why or why not?

Program Improvement

24. How could we make CEOLDP more effective?

Interview with Executive Facilitators

Listed below are the questions we would like to address in our interview with you. We hope you have time to look over them and perhaps make a few notes to yourself before your scheduled time with us. It is important to keep in mind the purpose of these interviews: We want to have a better understanding of how participating in CEOLDP has helped the superintendent, what your relationship with the superintendent was like, and how we can work to improve the program in the future. Your frank and honest responses to these questions will help us in this endeavor. These interviews are completely separate from the program certification process and will have no bearing on any evaluations made in that process. Your responses will be strictly confidential.

Overall Impact on Superintendent

1. What are the 2-3 most important ways in which CEOLDP impacted the superintendent you worked with?
2. How is the superintendent behaving differently today compared to a year ago? How much would you attribute these differences to the CEOLDP program?
3. Has any aspect of this program helped the superintendent bring about changes in his/her school system? How?

Relationship with Superintendent

4. How much and what type of interaction did you have with your superintendent during the year?
5. What role(s) did you try to serve in the superintendent's improvement efforts?
6. Was there anything that got in the way of the relationship being more successful? In retrospect, was there anything you could have done to be more helpful?

Learning Journals

7. Did you find journal writing an effective method for getting the superintendent to reflect on his/her own practice? Why or why not?
8. What seemed to help and what got in the way of the superintendent's efforts to keep a journal? How did you try to assist in these efforts?

Personal Benefits

9. How have you benefited from serving as an executive facilitator?

Program Improvement

10. What did you find most beneficial from the training designed to prepare you for the executive facilitator role? In what ways could you have been better prepared?
11. In looking back, what did you do during your initial site visit that was most worthwhile in helping you fulfill your role as executive facilitator? What do you wish you had done differently?
12. How else could we make CEOLDP more effective?

Appendix B

Subgroup Differences: Statistical Analysis

- Table B1: Demographics: Means across subgroups
- Table B2: Demographics: Frequencies across subgroups
- Table B3: Organizational information: Means across subgroups
- Table B4: Organizational information: Frequencies across subgroups
- Table B5: CEOLDP Research Questionnaire: Means across subgroups
- Table B6: *Managerial Job Satisfaction Questionnaire* (MJSQ): Means across subgroups
- Table B7: *Benchmarks*[®] self ratings: Preprogram means across subgroups
- Table B8: *Benchmarks*[®] observer ratings: Preprogram means across subgroups
- Table B9: *Benchmarks*[®] self-observer differences: Preprogram means across subgroups
- Table B10: *California Psychological Inventory* (CPI): Means across subgroups
- Table B11: *Fundamental Interpersonal Relations Orientation–Behavior* (FIRO-B): Means across subgroups
- Table B12: *Kirton Adaption-Innovation Inventory* (KAI): Means across subgroups
- Table B13: *Myers-Briggs Type Indicator* (MBTI): Means across subgroups
- Table B14: Learning Project Questionnaire–Superintendents: Means across subgroups
- Table B15: Learning Project Questionnaire–Executive Facilitators: Means across subgroups
- Table B16: Interaction with executive facilitator: Means across subgroups
- Table B17: Superintendent–executive facilitator relationship: Frequencies across subgroups
- Table B18: Roles played by executive facilitator: Means across subgroups
- Table B19: Journal ratings: Frequencies across subgroups

Table B1
Demographics: Means across subgroups

	Fine-tuning (<i>n</i> = 11)	Self-control (<i>n</i> = 5)	Role Expansion (<i>n</i> = 14)	New Perspectives (<i>n</i> = 8)	<i>F</i>	ω^2
Age	48.80	51.80	48.00	50.77	.70	.00
Years of Education	19.10	18.00	18.69	18.28	.86	.00
Years in Current Position	5.87 ^{a,b}	2.88 ^b	3.86 ^b	8.99 ^a	3.02 ^{**}	.14
# Prior Superintendencies	.36	.00	.36	.00	1.07	.01

Note. Within rows, superscripts (a,b,c) indicate significant pairwise differences based on Newman-Keuls test.

^{**} $p < .05$.

Table B2
Demographics: Frequencies across subgroups

	Fine-tuning (<i>n</i> = 11)	Self-control (<i>n</i> = 5)	Role Expansion (<i>n</i> = 14)	New Perspectives (<i>n</i> = 8)	χ^2
Highest Degree: Master's	5	4	10	7	4.65
Ph.D.	6	1	4	1	
Official: Elected	7	5	11	7	3.24
Appointed	4	0	3	1	

Table B3
Organizational information: Means across subgroups

	Fine-tuning (n = 11)	Self-control (n = 5)	Role Expansion (n = 14)	New Perspectives (n = 8)	F	ω^2
# of Schools	35.09 ^a	23.60 ^{a,b}	11.92 ^b	11.75 ^b	4.87 ^{***}	.24
Budget in Millions	165.55 ^a	119.00 ^{a,b}	53.43 ^b	46.13 ^b	4.11 ^{**}	.20
# of Teachers	2,206.36 ^a	1,304.00 ^b	542.21 ^b	516.25 ^b	4.87 ^{***}	.23

Note. Within rows, superscripts (a,b,c) indicate significant pairwise differences based on Newman-Keuls test.

