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THE RELATIONSHIP BETWEEN FORMAL MENTORING PROGRAM CHARACTERISTICS AND PERCEIVED PROGRAM EFFECTIVENESS

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Formal mentoring programs continue to gain popularity within organizations despite limited empirical research regarding how these programs should be designed to achieve maximum effectiveness. This study examined design features of formal mentoring programs and perceived program effectiveness from both mentor and protégé perspectives. Mentor commitment and program understanding were examined as mediators. Substantial support for the proposed path analytic model was found. These results help begin to bridge the gap between science and practice concerning the design of formal mentoring programs.

The popularity of formal mentoring programs within organizations has grown considerably in recent years. Many major U.S. companies such as Bank of America, Marriott International, and Charles Schwab have formal mentoring programs in place to help them attract, retain, and develop high performers (Eddy, Tannenbaum, Alliger, D'Abate, & Givens, 2001). Given the extensive use of formal mentoring in organizations, it is surprising that existing mentoring research has typically examined informal or spontaneously developed relationships or has failed to distinguish formal from informal mentoring (Wanberg, Welsh, & Hezlett, 2003). The studies that have examined formal mentoring relationships tend to either compare formal against informal mentorships (e.g., Chao, Walz, & Gardner,

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1992; Fagenson-Eland, Marks, & Amendola, 1997; Ragins & Cotton, 1999; Scandura & Williams, 2001), compare those with formal mentors to those without mentors (Chao et al., 1992; Seibert, 1999), or examine mentoring functions and protégé outcomes among participants in a specific mentoring program (Feldman, Folks, & Turnley, 1999; Noe, 1988; Orpen, 1997). Notably absent from the literature are research studies that focus on the relationship between formal mentoring program design characteristics and participant reports of program effectiveness (for an exception see Ragins, Cotton, & Miller, 2000). Moreover, the limited research that does exist provides little explanation for why certain practices within formal mentoring programs are thought to be more effective than others. This is troubling in light of the rampant proliferation of books and articles that provide prescriptive guidelines for the design and administration of mentoring programs (e.g., Burke & McKeen, 1989; Catalyst, 1993; Cunningham, 1993; Forret, Turban, & Dougherty, 1996; Gray, 1988; Murray, 1991; Noe, 1999; Phillips-Jones, 1983; Shea, 1994; Zachary, 2000). Existing recommendations appear to be based more on speculation than on data-driven evidence. With practice leading science in this regard, our lack of empirical research regarding formal mentoring programs represents a major gap in the mentoring literature.

This study addresses this gap by examining two major aspects of formal mentoring program design, participant input into the mentoring process and training prior to the mentorship, and how these characteristics relate to perceived program effectiveness. Participant-perceived program effectiveness is important to study as an outcome for several reasons. Perceptions of program effectiveness likely play a large role in determining whether or not individuals will continue in the program, if others will sign up for the program, and ultimately whether or not the program itself continues. Other desired outcomes of the program take time to evolve and favorable program reactions are likely key to continuing with the program long enough to realize those outcomes. In addition, we address *why* participant input and training should relate to perceived program effectiveness. This is important because program characteristics are adopted based on the assumption that they alter participants' cognitions or affective reaction to the program, which in turn enhances effectiveness. Thus, we take a process-oriented approach by examining two variables thought to mediate the relationship between program characteristics and perceived program effectiveness, specifically, mentor commitment and participants' understanding of their role in the mentoring process (referred to as program understanding). We contend that mentor commitment and program understanding are key variables that link program characteristics with program effectiveness. We also break new ground by examining these relationships from the perspective of both the protégé and the mentor. Because of the

pivotal role that mentors play in the success of formal programs, including their perspective is critical to an overall understanding of program effectiveness (Noe, Greenberger, & Wang, 2002). The collection of both mentor and protégé data also provides the opportunity to examine how protégé experiences relate to mentor reports of program effectiveness and how mentor formal program experiences relate to protégé reports of program effectiveness.

Theoretical Overview

The limited research that exists regarding the design of formal programs has been based primarily on the assumption that formal programs should be designed in a way that simulates informal, spontaneously occurring mentorships (Ragins et al., 2000). This focus is likely due to the fact that research generally indicates that formal mentoring is not as effective as is informal mentoring (Chao et al., 1992; Ragins & Cotton, 1999; Wanberg et al., 2003). The difference in effectiveness has been attributed to the unique interpersonal processes that fuel informal versus formal mentorships. Informal mentorships are typically initiated on the basis of factors such as perceived similarity, identification, and interpersonal comfort between the mentor and the protégé (Blake-Beard, 2001; Ragins & Cotton, 1999; Ragins et al., 2000). By contrast, in formal programs, mentor and protégé matches are often made by a third party within the organization. Thus, it follows that designing formal programs in a manner that helps mimic the interpersonal processes associated with informal mentoring processes may be one way to enhance their effectiveness. However, this theoretical approach alone is limited and does not adequately capture all design aspects of formal mentoring programs. Specifically, one of the most common recommendations for formal mentoring programs is that participants should receive training prior to the start of the mentorship, but training does not occur as a natural part of the informal mentoring process. Consequently, there is a need to move research regarding formal mentoring programs beyond the basic idea that they need to simulate informal mentoring to be effective. We do this in this study by drawing from multiple theoretical perspectives that can be used to examine formal mentoring such as research regarding employee empowerment and control, as well as literature on other forms of relationship building, to inform our hypotheses.

Program Characteristics

One major way that formal mentoring programs vary is the extent that participants are given input into the mentoring process. We examined two

aspects of input into the mentoring process, whether or not participation in the program is voluntary and the degree of input participants have regarding the mentor–protégé match.