** $p < .05$; *** $p < .01$.

Table B4
Organizational information: Frequencies across subgroups

		Fine-tuning (n = 11)	Self-control (n = 5)	Role Expansion (n = 14)	New Perspectives (n = 8)	χ^2
The system covers areas that are considered:						
Rural	Yes	10	4	12	6	.97
	No	1	1	2	2	
Suburban	Yes	7	3	4	3	3.17
	No	4	2	10	5	
Urban	Yes	6	3	0	1	13.23 ^{***}
	No	5	2	14	7	

*** $p < .01$.

Table B5
CEOLDP Research Questionnaire: Means across subgroups

Item	Fine-tuning (<i>n</i> = 11)	Self-control (<i>n</i> = 5)	Role Expansion (<i>n</i> = 14)	New Perspectives (<i>n</i> = 8)	<i>F</i>	ω^2
I believe this program will have positive benefits for me personally.	5.36	5.20	5.14	5.38	.29	.06
I believe this program will have positive impact on my school system.	5.09	4.80	5.07	5.25	.39	.00
I would try to attend this program even if the state had not made it available.	4.09	4.00	3.71	2.75	1.44	.03
I am concerned that my workload may distract me from getting the most from this program.	4.28 ^a	4.60 ^a	3.43 ^{a,b}	3.00 ^b	2.60*	.11
The timing of this program is good for me.	4.00	3.40	4.50	4.50	.95	.00
It is critical for superintendents to devote time to professional development.	5.72	5.60	5.42	5.75	.53	.00
I am willing to invest the time and energy needed to change aspects of my behavior that may be less effective.	5.63	5.40	5.53	5.75	.64	.00
I have discussed/plan to discuss the goals of the program with my board.	5.09	4.40	4.57	5.30	1.78	.06
Board members are supportive of my participation in the program.	5.09 ^a	4.00 ^b	4.57 ^a	5.30 ^a	3.70**	.18

Table B5 (cont.)
CEOLDP Research Questionnaire: Means across subgroups

Item	Fine-tuning (<i>n</i> = 11)	Self-control (<i>n</i> = 5)	Role Expansion (<i>n</i> = 14)	New Perspectives (<i>n</i> = 8)	<i>F</i>	ω^2
I have shared/plan to share information about this program with my staff.	5.00	4.80	5.14	5.50	.81	.00
My staff is in support of my participation in the program.	5.00	5.25	5.15	5.57	.99	.00
The state places importance on professional-development experiences for superintendents.	5.30	5.20	5.29	5.88	1.51	.04
I understand the state's goals in establishing this program.	5.30	5.00	5.50	5.63	1.18	.01
The state is exercising good vision in sponsoring this program.	5.40	5.00	5.57	5.63	1.04	.00
There is a gap between my knowledge, skills, or abilities and the demands of my job.	3.40	4.20	4.07	4.13	.78	.00
I have spent time recently reexamining my plans for the future.	3.60	4.40	4.64	3.75	1.46	.04
I am quite satisfied with my current job.	5.40 ^a	4.40 ^b	5.07 ^a	5.50 ^a	3.41 ^{**}	.16
I had planned on attending a developmental program this year.	3.80	3.20	4.29	4.38	.75	.00
I try to build time into my week for reflection on my work.	4.40	4.80	4.42	4.14	.25	.00
Our school system has experienced an upheaval or crisis in the last year.	3.30 ^b	5.20 ^a	3.57 ^b	2.25 ^b	2.94 ^{**}	.14

(continued on next page)

Table B5 (cont.)
CEOLDP Research Questionnaire: Means across subgroups

Item	Fine-tuning (<i>n</i> = 11)	Self-control (<i>n</i> = 5)	Role Expansion (<i>n</i> = 14)	New Perspectives (<i>n</i> = 8)	<i>F</i>	ω^2
I am under pressure from the board to bring about some immediate changes in the school system.	2.70 ^a	3.60 ^a	3.07 ^a	1.50 ^b	3.00 ^{**}	.14
Generally, I have a positive relationship with my staff.	5.40	5.00	5.36	5.50	.94	.00
Risk-taking is reinforced in my school system.	4.80	5.20	4.43	4.00	1.29	.02
I have a staff who is experienced in implementing change.	5.00	4.60	4.21	5.13	1.71	.06
Our school system has a history of successfully implementing change.	4.60 ^a	3.00 ^b	4.29 ^a	4.88 ^a	3.13 ^{**}	.15
Past change efforts in our school system have failed.	2.40 ^{a,b}	3.20 ^a	2.57 ^{a,b}	1.62 ^b	2.85 [*]	.13
Creating change in our school system requires a lot of political maneuvering.	4.37 ^b	5.80 ^a	4.71 ^b	3.75 ^b	3.55 ^{**}	.17
In our school system, there is a history of good relationships between teachers and administrators.	4.36	4.60	4.50	4.88	.55	.00
If I want to implement change in my school system, there are resources available to me.	4.72 ^{a,b}	4.40 ^b	4.43 ^b	5.25 ^a	2.18 [*]	.09
Creating change in an organization is a positive process.	5.18	4.80	5.14	5.00	.34	.00
I can personally make change happen in my organization.	5.27	5.40	5.14	5.38	.27	.00

Note. Items were rated on a 6-point scale with 1 = strongly disagree and 6 = strongly agree.

Note. Within rows, superscripts (a,b,c) indicate significant pairwise differences based on Newman-Keuls test.

* $p < .15$; ** $p < .05$.

Table B6
Managerial Job Satisfaction Questionnaire (MJSQ): Means across subgroups

Scale	Fine-tuning (<i>n</i> = 11)	Self-control (<i>n</i> = 5)	Role Expansion (<i>n</i> = 14)	New Perspectives (<i>n</i> = 8)	<i>F</i>	ω^2
The Work Itself	4.66	4.55	4.46	4.66	.43	.00
Supervision	4.16	3.60	3.86	4.14	.92	.00
Co-workers	4.52	4.40	4.18	4.38	1.19	.02
Pay and Benefits	2.70	2.55	2.91	2.03	.38	.00
Promotion Opportunity	3.88	3.55	3.64	3.97	.52	.00
Overall	3.98	3.73	3.81	4.03	.69	.00

Note. Scale scores can range from 1 (very dissatisfied) to 5 (very satisfied).

Table B7
Benchmarks[®] self ratings: Preprogram means across subgroups

Scale	Fine-tuning (<i>n</i> = 11)	Self-control (<i>n</i> = 5)	Role Expansion (<i>n</i> = 14)	New Perspectives (<i>n</i> = 8)	<i>F</i>	ω^2
Resourcefulness	3.98	4.15	3.79	4.09	1.78	.06
Doing Whatever it Takes	4.14 ^{b,c}	4.57 ^a	4.03 ^c	4.38 ^{a,b}	3.97 ^{**}	.21
Being a Quick Study	3.78	4.05	3.71	3.92	.45	.00
Decisiveness	3.58 ^{a,b}	4.15 ^a	3.19 ^b	3.96 ^a	4.16 ^{**}	.22
Leading Employees	4.06 ^{a,b}	4.23 ^a	3.81 ^b	4.18 ^a	2.77 [*]	.14
Setting a Developmental Climate	4.04	4.40	3.95	4.30	2.10 [*]	.09
Confronting Problem Employees	3.48	3.77	3.16	3.63	1.47	.04
Work Team Orientation	4.13 ^{a,b}	4.25 ^a	3.69 ^b	4.13 ^{a,b}	3.08 ^{**}	.16
Hiring Talented Staff	4.03 ^c	4.87 ^a	4.28 ^{b,c}	4.61 ^{a,b}	4.03 ^{**}	.21
Building and Mending Relationships	4.04	4.18	3.88	4.18	1.63	.05
Compassion and Sensitivity	3.85 ^b	4.55 ^a	4.00 ^b	4.17 ^b	2.74 [*]	.13
Straightforwardness and Composure	4.33	4.23	3.95	4.20	1.48	.04
Balance Between Personal Life and Work	3.48	4.00	3.23	3.25	1.39	.03
Self-awareness	3.70	4.10	3.83	3.79	1.16	.01
Putting People at Ease	4.08	4.45	4.18	4.17	.53	.00
Acting with Flexibility	4.04 ^a	4.20 ^a	3.78 ^b	4.20 ^a	3.55 ^{**}	.25
Overall Mean	3.92 ^{b,c}	4.26 ^a	3.78 ^c	4.07 ^{a,b}	4.55 ^{***}	.24

Note. Scale scores can range from 1 (not at all descriptive) to 5 (descriptive to a very great extent).
Note. Within rows, superscripts (a,b,c) indicate significant pairwise differences based on Newman-Keuls test.

* $p < .15$; ** $p < .05$; *** $p < .01$.

Table B8
Benchmarks[®] observer ratings: Preprogram means across subgroups

Scale	Fine-tuning (<i>n</i> = 11)	Self-control (<i>n</i> = 5)	Role Expansion (<i>n</i> = 14)	New Perspectives (<i>n</i> = 8)	<i>F</i>	ω^2
Resourcefulness	4.16 ^a	3.77 ^b	3.99 ^{a,b}		2.47*	.12
Doing Whatever it Takes	4.31	4.17	4.14		1.51	.04
Being a Quick Study	4.36	4.16	4.16		.79	.00
Decisiveness	3.51	3.91	3.63		1.82	.07
Leading Employees	4.04	3.78	3.97		1.42	.04
Setting a Developmental Climate	4.15	3.90	4.05		1.15	.01
Confronting Problem Employees	3.47	3.64	3.56		.25	.00
Work Team Orientation	3.99	3.91	3.92		.13	.00
Hiring Talented Staff	4.11	4.14	4.08		.04	.00
Building and Mending Relationships	4.21 ^a	3.71 ^b	4.05 ^a		5.95***	.30
Compassion and Sensitivity	3.94 ^{a,b}	3.78 ^b	4.05 ^{a,b}		2.04*	.08
Straightforwardness and Composure	4.21	4.02	4.20		1.72	.06
Balance Between Personal Life and Work	3.80	3.97	4.06		.52	.00
Self-awareness	3.98	3.75	3.93		.84	.00
Putting People at Ease	4.39	4.15	4.40		.60	.00
Acting with Flexibility	4.16	3.96	4.03		1.13	.01
Overall Mean	4.05	3.92	4.01		.99	.00

Note. Scale scores can range from 1 (not at all descriptive) to 5 (descriptive to a very great extent).

Note. Within rows, superscripts (a,b,c) indicate significant pairwise differences based on Newman-Keuls test.

* $p < .15$; *** $p < .01$.

Table B9
Benchmarks[®] self-observer differences:
Preprogram means across subgroups

Scale	Fine-tuning (<i>n</i> = 11)	Self-control (<i>n</i> = 5)	Role Expansion (<i>n</i> = 14)	New Perspectives (<i>n</i> = 8)	<i>F</i>	ω^2
Resourcefulness	-0.02 ^b	0.37 ^a	-0.20 ^b	-0.09 ^b	3.18 ^{**}	.16
Doing Whatever it Takes	-0.02 ^b	0.40 ^a	-0.11 ^b	-0.04 ^b	2.75 [*]	.13
Being a Quick Study	-0.59	-0.11	-0.45	-0.39	.48	.00
Decisiveness	0.07 ^a	0.24 ^a	-0.44 ^b	0.02 ^a	3.66 ^{**}	.19
Leading Employees	0.03 ^{a,b}	0.46 ^a	-0.17 ^b	0.13 ^{a,b}	2.18 [*]	.09
Setting a Developmental Climate	-0.11 ^b	0.50 ^a	-0.10 ^b	0.09 ^b	2.41 [*]	.11
Confronting Problem Employees	0.00	0.12	-0.40	0.17	1.99 [*]	.08
Work Team Orientation	0.14 ^{a,b}	0.34 ^a	-0.23 ^b	0.14 ^{a,b}	2.43 [*]	.11
Hiring Talented Staff	-0.07 ^c	0.73 ^a	0.20 ^{b,c}	0.51 ^{a,b}	3.18 ^{***}	.16
Building and Mending Relationships	-0.18 ^b	0.47 ^a	-0.17 ^b	-0.08 ^b	2.53 [*]	.12
Compassion and Sensitivity	-0.09 ^b	0.77 ^a	-0.05 ^b	0.00 ^b	4.15 ^{**}	.22
Straightforwardness and Composure	0.12	0.22	-0.26	-0.17	1.73	.06
Balance Between Personal Life and Work	-0.33 ^{a,b}	0.03 ^a	-0.83 ^b	-0.70 ^{a,b}	2.02 [*]	.08
Self-awareness	-0.28	0.35	-0.11	-0.19	1.68	.06
Putting People at Ease	-0.32	0.30	-0.22	-0.33	1.64	.05
Acting with Flexibility	-0.12	0.24	-0.24	-0.01	1.18	.02
Overall Mean	-0.13 ^b	0.34 ^a	-0.24 ^b	-0.06 ^b	5.48 ^{**}	.28

Note. Negative scores indicate self ratings were lower than observer ratings; positive scores indicate self ratings were higher than observer ratings.