Practitioners typically suggest that formal mentoring programs be designed so that participation is voluntary and participants are given some voice as to who will be their mentoring partner. Several lines of research provide support for such views. For example, research regarding voluntary participation in the training domain has shown that employees given a greater degree of choice regarding whether or not to attend training workshops had greater motivation and satisfaction than did those given less choice (Hicks & Klimoski, 1987; Mathieu, Tannenbaum, & Salas, 1992). Similarly, research from the social psychology literature on planned helping demonstrates that mandated community service or volunteerism can have a detrimental effect on participant motivation (Stukas, Snyder, & Clary, 1999). In addition, providing more input into the mentoring process gives the mentoring participants more control. This is important in that perceived control has been related to favorable employee job attitudes such as perceptions of fairness and job satisfaction, better job performance, and enhanced self-esteem (e.g., Lind & Tyler, 1988; Super, 1994; Terry & Jimmieson, 1999; Thomas & Ganster, 1995). Further, voice into the mentoring process should instill responsibility in the mentoring parties for the outcome of the relationship. Research shows that when employees are empowered to make decisions, they become self-directing and take ownership of the process (Stewart & Manz, 1995). Giving participants input into the match should increase the likelihood that mentors and protégés will be compatible and will seek out individuals that share the interpersonal similarities that fuel the identification process (Scott, 1992). Similarly, Wanberg et al. (2003) suggested that having some say in selecting a mentoring partner may increase the likelihood that individuals are linked in a relationship that meets their unique developmental needs.

In addition to input into the mentoring process, one of the most common recommendations for formal mentoring programs is that training be provided to both mentors and protégés (e.g., Catalyst, 1993; Shea, 1994). Training serves several important purposes in the development of an effective mentoring program. Investment in the mentoring program through the provision of training can signal to participants that the company stands behind the program and is committed to its success. In addition, training has been shown to be beneficial to the development of other types of interpersonal relationships such as marriages (e.g., Markman, Renick, Floyd, Stanley, & Clements, 1993), relationships with diverse coworkers (Hanover & Cellar, 1998), and work teams (Neuman, Edwards, & Raju, 1989). Although the effectiveness of training has yet to be examined in workplace mentoring programs, training has been shown to be critical

to the effectiveness of mentoring programs that match adults and youth (Dubois, Holloway, Valentine, & Cooper, 2002; Sipe, 2002). Big Brothers/Big Sisters of America, which is generally considered as a model of the best practices for youth mentoring, requires that program participants attend orientation training (Tierney, Grossman, & Resch, 1995). In this study we examined three aspects of training, (a) whether or not training was received, (b) the number of hours of training received, and (c) the quality of training received.

Mediating Variables

In this study we were interested in identifying the psychological mechanisms that might help explain *why* certain program design characteristics relate to perceived program effectiveness. As the first study to examine such relationships, there were a number of possible mediators worthy of examination. Two factors that have been cited by researchers as critical to the effectiveness of formal mentoring programs are mentor commitment and program understanding (e.g., Blake-Beard, 2001; Ragins & Cotton, 1999). Based on the theories reviewed, we believe participant input into the mentoring process and training relate to perceived program effectiveness through their influence on mentor commitment and program understanding. The theoretical mechanisms linking program features to these two mediators are the greater sense of personal control, enhanced sense of responsibility, and increased commitment to the program that these program characteristics engender in participants. In turn, mentor commitment and program understanding should lead to more favorable perceptions of program effectiveness. A model depicting the proposed relationships is shown in Figure 1. A specific rationale for the role of each of the variables is provided in the following sections.

Mentor commitment. Mentor commitment has been discussed as the key to the success of formal mentoring programs (Zachary, 2000). Scandura and Williams (2001) recently suggested that the nature by which the mentorship is initiated can influence the level of commitment of the parties. The nature of traditional, spontaneously developed mentoring relationships suggests that mentors are likely to be committed to the relationship and to their protégés because the relationship is initiated volitionally (Allen & Eby, 2003). On the other hand, mentor commitment is likely to be variable in formal mentorships because mentors may be coerced or reluctantly recruited into participating (Kizilos, 1990; Ragins & Cotton, 1999). Accordingly, designing mentoring programs in a way that enhances mentor commitment seems critical to program success. It seems likely that both input into the mentoring process and training can help meet the goal of instilling mentor commitment. For example, having

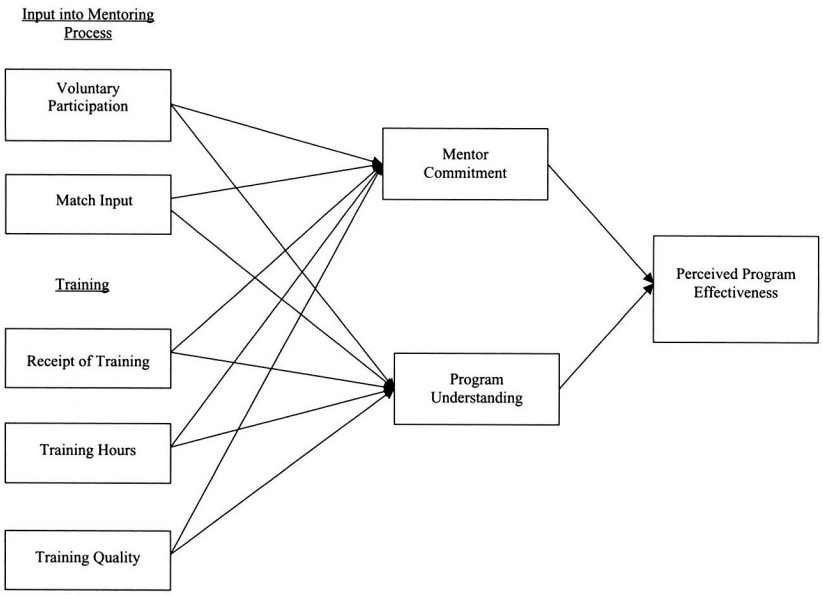

Figure 1: **Proposed Model of the Role of Formal Mentoring Characteristics on Perceived Program Effectiveness.**

input into the matching process should increase mentor buy-in given that empowerment has been positively associated with employee commitment (Niehoff, Enz, & Grover, 1990). Wanberg et al. (2003) also suggested that input into the match likely increases psychological ownership and commitment to the mentoring process. Likewise, providing training that explains the goals and purpose of the program may increase mentor enthusiasm for the program. Training may also help protégés better appreciate the time and energy investment that the mentor is making by participating in the program. Thus, protégés who attend training may report that their mentors are more committed.