Note. Within rows, superscripts (a,b,c) indicate significant pairwise differences based on Newman-Keuls test.

* $p < .15$; ** $p < .05$; *** $p < .01$.

Table B10
California Psychological Inventory (CPI): Means across subgroups

Scale	Fine-tuning (<i>n</i> = 11)	Self-control (<i>n</i> = 5)	Role Expansion (<i>n</i> = 14)	New Perspectives (<i>n</i> = 8)	<i>F</i>	ω^2
Dominance	68.18	72.40	66.07	66.25	.66	.00
Capacity for Status	57.09	57.40	50.43	55.00	1.40	.03
Sociability	56.82	57.00	55.86	54.50	.11	.00
Social Presence	54.82	60.20	48.86	53.50	1.58	.04
Self-acceptance	61.36	63.60	58.50	61.00	.63	.00
Sense of Well-being	53.00	48.00	50.93	53.88	.48	.00
Responsibility	54.91	54.40	56.71	52.25	.62	.00
Socialization	52.91 ^a	40.40 ^b	55.93 ^a	53.00 ^a	5.85 ^{***}	.28
Self-control	54.00 ^a	42.40 ^b	53.00 ^a	50.63 ^a	2.13 [*]	.08
Tolerance	53.27	52.00	51.79	52.13	.07	.00
Good Impression	56.09	44.20	51.93	49.13	1.41	.03
Communality	54.45 ^{a,b}	52.00 ^b	59.21 ^a	53.88 ^{a,b}	2.77 [*]	.12
Achievement via Conformance	61.27	55.20	59.64	61.50	1.27	.02
Achievement via Independence	59.09	55.60	56.64	58.63	.32	.00
Intellectual Efficiency	52.36	52.00	49.36	51.63	.30	.00
Psychological Mindedness	58.64	59.40	54.21	56.38	.91	.00
Flexibility	49.09	53.00	44.50	51.50	1.19	.01
Femininity	42.91 ^{a,b}	40.40 ^b	47.71 ^{a,b}	50.75 ^a	1.91 [*]	.07

Note. Scale scores generally range from 20 to 80.

Note. Within rows, superscripts (a,b,c) indicate significant pairwise differences based on Newman-Keuls test.

* $p < .15$; *** $p < .01$.

Table B11
**Fundamental Interpersonal Relations Orientation–Behavior (FIRO-B):
 Means across subgroups**

Scale	Fine-tuning (<i>n</i> = 11)	Self-control (<i>n</i> = 5)	Role Expansion (<i>n</i> = 14)	New Perspectives (<i>n</i> = 8)	<i>F</i>	ω^2
Expressed Inclusion	4.60	3.60	4.86	3.75	.77	.00
Wanted Inclusion	2.30	2.60	3.86	2.50	.49	.00
Expressed Control	5.20 ^b	7.40 ^a	4.26 ^b	4.50 ^b	1.92*	.07
Wanted Control	2.90	2.20	3.07	3.13	.31	.00
Expressed Affection	4.20	2.00	3.79	3.00	1.80	.06
Wanted Affection	5.50	3.60	5.43	5.75	1.55	.04

Note. Scale scores can range from 0 (low) to 9 (high).

Note. Within rows, superscripts (a,b,c) indicate significant pairwise differences based on Newman-Keuls test.

**p* < .15.

Table B12
Kirton Adaption-Innovation Inventory (KAI): Means across subgroups

Scale	Fine-tuning (<i>n</i> = 11)	Self-control (<i>n</i> = 5)	Role Expansion (<i>n</i> = 14)	New Perspectives (<i>n</i> = 8)	<i>F</i>	ω^2
KAI Score	98.54	106.60	89.57	96.13	1.07	.01

Note. Scale scores generally range from 50 to 150.

Table B13
Myers-Briggs Type Indicator (MBTI): Means across subgroups

Scale	Fine-tuning (<i>n</i> = 11)	Self-control (<i>n</i> = 5)	Role Expansion (<i>n</i> = 14)	New Perspectives (<i>n</i> = 8)	<i>F</i>	ω^2
Extraversion / Introversion	-14.45	-19.80	-4.86	-4.00	.60	.00
Sensing / Intuition	-7.36	-4.60	-15.57	-14.25	.21	.00
Thinking / Feeling	-11.55	-20.20	-8.86	-2.25	.58	.00
Judging / Perceiving	-14.09	-12.60	-30.00	-20.75	.77	.00

Note. Scale scores generally range from -60 to +60.

Table B14
Learning Project Questionnaire–Superintendents: Means across subgroups

Item	Fine-tuning (<i>n</i> = 23)†	Self-control (<i>n</i> = 10)†	Role Expansion (<i>n</i> = 25)†	New Perspectives (<i>n</i> = 17)†	<i>F</i>	ω^2
How much difficulty did you have designing this learning project?	2.30	1.90	2.72	2.47	1.44	.02
How much influence did your executive facilitator have on the choice or refinement of this project?	2.78	2.70	2.88	3.00	.18	.00
How much impact will this learning project have on the effectiveness of your school system?	4.43	4.50	4.44	4.41	.03	.00
How difficult will this project be to complete?	3.87 ^{a,b}	3.50 ^b	4.20 ^a	3.59 ^b	2.98 ^{**}	.07
How much control do you personally have on the outcomes of this project?	3.85	3.50	3.88	3.94	.76	.00
How much will you have to influence other people in order to complete this project?	3.95	3.80	4.16	4.12	.40	.00
How much change in your own behavior will be required to accomplish the goals of this project?	2.65	2.70	3.36	2.82	1.66	.03
How much change in your organization will be required to accomplish the goals of this project?	3.39	3.00	3.68	3.06	1.34	.01
How confident are you that you will complete this project?	4.56	4.40	4.48	4.52	.16	.00

Note. Items were rated on a 5-point scale with 1 = none/very minimal and 5 = an extreme amount.
 †Unit of analysis is learning projects. (It is individual superintendents in other tables in appendix.)