Mentor commitment in turn likely relates to perceived effectiveness of the program. For example, the interpersonal relationships literature indicates that level of commitment is associated with both relationship satisfaction and couple adjustment (Drigotas, Rusbult, & Verette, 1999; Rusbult, Martz, & Agnew, 1999). Similarly, the youth mentoring literature stresses the importance of mentor commitment to ensuring the success of formal mentoring programs such as Big Brothers/Big Sisters of America (Sipe, 2002).

Program understanding. The practitioner literature concerning formal mentoring programs also suggests that participants should be

counseled on the purpose of the program and on their roles and responsibilities in order to have a good understanding of the nature of the program (e.g., Catalyst, 1993; Murray, 1991). A clear understanding of the purpose of the program and of participant roles within the program relates to the development of appropriate expectations. Unrealistic expectations can be a major challenge to the success of any mentoring relationship for both mentors and protégés (Allen & Poteet, 1999; Eby & McManus, 2004; Sipe, 1996; Young & Perrewe, 2000). Again, we believe that input into the mentoring process and training should result in greater program understanding and that greater program understanding should relate to greater perceived program effectiveness.

In situations where participants are volunteers, it is likely that information regarding the program has been provided in order for individuals to make an informed choice regarding whether or not they should join. Because they have greater participation discretion, volunteers may also seek out information from previous program participants in deciding whether or not to participate. This may help individuals better understand how the program is structured, expectations for meetings and interacting with partners, and what participation in the program is supposed to accomplish. Likewise, when mentors and protégés have more input in the matching process, some responsibility is typically placed on each to find a suitable match (Eddy et al., 2001). This may lead both parties to think more carefully about what they want to get out of the program and to explore how their needs fit into the stated goals of the program. Greater personal reflection and contemplation about the program and one's role in it may lead to a deeper appreciation and understanding of the program. Taken together this suggests that greater input into the match will enhance program understanding for both mentors and protégés.

There is also strong rationale for expecting training to relate to program understanding. Training is typically designed with the expressed purpose of providing participants with information concerning the goals and objectives of the program. Specifically, research indicates that the content of training programs includes issues such as meeting guidelines, expected mentor and protégé roles in the relationship, and communication skills (Allen, Day, & Lentz, 2001). Both mentors and protégés are likely to benefit from receiving this type of information during training, particularly when participants in formal programs may be new to the mentoring process. With an enhanced understanding of the program, participants are more likely to feel comfortable in their roles and understand how to use the relationship to meet developmental objectives. This reasoning is consistent with recent qualitative research by Eby and Lockwood (2005), which finds that many mentors and protégés participating in formal mentoring programs repeatedly report frustration related to not understanding

what the program is supposed to accomplish or how to effectively utilize the relationship as a developmental experience. Finally, greater program understanding should in turn relate to participants' perceptions that the program is effective.

Hypothesis 1: Protégé reports of mentor commitment and program understanding will mediate the relationship between protégé input into the mentoring process and protégé perceived program effectiveness.

Hypothesis 2: Protégé reports of mentor commitment and program understanding will mediate the relationship between protégé training and protégé perceived program effectiveness.

Hypothesis 3: Mentor reports of their own commitment and program understanding will mediate the relationship between mentor input into the mentoring process and mentor perceived program effectiveness.

Hypothesis 4: Mentor reports of their own commitment and program understanding will mediate the relationship between mentor training and mentor-perceived program effectiveness.

Mentor–Protégé Matched Effects

The proposed hypotheses thus far posit that relationships between formal mentoring program characteristics as experienced by the protégé will relate to protégé reports of program effectiveness and that program characteristics as experienced by the mentor will relate to mentor reports of program effectiveness. However, it also seems likely that the program experiences of the protégé will relate to mentor perceptions of program effectiveness. Likewise, mentor program experiences should relate to protégé perceptions of program effectiveness. A systems theory approach (e.g., Hanson, 1995) suggests that the protégé's perspective on the effectiveness of the mentoring program can be better understood by also examining the experiences that the mentor brings to the relationship. Similarly, mentor perceptions of the program can be better captured by also considering the experiences of the protégé.

This is particularly important in this study as mentors and protégés in formal mentoring programs may not share the same program experiences. That is, input into the mentoring process and training experiences likely differ within mentor–protégé dyads. For example, a recent study of industry practices in formal mentoring finds that in situations where participants have input into the match, it is often the protégé who is responsible for finding a mentor rather than vice versa (Eddy et al., 2001). In such a situation, the protégé may report having input into the match, but the protégé's mentor would not. In a similar manner, a program may include training for only one member of the dyad. Accordingly, we predict:

Hypothesis 5: Mentor reports of input into the mentoring process, training, program understanding, and mentor commitment will relate to protégé reports of perceived program effectiveness.

Hypothesis 6: Protégé reports of input into the mentoring process, training, program understanding, and mentor commitment will relate to mentor reports of perceived program effectiveness.

Method

Participants

The participants came from four different organizations that had existing formal mentoring programs, including a healthcare organization, an oil company, a technology firm, and a manufacturing firm.[1] Within one of the companies, 9 distinct mentoring programs were in place, therefore a total of 12 different mentoring programs were represented in the sample. The overall sample fit the purpose of the study in that multiple formal programs were included that varied in their design. Altogether there were a total of 175 protégés and 110 mentors. Sample characteristics appear in Table 1. Of the mentors and protégés that responded, a total of 91 could be matched. Sample characteristics of the matched set can be obtained from the first author.

Procedures

Both a paper-and-pencil survey and a Web-based version were used to collect data. The mentor and protégé surveys contained identical questions but worded from the perspective of each. With the paper-and-pencil surveys, protégés were given a survey packet that contained a protégé survey and a mentor survey. Protégés delivered the mentor survey to their mentors, and surveys were matched using a unique numerical code. With regard to the Web-based survey, protégés were initially contacted via e-mail and provided a URL address that housed the protégé survey. At the end of the survey, protégés input the e-mail address of their mentors. An automated e-mail was then delivered to mentors containing their unique survey URL. This process allowed for protégé and mentor responses to be matched. Based on reports provided by the organizations, an estimated total of 681 invitations were sent to protégés. This results in a lower bound response

[1]This data are part of a larger study of formal mentoring programs. Portions of this data are also included in Allen, T. D., Eby, L. T., & Lentz E. (in press). Mentor and protégé outcomes associated with formal mentoring programs: Closing the gap between research and practice. *Journal of Applied Psychology*.

TABLE 1
Background Characteristics of Protégés and Mentors

	Protégés		Mentors	
	Mean (*SD*)	Percent	Mean (*SD*)	Percent
Gender				
Male		40.0		65.0
Female		60.0		35.0
Age	34.5 (9.0)		43.4 (7.8)	
Race/Ethnicity				
Caucasian/White		66.7		82.5
African American/Black		14.9		05.6
Hispanic		06.0		05.6
Asian		08.9		01.9
Other		03.6		01.8
Education Level	4-yr degree[a]		Graduate work[a]	

[a]Median.

rate estimate of 25.7%. Response rates for each of the four companies ranged from 12.87% to 70.59%. These estimates are conservative because company representatives reported that some e-mails were returned and thus never received by participants and that some individuals may have not received surveys because they moved to a new mail location, and so on. Each program was based on a 12-month relationship cycle and participants were surveyed at one point in time. Program representatives were specifically asked that the survey be limited to recent program "graduates" and those that had been in the program for at least 6 months. In the protégé sample, 72% of the relationships were complete. In the mentor sample, 77% of the relationships were complete.

Measures

Perceived program effectiveness. Seven questions were developed to assess perceived effectiveness of the mentoring program (e.g., "I believe the company's formal mentoring program is very effective."; "I am very satisfied with the organization's mentoring program."). Responses were made on a 5-point scale anchored by strongly disagree to strongly agree. Higher scores indicated greater perceived effectiveness. Coefficient alpha for protégés was .89 and for mentors was .87.

Mentor commitment. Mentor commitment was measured with four items developed for this study (e.g., "My mentor (I) was committed to developing an effective and productive mentoring relationship."). Responses were made on a 5-point scale anchored by strongly disagree to strongly

agree. Higher scores indicated greater mentor commitment. Coefficient alpha for protégés was .84 and for mentors was .67.

Program understanding. Participants responded to four questions concerning the extent they understood the mentoring program (e.g., "I understood the purpose of the mentoring program."; "I understood what my responsibilities as a protégé [mentor] in the mentoring program were."; "I understood what was expected of me as a protégé [mentor]."; "I was counseled on how to get the most out of my mentoring relationship."). Responses were made on a 5-point scale anchored by strongly disagree to strongly agree. Higher scores indicated greater program understanding. Coefficient alpha for protégés was .82 and for mentors was .74.

Program characteristics.[2] Two questions were asked concerning participant input into the mentoring process. Participants were asked if their participation in the program was voluntary (1 = *no*, 2 = *yes*) and how much input they had as to whom would be their protégé (or mentor); (1 = *none*, 2 = *very little*, 3 = *moderate amount*, 4 = *a great deal*). As a crude validity check of the responses regarding input into the mentoring match, we also asked participants to indicate the way that they were matched based on six response options: 1 = *my protégé (mentor) selected me*, 2 = *I selected my protégé (mentor)*, 3 = *My protégé (mentor) and I selected each other*, 4 = *Protégé (mentor) and I were randomly assigned*, 5 = *Protégé (mentor) and I were assigned to each other through prescreening process*, 6 = *I am not sure*. We conducted an analysis of variance to examine mean differences in the input variable across the different types of matches. For example, we would expect participants who indicated that they selected their mentoring partner to report greater input into the match than participants who indicated they were randomly assigned. The F test for protégés was significant ($F = 33.39, p < .001$) and the means were in the expected direction. Protégés who reported that they and their mentor selected each other ($M = 3.75$, $SD = .58$) and those that reported they selected their mentor ($M = 3.56$, $SD = .80$) reported having the greatest input into the mentoring match. The lowest means were for those who were not sure how they were matched ($M = 1.21$, $SD = .51$) and those who indicated that they were randomly assigned ($M = 1.55$, $SD = .86$). The F test for mentors was also significant ($F = 419.51, p < .001$). Again,

[2]We also collected data that described their mentoring programs from three of the four companies. These data were largely consistent with participant reports (e.g., participants coming from companies that reported participation was voluntary self-reported that their participation was voluntary). Nevertheless, it is important to acknowledge that participant reports may not be 100% veridical with the way in which a program is actually designed. In addition, the type of training reported varied from written information sources to formalized classroom training. More information regarding the company data is available upon request.

the means were in the expected direction. Mentors who reported that they and their protégé selected each other reported having the greatest input into the match ($M = 3.67$, $SD = .52$). The lowest means were for those who were not sure how they were matched ($M = 1.25$, $SD = .45$) and those who were randomly assigned ($M = 1.31$, $SD = .60$).

Three questions were asked concerning training. Specifically, participants reported if they received training prior to the mentoring relationship (1 = *no*, 2 = *yes*), the number of hours of training received, and an assessment of the training quality (1 = *poor*, 2 = *fair*, 3 = *good*, 4 = *very good*, 5 = *excellent*). Content of training across programs included issues such as a discussion of program purpose and objectives, mentor and protégé roles and responsibilities, and elements of a successful partnership. However, it is important to note that specific content varied across programs.

Control variables. Although the results are inconsistent, some research has shown that mentoring outcomes may differ across demographic factors such as mentor and protégé gender and ethnicity (e.g., Ragins & Cotton, 1999; Wanberg et al., 2003). Accordingly, these variables were considered as potential controls. Gender was dummy-coded (0 = *male*, 1 = *female*), as was ethnicity (0 = *nonminority*, 1 = *minority*).