Note. Within rows, superscripts (a,b,c) indicate significant pairwise differences based on Newman-Keuls test.

^{**}*p* < .05.

Table B15
**Learning Project Questionnaire–Executive Facilitators:
Means across subgroups**

Item	Fine-tuning (<i>n</i> = 23)†	Self-control (<i>n</i> = 10)†	Role Expansion (<i>n</i> = 25)†	New Perspectives (<i>n</i> = 17)†	<i>F</i>	ω^2
How much difficulty did the superintendent seem to have in designing this learning project?	2.28	2.25	2.37	2.22	.08	.00
How much influence did you have on the choice or refinement of this project?	2.14 ^b	2.62 ^{a,b}	3.12 ^a	2.72 ^{a,b}	4.28 ^{***}	.12
How much impact could the learning project have on the effectiveness of the superintendent's school system?	4.04 ^b	4.75 ^a	4.25 ^b	4.28 ^b	1.97 [*]	.04
How difficult a project has the superintendent taken on?	3.76	4.00	4.04	4.16	.98	.00
How much personal control will the superintendent have on the outcomes of this project?	4.09	4.37	3.75	3.83	1.78	.03
How much will the superintendent be required to influence other people in order to complete this project?	4.23	4.62	4.95	4.27	1.44	.02
How much will the superintendent need to change his/her own behavior in order to accomplish the goals of this project?	3.05 ^b	4.25 ^a	3.42 ^b	3.16 ^b	2.79 ^{**}	.07
How much will the superintendent need to change his/her school system in order to accomplish the goals of this project?	3.28 ^b	4.25 ^a	3.54 ^b	3.33 ^b	2.38 [*]	.06
How confident are you that you will be able to help the superintendent as he/she works on this learning project?	3.62 ^b	4.75 ^a	3.75 ^b	4.11 ^b	5.63 ^{***}	.16

Note. Items were rated on a 5-point scale with 1 = none/very minimal and 5 = an extreme amount.
†Unit of analysis is learning projects. (It is individual superintendents in other tables in appendix.)
Note. Within rows, superscripts (a,b,c) indicate significant pairwise differences based on Newman-Keuls test.

* $p < .15$; ** $p < .05$; *** $p < .01$.

Table B16
Interaction with executive facilitator: Means across subgroups

	Fine-tuning (<i>n</i> = 11)	Self-control (<i>n</i> = 5)	Role Expansion (<i>n</i> = 14)	New Perspectives (<i>n</i> = 8)	<i>F</i>	ω^2
# of Hours Reported by Executive Facilitator	64.63	76.60	74.00	79.63	.24	.00
# of Face-to-face Visits	2.09	1.80	2.31	2.38	.51	.00

Table B17
**Superintendent–executive facilitator relationship:
 Frequencies across subgroups**

	Fine-tuning (<i>n</i> = 11)	Self-control (<i>n</i> = 5)	Role Expansion (<i>n</i> = 14)	New Perspectives (<i>n</i> = 8)	χ^2
Positiveness of Relationship:					
Neutral or Negative	2	2	0	1	18.06***
Positive	7	1	10	0	
Very Positive	2	2	4	7	

****p* < .01.

Table B18
Roles played by executive facilitator: Means across subgroups

		Fine-tuning (<i>n</i> = 11)	Self-control (<i>n</i> = 5)	Role Expansion (<i>n</i> = 14)	New Perspectives (<i>n</i> = 8)	<i>F</i>	ω^2
Suggest Strategies for Accomplishing Your Objective	S	3.54	3.40	4.15	3.88	.56	.00
	E	3.00	3.60	3.92	3.50	2.00*	.08
Provide Feedback on Your Effectiveness	S	4.27	3.80	4.54	4.50	.64	.00
	E	3.60 ^b	4.20 ^{a,b}	4.85 ^a	3.88 ^b	3.31**	.16
Share Own Attitudes, Values, and Ways They Solved a Problem	S	4.63	3.80	3.69	4.25	1.74	.06
	E	3.90	4.60	3.75	3.75	.70	.00
Serve as a Sounding Board	S	4.27	3.60	4.54	3.88	.86	.00
	E	3.90	4.40	4.15	5.00	1.56	.04
Became a "Sympathetic Ear"	S	3.72	3.40	4.00	4.00	.25	.00
	E	3.09	3.80	4.08	3.75	.86	.00
Push You to Take Action	S	2.36	3.00	2.85	3.50	.98	.00
	E	2.72	3.80	3.00	2.75	.65	.00
Provide you with Friendship Outside the Formal Role	S	4.45	3.40	4.31	4.75	1.41	.03
	E	3.90	3.60	4.62	4.50	1.58	.04
Ask for Your Advice or Input	S	3.18 ^a	1.60 ^b	2.31 ^b	2.00 ^b	3.14**	.15
	E	2.27	1.80	2.54	2.00	.53	.00

Note. Ratings ranged from 1 (none) to 5 (a lot).

Note. S = Superintendents; E = Executive Facilitators.

Note. Within rows, superscripts (a,b,c) indicate significant pairwise differences based on Newman-Keuls test.

* $p < .15$; ** $p < .05$.