Results

Factor Analysis

Confirmatory factor analysis (CFA) was used to assess how well the scale items designed to measure program effectiveness, mentor commitment, and program understanding loaded onto their respective constructs. These analyses were conducted using LISREL 8.54 (Jöreskog & Sörbom, 1993). With regard to the protégé data, the results indicated that the three-factor model provided a reasonable fit to the data (χ^2(df, 87) = 229.39, $p < .05$; RMSR = .00; GFI = .85; NFI = .93; CFI = .95). Moreover, all items loaded significantly onto their respective constructs with all t-values exceeding 7.15. With regard to the mentor data, the results also indicated that the three-factor model provided a reasonable fit to the data (χ^2(df, 87) = 197.83, $p < .05$; RMSR = .00; GFI = .82; NFI = .88; CFI = .93). All items loaded significantly onto their respective constructs with t-values at 3.16 or greater.

Hypothesis Testing

The protégé survey contained one impossible value (greater than 30,000) in response to the question concerning the number of hours of

training received. This response occurred with the Web-based survey and was attributed to a user input error. The response was reset to a missing value prior to data analysis.

Means, standard deviations, and correlations for the protégé variables are presented in Table 2. Means, standard deviations, and correlations for the mentor variables are presented in Table 3. Only two mentors reported that their participant was not voluntary, hence this variable could not be tested for mentors. Results for protégé hypothesis testing are presented first, followed by the results for mentors.

Protégé analysis. Path analysis was used to determine if the relationships among the variables were consistent with the model specified in Figure 1. Preliminary analyses indicated that ethnicity and gender did not account for significant variance associated with any of the endogenous variables so they were omitted from further analyses. A series of ordinary least squares regression analyses were conducted. Because the training hours and training quality variables were only relevant to those who received training, we followed Cohen and Cohen's (1983) recommendation for dealing with this type of missing data. Specifically, the variable of training versus no training served as a missing data dummy variable (coded 0 = *no training*, 1 = *training*), and missing data for those not receiving training was replaced using mean substitution. As the scores on training hours and training quality were identical for the no training group, the resulting beta weights associated with these variables were not biased and we were able to include all participants in the path analysis, (see Cohen & Cohen for a detailed discussion of this procedure). The results of these analyses are shown in Table 4.

The full model explained 48% of the variance associated with protégé perceived program effectiveness. Figure 2 displays the significant direct effects only. The model received mixed support in that 8 of the 12 hypothesized paths were significant. Match input, receipt of training, and training quality all had direct effects on mentor commitment and program understanding. Mentor commitment and program understanding both had direct effects on perceived program effectiveness. In addition, training quality had a direct effect on perceived program effectiveness. Indirect effects on perceived program effectiveness were also computed where appropriate and tested for significance using the interactive Sobel test developed by Preacher and Leonardelli (2001). Match input had a significant indirect effect through mentor commitment (.13) and a nonsignificant indirect effect through program understanding (.04). Receipt of training had a nonsignificant indirect effect through mentor commitment (.06) and a significant indirect effect through program understanding (.13). Training quality demonstrated a significant indirect effect through mentor commitment (.10) and a nonsignificant indirect effect through program

TABLE 2

Means, Standard Deviations, and Intercorrelations for Protégés

Variable	1	2	3	4	5	6	7	8	9	10
1. Program effectiveness	–									
2. Mentor commitment	.60*	–								
3. Program understanding	.52*	.39*	–							
4. Voluntary participation	.16*	.06	.18*	–						
5. Match input	.15*	.24*	.10	.35*	–					
6. Receive training	.23*	.09	.38*	.16*	−.13	–				
7. Hours of training	.19*	.16	.10	−.08	.08	NA	–			
8. Training quality	.48*	.32*	.29*	.34*	.14	NA	.16	–		
9. Gender	.09	.07	.07	.16	.10	.19*	.24*	.21*	–	
10. Ethnicity	.02	.00	−.02	.00	.06	.00	−.06	−.05	.12	–
Mean	3.79	3.87	3.99	1.82	2.30	1.69	6.09	3.45	NA	NA
Standard deviation	.68	.76	.69	.39	1.18	.46	3.01	.88	NA	NA

Note. *$p < .05$. Two-tailed test. $N = 112$ to 173 (range in N is because participants that did not receive training did not respond to questions concerning training hours and training quality). Program effectiveness, mentor commitment, program understanding, and training quality were each measured on a 5-point scale with higher scores indicating more of each; voluntary training coded 1 = *no*, 2 = *yes*; input into the match was measured on a 4-point scale with higher scores indicating more input; Receive training coded 1 = *no*, 2 = *yes*; Gender coded (0 = *male*, 1 = *female*), as was ethnicity (0 = *nonminority*, 1 = *minority*).

TABLE 3

Means, Standard Deviations, and Intercorrelations for Mentors

Variable	1	2	3	4	5	6	7	8	9
1. Program effectiveness	–								
2. Mentor commitment	.38*	–							
3. Program understanding	.48*	.47*	–						
4. Match input	.17	.29*	.15	–					
5. Receive training	.31*	.13	.37*	−.11	–				
6. Hours of training	.14	.01	.17	.22	NA	–			
7. Training quality	.42*	.19	.35*	.14	NA	.27*	–		
8. Gender	−.02	−.13	.00	−.21*	.07	−.07	.02	–	
9. Ethnicity	.02	.13	.21*	.06	.06	−.07	.14	−.03	–
Mean	3.53	3.68	3.88	1.97	1.68	5.71	3.32	NA	NA
Standard deviation	.69	.62	.63	1.05	.47	2.83	.83	NA	NA

Note. $^*p < .05$. Two-tailed test. $N = 70$ to 109 (range in N is because participants that did not receive training did not respond to questions concerning training hours and training quality). Program effectiveness, mentor commitment, program understanding, and training quality were each measured on a 5-point scale with higher scores indicating more of each; voluntary training coded 1 = *no*, 2 = *yes*; input into the match was measured on a 4-point scale with higher scores indicating more input; Receive training coded 1 = *no*, 2 = *yes*; Gender coded (0 = *male*, 1 = *female*), as was ethnicity (0 = *nonminority*, 1 = *minority*).