Table B19
Journal ratings: Frequencies across subgroups

	Fine-tuning (<i>n</i> = 5)	Self-control (<i>n</i> = 3)	Role Expansion (<i>n</i> = 6)	New Perspectives (<i>n</i> = 2)	χ^2
Journal Ratings:					
Least Successful	4	1	0	0	14.80*
Most Persistent	1	2	3	0	
Most Reflective	0	0	3	2	

* $p < .15$.

Index

- Action-learning, 5
See also Learning projects (in CEOLDP)
- Ahadi, S. A., 5
- ANOVAs, 38
- Argyris, C., 6
- Assessments, for classwork, 2
- Baldwin, T. T., 47
- Baumgartel, H., 8
- Benchmarks*[®], 9, 11, 12, 14, 15, 18, 19, 20-25, 51
 scale definitions of, 20
 use of, in assessing changes, 18-23
- Black, R., 6
- Bragar, N. C., 5
- Bruff, C. D., 5, 7, 46
- Bunning, C., 6
- Burnside, R. M., 5
- California Psychological Inventory* (CPI), 4, 11
- Case studies (in CEOLDP)
 description of, 13-14
 goal for selecting, 13
 use of idiographic method in, 54
 use of, in Fine-tuning subgroup, 35
 use of, in New Perspectives subgroup, 37-38
 use of, in Role Expansion subgroup, 37
 use of, in Self-control subgroup, 35, 37
See also Methods (in CEOLDP); Subgroups of superintendents (in CEOLDP)
- CCL (Center for Creative Leadership), 1, 3, 6, 9, 61n. 3
- Cell, E., 6
- Center for Creative Leadership (CCL), 1, 3, 6, 9, 61n. 3
- CEOLDP. *See* Chief Executive Officer Leadership Development Program
- CEOLDP Organizational Survey, 11
- CEOLDP Research Questionnaire, 9, 12
 subgroup differences in, 62nn. 6, 7
- Changes, observable (in CEOLDP)
 in accomplishing learning projects, 25
 motivation for, 48-49
 that others would see, 18-23
 reasons to study, 7
 in school system, 23
 in superintendent, 14-17, 24-25, 34
- Chao, G. T., 5
- Chief Executive Officer Leadership Development Program (CEOLDP)
 assessments of, 2
 description of, 1-3
 implications of, for leadership development programs, 51-54
 limitations of, 50-51
 research questions for, 6, 14, 44-45, 47
 value of, 52-54
See also Classroom experience (in CEOLDP); Executive facilitators (in CEOLDP); Feedback; Goals (in CEOLDP); Journal writing (in CEOLDP); Learning projects (in CEOLDP); Methods (in CEOLDP); Program design (in CEOLDP)
- Chi Square Tests of Association, 38
- Classroom experience (in CEOLDP)
 as contribution to outcomes, 26-27
 description of, 2
 feedback in, 2, 4, 47-48
 group-discussion exercises in, 2
 relationship of learning projects to, 5, 61n. 1
See also Instruments (in CEOLDP)
- Coding, data
 content categories for, 13
- Competencies for continuous learning
 linkage of, to CEOLDP program, 33
- Competencies, leadership
 as outcomes in evaluation studies, 7
 as outcomes of CEOLDP, 7
See also Outcomes (in CEOLDP); Program components (in CEOLDP)
- Conger, J. A., 4, 47
- Content analysis (in CEOLDP), 10-13, 15, 18, 23, 27
- Contextual factors
 impact of learning on, 49-50
 influence of, on CEOLDP outcomes, 8
 as organizing features, 47
 relationship of, to variabilities in outcomes, 8
- Corey, S., 6
- CPI (*California Psychological Inventory*), 4, 11
- Dalton, M., 11
- Data collection (in CEOLDP), 9-12
- Development
 influence of readiness factors on, 8
 as opposed to training, 4
 for school principals, 1
See also Leadership Development Program (LDP); Leadership development programs

- Dixon, N. M., 5, 7 (in Young et al.), 46 (in Young et al.), 49 (in Young et al.)
- Drath, W. H., 4, 8, 47, 54
- Drexler, A., 5
- Evaluation
 implications of, for leadership development programs, 54-56
 of LDP, 4-5
 of leadership development, 1
 of leadership development programs, 54-56
 of other programs, 7, 8
 personality factors in, 49
- Evaluation (of CEOLDP)
 compared to other studies, 46-47
 use of multiple methods for, 54-55
See also Evaluation; Methods (in CEOLDP); Outcomes (in CEOLDP)
- Executive facilitators (in CEOLDP)
 contribution of, to outcomes, 27-29
 data collection from, 12, 65-66
 matching of, with participants, 3
 relationship of, to case studies, 13-14
 relationship of, to subgroup members, 39, 41
 role of, in establishing developmental relationships, 33
 strength of, as program component, 48
 use of, in CEOLDP program, 3, 5
See also Evaluation (in CEOLDP); Program components (in CEOLDP)
- FCEM (Florida Council of Educational Management), 1
- Feedback
 as additions in development programs, 4-5
 in classroom portion of CEOLDP, 2
 from executive facilitators in CEOLDP, 28, 46
 instruments used in CEOLDP, 9-12
 on journal writing in CEOLDP, 3
 in LDP program, 4
 in lessons from CEOLDP, 27
 motivational component of, 4, 47-49
 as outcome in other studies, 46
See also Classroom experience (in CEOLDP); Program components (in CEOLDP); Self-awareness (in CEOLDP); Strengths and weaknesses (in CEOLDP)
- Fine-tuning subgroup (in CEOLDP)
 case study in, 35
 developmental stimulants in, 53
 patterns of outcomes for, 41-44
 themes in, 35
 trends for, 39
See also Subgroups of superintendents (in CEOLDP)
- FIRO-B (*Fundamental Interpersonal Relations Orientation–Behavior*), 11
- Florida Council of Educational Management (FCEM), 1
- Florida Department of Education, 1, 3, 6
- Florida legislature, 1
- Ford, J. E., 5, 7, 46
- Ford, J. K., 47
- Formative evaluation studies, 7
- Fundamental Interpersonal Relations Orientation–Behavior* (FIRO-B), 11
- Gardner, P. D., 5
- Gluck, G. A., 11
- Goals (in CEOLDP)
 individual, 2
 for learning projects, 2
 for program as a whole, 1
 as related to outcomes, 25
See also Outcomes (in CEOLDP)
- Gough, H. G., 11
- Guthrie, V. A., 5
- Hand, H. H., 8
- Hazucha, J. F., 8, 50
- Hersey-Blanchard leadership styles model, 43
- Hezlett, S. A., 8, 50 (in Hazucha et al.)
- Hixon, J. G., 6
- Hodgson, T., 5
- Idiographic method, 54
- Implications (of CEOLDP), 51-56
 for leadership development programs, 52-54
 for program evaluation, 54-56
See also Outcomes (in CEOLDP)
- Individual differences factors
 importance of assessment of, 56
 as influence on CEOLDP outcomes, 7
 in motivation and learning, 48-49
 as part of readiness factors, 8
- Instruments (used in CEOLDP), 9, 11-12
See also *Benchmarks*[®]; CEOLDP
 Organizational Survey; CEOLDP Research Questionnaire; *California Psychological Inventory*; *Fundamental Interpersonal Relations Orientation–Behavior*; *Kirton Adaption-Innovation Inventory*; Learning Project Questionnaire; *Managerial Job Satisfaction Questionnaire*; *Myers-Briggs Type Indicator*