TABLE 4

Summary of Path Analysis Regression Equations for Protégés

Equation	*B*
1. Perceived program effectiveness: $R^2 = .44, p < .001$	
Mentor commitment	.45***
Program understanding	.34***
2. Mentor commitment: $R^2 = .13, p < .01$	
Voluntary participation	−.11
Match input	.28***
Receive training	.14*
Hours of training	.08
Training quality	.22***
3. Program understanding: $R^2 = .20, p < .001$	
Voluntary participation	.03
Match input	.13*
Receive training	.39***
Hours of training	.03
Training quality	.16**
4. Perceived program effectiveness: $R^2 = .48, p < .001$	
Voluntary participation	.02
Match input	.01
Receive training	.09
Hours of training	.03
Training quality	.18***
Mentor commitment	.42***
Program understanding	.28***

Note. One-tailed test. $N = 174$. $^*p \leq .05$. $^{**}p < .01$. $^{***}p < .001$.

understanding (.05). It should be noted that the indirect effects that were significant were small in magnitude.

Mentor analyses. The results of the path analyses for mentors are shown in Table 5 and included ethnicity as a control. The full model accounted for 33% of the variance associated with mentor perceived program effectiveness. Figure 3 displays the significant direct effects. The model received mixed support in that 7 of the 10 hypothesized paths were significant (recall voluntary participation could not be tested for mentors). Match input and receipt of training had direct effects on mentor commitment. Match input, receipt of training, and training quality each had direct effects on program understanding. Mentor commitment and program understanding both had direct effects on perceived program effectiveness. In addition, receipt of training and training quality both had direct effects on perceived program effectiveness. As with protégés, indirect effects on perceived program effectiveness were computed for mentors. Match input had nonsignificant indirect effects on perceived program effectiveness through

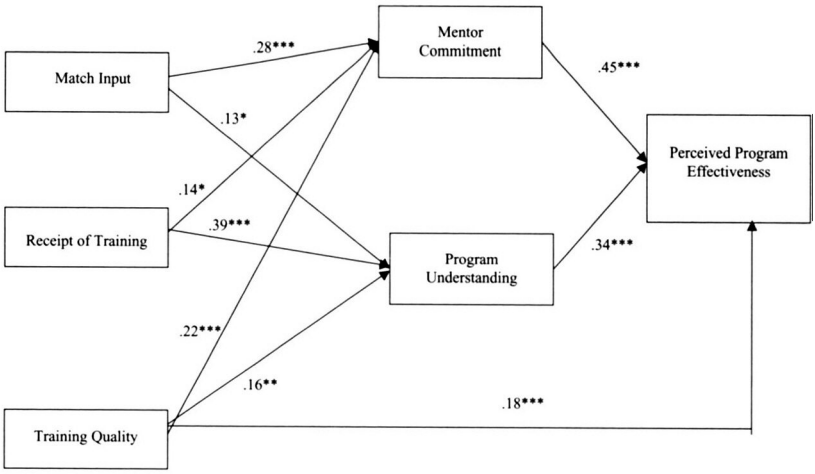

Figure 2: **Path Model of Significant Direct Effects for Protégés.**

mentor commitment (.06) and through program understanding (.06). Receipt of training had a nonsignificant indirect effect on perceived program effectiveness through mentor commitment (.03) and a significant indirect effect through program understanding (.15). Finally, training quality had a nonsignificant indirect effect on program effectiveness through program understanding (.08).

Matched mentor–protégé analyses. Hypothesis 5 was tested by regressing protégé perceived program effectiveness onto mentor reports of program characteristics, mentor commitment, and program understanding (see Table 6) using our matched set of mentors and protégés ($n = 91$). Of the independent variables examined, only mentor receipt of training contributed unique variance toward protégé reports of perceived program effectiveness (ß = .19, $p < .05$). However, it should be noted that the full regression model was not significant. We repeated this analysis using mentor-perceived program effectiveness as the dependent variable and protégé reports of the independent variables. Results are shown in Table 6. Protégé reports of mentor commitment (ß = .19, $p < .05$) and program understanding (ß = .34, $p < .001$) both contributed unique variance toward the prediction of mentor perceived program effectiveness. It is also worth noting that the protégé variables accounted for a mere 9% of the variance associated with mentor perceptions of program effectiveness whereas the mentor variables accounted for 24% of the variance associated with protégé perceptions of program effectiveness.

TABLE 5

Summary of Path Analysis Regression Equations for Mentors

Equation	*B*
1. Perceived program effectiveness: $R^2 = .26, p < .001$	
Ethnicity	−.09
Mentor commitment	.20**
Program understanding	.40***
2. Mentor commitment: $R^2 = .14, p < .01$	
Race	.08
Match input	.30**
Receive training	.16*
Hours of training	−.07
Training quality	.13
3. Program understanding: $R^2 = .24, p < .001$	
Race	.15*
Match input	.16*
Receive training	.38***
Hours of training	.04
Training quality	.19**
4. Perceived program effectiveness: $R^2 = .33, p < .001$	
Race	−.10
Match input	.08
Receive training	.19**
Hours of training	−.02
Training quality	.21**
Mentor commitment	.18**
Program understanding	.28***

Note. One-tailed test. $N = 109$. *$p < .05$. **$p < .01$. ***$p < .001$.