- Interviews (used in CEOLDP)
 end-of-program, 9, 10, 12, 14-15, 26, 30, 32, 34, 63-66
 preprogram, for case studies, 13
 value of, in evaluating leadership, 54-55
- Isabella, L. A., 5
- Journal writing (in CEOLDP)
 benefits of, 6, 31
 contribution of, to outcomes, 30-31
 implications of, for leadership development programs, 55
 ratings of, 12
 use of, in program, 3, 6
See also Program components (in CEOLDP); Reflective thinking
- KAI (*Kirton Adaption-Innovation Inventory*), 11
- Kaplan, R. E., 4, 49, 53, 54
- Kirton, M. J., 11
- Kirton Adaption-Innovation Inventory* (KAI), 11
- Knowledge-building programs, 55
- Kofodimos, J. R., 54
- Kram, K. E., 5
- Krug, S. E., 5
- LDP (Leadership Development Program), 1
- Leadership content areas (in CEOLDP), 26-27
- Leadership development
 as research goal, 6-7, 34
- Leadership Development Program (LDP), 1
- Leadership development programs
 additional features of, 4-6
 design of, 4-5
 feedback in, 4
 implications of CEOLDP for, 52-54
 need for, at top levels, 54
See also Evaluation; Leadership development
- Learning
 in evaluation studies, 7-8
- Learning (in CEOLDP)
 as affected by program design, 7
 from case studies, 13
 development of competencies and strategies for, 24
 effect of contextual variables on, 49-50
 on the job, 5
 in program, 5-6
See also Learning projects (in CEOLDP)
- Learning Project Questionnaire, 12
- Learning projects (in CEOLDP)
 as addition to program, 5
 contribution to outcomes of, 32
 definition of specific use of, 61n. 1
 improvement in, as accomplishment, 25
See also Learning (in CEOLDP)
- León, L. S., 5
- Lessons (in CEOLDP), 12
 use of, in classroom portion, 26-27
- Limitations (of CEOLDP), 50-51
- Lombardo, M. M., 5, 6 (in McCall et al.), 11, 15
- Managerial Job Satisfaction Questionnaire* (MJSQ), 11
 subgroup differences in, 62n. 7
- Marsick, V., 5
- Marson, P. P., 5, 7, 46
- Mathieu, J. E., 8
- MBTI (*Myers-Briggs Type Indicator*), 4, 11
- McCall, M. W., 5
- McCaulley, C. D., 11, 15
- McCaulley, M. H., 11
- Methods (in CEOLDP), 9-14
 content analysis, 10-13, 15, 18, 23, 27
 data collection, 9-12
 idiographic, 54
 qualitative, 54
 quantitative, 54
 sample, 9
 triangulation, 54-55
- MJSQ (*Managerial Job Satisfaction Questionnaire*), 11
- Morrison, A. M., 5, 6 (in McCall et al.)
- Motivation
 as a component of feedback, 4, 47-49
- Moxley, R., 11
- Mumford, A., 6
- Musselwhite, C., 7, 8, 9, 49, 50
- Myers, I. B., 11
- Myers-Briggs Type Indicator* (MBTI), 4, 11
- Newell, T., 5
- New Perspectives subgroup (in CEOLDP)
 case study in, 38
 patterns of outcomes for, 41-44
 themes in, 37-38
 trends for, 41
 turbulence in, 50
See also Subgroups of superintendents (in CEOLDP)
- Noe, R. A., 5, 8, 47, 49