Discussion

Although there has been no shortage of prescriptive recommendations regarding the design of formal programs, empirical research on the efficacy of these recommendations has been sparse. This study examined the relationship between specific mentoring program characteristics and perceived program effectiveness from the perspective of both the mentor and the protégé. We also examined mentor commitment and program understanding as possible mediating mechanisms through which program characteristics relate to program effectiveness. Substantial support was found for our prediction that program characteristics relate to reports of program effectiveness, and that mentor commitment and program understanding serve as full and partial mediators of the program characteristic → program effectiveness relationship. It is also noteworthy that the program characteristics found to be important have not been examined in previous

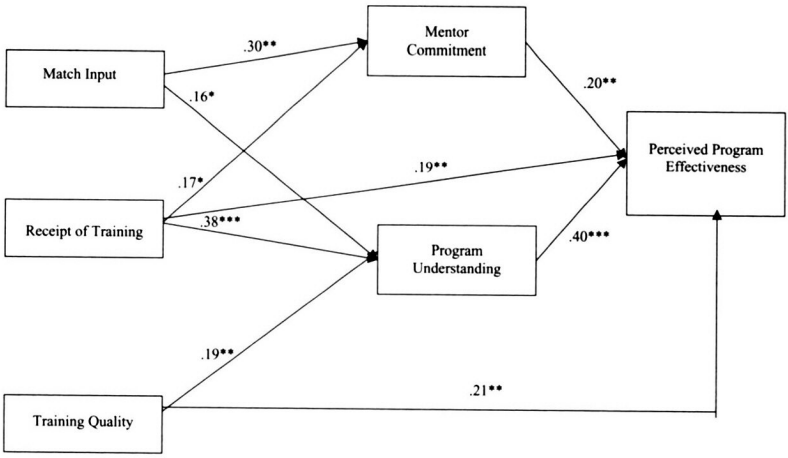

Figure 3: **Path Model of Significant Direct Effects for Mentors.**

TABLE 6

Matched Mentor and Protégé Regression Analyses

Mentor predictor variables	Protégé program effectiveness	Protégé predictor variables	Mentor program effectiveness
NA	NA	Voluntary participation	−.06
Match input	.11	Match input	−.09
Receive training	.19*	Receive training	−.11
Hours of training	−.12	Hours of training	.10
Training quality	.12	Training quality	.10
Mentor commitment	.07	Mentor commitment	.19*
Program understanding	.04	Program understanding	.34***
F	1.42	F	3.78**
R^2 Total	.09	R^2 Total	.24
Adjusted R^2	.03	Adjusted R^2	.18

Note. *$p < .05$. One-tailed test. $N = 91$. NA = not applicable.

empirical research, underscoring this study's unique contribution to the literature.

Important Program Characteristics

Practice recommendations commonly advocate that participation in formal mentoring programs be voluntary (Burke & McKeen, 1989; Kram & Hall, 1996; Murray, 1991; Phillips-Jones, 1983). However, consistent with Ragins et al. (2000), we find no evidence that voluntary participation

directly or indirectly relates to protégé reports of program effectiveness. Formal mentoring programs are designed to meet the development needs of the protégé. Accordingly, as the primary beneficiaries, protégés may view the program favorably whether their participation is required or is voluntary. Unfortunately, we were not able to test the effects of voluntary participation among mentors, but the fact that only two mentors indicated their participation was not voluntary may indicate that concerns regarding forced mentor participation have been overstated. It may also reflect a limitation in how we conceptualized voluntary participation; it is possible that some mentors feel normative or informal pressure to participate in formal mentoring programs. In future studies a more nuanced measure of participation might be able to tap into such perceptions. In contrast to protégés, mentors may view participating in the program as a chore rather than a benefit. Thus, voluntary participation may be more critical to mentor reactions to the program than to protégé reactions. Moreover, there may be other benefits to voluntary versus mandatory participation that were not examined in this study but that are important to the success of formal mentoring programs. In particular, research on sustained planned helping behavior shows that requiring participation can inhibit intentions to participate in future helping activities (Stukas et al., 1999). When applied to formal mentoring, this research suggests that nonvoluntary participation on the part of mentors may reduce their willingness to mentor others in the future. Thus, voluntary participation may be key to retaining willing mentors within a program across time.

In contrast to the findings regarding voluntary participation, the results reveal that having input into the mentor–protégé matching process is an important program characteristic. Both mentor and protégé input into the matching process relate to perceived program effectiveness through their relationships with mentor commitment and program understanding. Thus, providing participants with a voice regarding the matching process might facilitate perceptions that the mentor is psychologically engaged in the relationship. Mentor commitment seems essential given that meeting program goals hinges on the *mentor's actions* to help the protégé develop. Nonetheless, future research might also inquire about protégé commitment to the relationship in an effort to more fully understand the motivational bases of effective mentoring program participation. Input also relates to perceptions of program understanding, perhaps because, as noted in the introduction, input facilitates greater information acquisition and reflection before entering the program. The results provide some initial empirical support for the recommendation that programs be designed so that participants have some say regarding the matching process. There are several ways to facilitate such input. For example, companies may use informal means such as the use of social gatherings where potential mentors and

protégés get to know one another prior to matching or more formally by having mentors and protégé review applications and rank order their preference for a mentoring partner. Another way to foster input is to ask mentors and protégés to provide data on what characteristics they are looking for in a mentoring partner. Research is needed to determine which of these mechanisms relate most highly to mentor and protégé perceptions of input and perhaps more importantly, are most effective in developing a productive mentoring partnership.

Practice recommendations also commonly call for training as part of the formal mentoring process (e.g., Burke & McKeen, 1989; Catalyst, 1993; Eddy et al., 2001; Forret et al., 1996; Gray, 1988; Kram, 1985). To our knowledge this is the first study to empirically examine the relationship between training and perceived program effectiveness. Although training hours were not significant, both the receipt of training and the quality of training emerge as important program features. Training quality has both direct and indirect effects on perceived program effectiveness for both mentor and protégé; however, there are findings that differ across these groups. For protégés the indirect effects of training quality operate by enhancing both perceived mentor commitment and program understanding. In contrast, for mentors the indirect effects of training quality are transmitted through program understanding alone. Another difference is that the effects of receiving training on protégé perceived program effectiveness are completely mediated by mentor commitment and program understanding whereas in addition to indirect effects, the receipt of training also has a direct effect on mentor reports of perceived program understanding.