- Outcomes (in CEOLDP), 14-56
 contribution of various parts of program to, 25-34
 effect of personality factors on, 49
 generated from program, 14-25
 implications of, 51-54
 limitations of study of, 50-51
 most important, 15-18, 24
 organizing framework for, 47-50
 relationship of, to program components, 25-26, 28, 35-36, 47-48
 relationship of, to program goals, 25
 types of, 23
 variability in individuals of, 7-8, 34-44, 37
See also Changes, observable (in CEOLDP); Evaluation (in CEOLDP); Feedback; Subgroups of superintendents (in CEOLDP)
- Outcomes (in other evaluation studies), 7
 compared to outcomes in CEOLDP, 46-47
- Palus, C., 5, 7 (in Young et al.), 8, 46 (in Young et al.), 47, 49 (in Young et al.)
- Participant Background Form, 11
- Participants (in CEOLDP). *See* School superintendents (in CEOLDP)
- Pathan, R., 8
- Patton, M. Q., 54
- Peers
 personality factors of, in evaluation studies, 49
- Peers (in CEOLDP)
 in classroom portion, 27
 as important outcome, 23
 relationships of, 15, 16
- Petraneck, C. F., 6
- Phillips, A. D., 6, 55
- Prewrite (for CEOLDP). *See* Instruments (in CEOLDP); Interviews (in CEOLDP)
- Prideaux, S., 5, 7, 46
- Program components (in CEOLDP)
 contribution of, to outcomes, 25-32
 as enhancements to leadership development programs, 52
 as they lead to outcomes, 47-48
 role of, in behavioral changes, 34
See also Classroom experience (in CEOLDP); Executive facilitators (in CEOLDP); Journal writing (in CEOLDP); Learning projects (in CEOLDP); Program design (in CEOLDP)
- Program design (in CEOLDP)
 rationale for, 4-6
- Qualitative data (in CEOLDP), 10-13, 54
 use of, in program outcomes, 14
See also Interviews (in CEOLDP)
- Quantitative data (in CEOLDP), 10-13, 54
 use of, in program outcomes, 15-18
See also Instruments (in CEOLDP)
- Ratings (in CEOLDP)
 for coding program components, 13
 of interview data, 10
 of Learning Journals, 12, 13
- Readiness factors, 7, 8
 in CEOLDP Research Questionnaire, 9, 12
 differences in superintendents of, 38-39
- Reflective thinking
 as important outcome in CEOLDP, 15, 23-24, 30-31, 32
 linkage of, to CEOLDP program components, 33
 in other evaluation studies, 46
See also Journal writing (in CEOLDP)
- Relationships
 use of, in development programs, 5
- Relationships (in CEOLDP)
 linkage of, to program components, 33
 between superintendent and executive facilitator, 29
See also Executive facilitators (in CEOLDP); Peers (relationships in CEOLDP)
- Research questions (in CEOLDP), 6, 14, 44, 47-48
- Research study (of CEOLDP)
 description of, 6-8
 motivation for, 6
 research questions in, 6, 14, 44, 47-48
See also Outcomes (in CEOLDP)
- Results (of CEOLDP). *See* Outcomes (of CEOLDP)
- Reynolds, M., 8
- Richards, M. D., 8
- Robinson, G. S., 6
- Role-expansion subgroup (in CEOLDP)
 case study in, 37
 patterns of outcomes in, 41-44
 themes in, 37-38
 trends for, 41
 turbulence in, 50
See also Subgroups of superintendents (in CEOLDP)
- Ruderman, M. N., 6
- Salas, E., 8
- Sample (in CEOLDP), 9

- benefits and drawbacks of, 50-51
- diversity of, 34, 51
- Schmitt, N., 8
- Schneider, R. J., 8, 50 (in Hazucha et al.)
- School-site management movement, 47
- School superintendents (in CEOLDP study)
 - in case studies, 13
 - description of, 9
 - elected, versus appointed, 61n. 2
- School systems (of CEOLDP participants)
 - changes in, 23
 - size of, 9
- Schön, D. A., 5
- Schutz, W. C., 11
- Scott, C. K., 5
- Self-awareness
 - in classroom portion of CEOLDP, 26
 - comparison of, in CEOLDP with other evaluation studies, 46
 - in evaluation studies, 55-56
 - as implication of leadership development programs, 52
 - as important outcome of CEOLDP, 15, 23-24
 - linkage of, to CEOLDP components, 33
 - as outcome of evaluation studies, 7
 - See also* Leadership development programs; Outcomes (in CEOLDP); Strengths and weaknesses (in CEOLDP)
- Self-control subgroup (in CEOLDP)
 - case study in, 36-37
 - developmental stimulants in, 53-54
 - patterns of outcomes for, 41-44
 - themes in, 35
 - trends for, 39
 - See also* Subgroups of superintendents (in CEOLDP)
- Senge, P., 6
- Shively, Robert, 62n. 5
- Skill-building programs, 55
- Slocum, J. M., 8
- Statistical analysis of subgroup differences, 38, 67-84
 - See also* Subgroups of superintendents (in CEOLDP)
- Sternberg, R. J., 24
- Strengths and weaknesses (in CEOLDP)
 - awareness of, for development, 2, 4
 - implications for, 52
 - learned in classroom portion, 26
- Student-Neuman-Keuls' multiple range tests, 38
- Subgroups of superintendents (in CEOLDP), 34-44
 - common themes of, 35-38
 - data sources used for, 11-12
 - developmental implications of, 53-54
 - differences in, 41-44
 - factors differentiating, 38-41
 - statistical analysis of differences in, 38, 67-84
 - trends for, 41-46
 - variations in program outcomes of, 35-38
 - See also* Fine-tuning subgroup (in CEOLDP); New Perspectives subgroup (in CEOLDP); Outcomes (in CEOLDP); Role Expansion subgroup (in CEOLDP); Self-control subgroup (in CEOLDP)
- Swann, W. B., 6
- Tannenbaum, S. I., 8
- Triangulation, use of (in CEOLDP), 54-55
- Usher, C. J., 11, 15
- Van Hutton, V., 11
- Van Velsor, E., 4, 6, 7, 8, 9, 46, 47, 49, 50
- Variations of individuals (in CEOLDP outcomes), 34-44
 - contextual factors in, 8
 - individual difference factors in, 7-8
 - readiness factors in, 8
 - See also* Subgroups of superintendents (in CEOLDP)
- Wagner, R. K., 24
- Walz, P. M., 5
- Wick, C. W., 5, 6
- Wolf, J., 5
- Young, D. P., 5, 7, 46, 49, 62n. 5

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AN EVALUATION OF THE OUTCOMES OF A LEADERSHIP DEVELOPMENT PROGRAM

When a group of school superintendents participated in a one-year development program that included feedback, coaching, journal-writing, and learning projects, it was found that their leadership competencies and self-awareness increased. This report documents the study of that program and compares the outcomes to similar studies of other such efforts. The program's limitations and implications are also considered.

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