These differences may be understood in terms of the goals of a mentoring relationship and different roles played by mentor and protégé. The basic function of a mentoring relationship is to facilitate protégé career development (Kram, 1985). As such, the effectiveness of the mentoring program depends in large part on the mentor's behavior toward his or her protégé. Recent qualitative research from the mentor's perspective indicates that some formal mentors are unclear as to what they are supposed to do to help their protégés develop and some report feeling frustrated and inadequate in the role of mentor (Eby & Lockwood, 2005). This argues that training for mentors may be particularly important in predicting perceptions of program effectiveness. The direct effects found here for receipt of training and training quality on program effectiveness for mentors, but not protégés, support this reasoning.

We also note differences in terms of the relationship between training quality and mentor commitment; the direct effect was significant for protégés but not mentors. Because formal mentoring programs are designed to serve protégés' developmental needs, perhaps higher quality

training creates a sort of mentor "halo effect." Specifically, protégés who receive high quality training may attribute higher commitment to their mentor because the organization is viewed as investing more in the program, and mentors are symbolic representatives of the organization. By contrast, the mentor's own commitment may also relate to other unmeasured variables, such as their own motives for mentoring, the extent that they have competing demands on their time, and beliefs about the benefits they may receive by mentoring others.

Matched Mentor–Protégé Findings

Our analyses involving the relationship between one mentoring partner's reports of program characteristics, program understanding, and mentor commitment with that of the other partner's report of program effectiveness yielded several findings of note. We found little evidence of relationships between mentor reports and protégé perceptions of program effectiveness but did find significant relationships between protégé reports and mentor perceptions of program effectiveness. Again, these contrasting findings can perhaps be explained by the nature of the mentoring relationship. Given that protégés are the recipient of support and guidance in a mentoring relationship, it is likely that beliefs about program effectiveness are influenced by how much mentoring they receive and the extent that their career is enhanced by the relationship through promotions, learning new skills, and preparation for more challenging roles within the organization. In contrast, mentors may gauge program effectiveness more in terms of how effectively they were utilized by their protégé. If this is the case, then mentors with protégés who better understand the program and who believe their mentor is committed to the program may more effectively use their mentors and be more committed themselves to their mentorships, which in turn makes the program more rewarding for mentors. In addition, protégés with a greater understanding of the mentoring program may be less likely to have unrealistic expectations regarding the relationship, which can dampen a mentor's assessment of the effectiveness of the mentoring program.

Implications and Future Research and Theory

Our findings have important implications for mentoring theory as they help us understand which specific program characteristics relate to perceived program effectiveness and why. Previous research regarding formal mentoring programs has emphasized the importance of trying to emulate the psychological processes of an informal mentoring experience. This

research calls into focus the importance of moving beyond this simple logic and acknowledging issues unique to formal mentorships, such as program understanding, in order to improve program effectiveness. Designing formal programs that engender commitment on the part of mentors and that help participants better understand the goals and purpose of the program can be a key overarching strategy for developing more favorable mentor and protégé perceptions of program effectiveness.

Our findings indicate that participant input into the mentor–protégé match is important; however, a key gap in the mentoring literature is research that examines the specific factors mentors and protégés should take under consideration in selecting their mentoring partner. Even the youth mentoring literature on formal mentoring programs, which is far more advanced in terms of rigorous evaluation of best practices than is the workplace mentoring literature, is equivocal regarding the best basis for matching mentors and protégés (Hall, 2003; Miller, in press). There has been some suggestion that mentor–protégé matches are best made on the basis of similar attitudes (e.g., Gray, 1988). Research examining perceived similarity indicates that mentors and protégés who perceive their mentoring partner to be similar to themselves report greater relationship quality and more mentoring behavior (Allen & Eby, 2003; Ensher & Murphy, 1997; Turban, Dougherty, & Lee, 2002). Moreover, mismatches in terms of values, personality, and work styles have been identified as barriers to relationship effectiveness by both protégés (Eby, Butts, Lockwood, & Simon, 2004) and mentors (Eby & Lockwood, 2005; Eby & McManus, 2004). On the other hand, there may also be value in matching individuals who are dissimilar on some characteristics. For instance, Eddy et al. (2001) note that organizations often match formal mentors and protégés from different departments or business units in an effort to enhance learning. It is important to note that Kram (1985) advocates the development of complementary relationships that respond to the needs of both mentor and protégé. The close relationships literature also discusses the importance of mutuality, where both partners gain from the relationship and complement one another rather than demonstrate high similarity (Huston & Burgess, 1979; Levinger, 1983). Thus, the pressing theoretical and practical question that emerges is, "On what characteristics should mentors and protégés be similar and on what characteristics should they be dissimilar to maximize the success of formal mentoring programs?" This is a major topic for future research.

Goals for the relationship may also be important to consider in relation to program effectiveness. In other words, there may be situations where similarity (or dissimilarity) is more or less important. For instance, if the protégé hopes to gain psychosocial support and friendship then

similarity in demographic characteristics and personality may be particularly important to foster identification and liking (Ragins, 1997). In contrast, if the protégé enters the program to gain a better understanding of the organization and to learn new skills to prepare him or her for upward mobility, then dissimilarity with the mentor, particularly in terms of job type, background, and educational specialty may be important. Thus, protégé relationship goals may moderate the relationship between program characteristics and perceived effectiveness.

Additional Future Research

Given the limited number of studies examining formal mentoring programs and their effectiveness, many issues remain for future research. This study focused on mentor commitment and program understanding as mediating mechanisms. There are a number of other factors that may mediate the relationship between program characteristics and perceived program effectiveness. This includes cognitive (e.g., receipt of training may predict met expectations, match input may relate to perceptions of interpersonal fit), affective (e.g., match input may predict interpersonal attraction, training quality may enhance protégé commitment), and behavioral (e.g., better matches may relate to more mentoring provided, higher quality training may lead to more effective use of time during meetings or more frequent mentor–protégé interaction) processes.

Moreover, there may be complex chain reaction mechanisms that link program features and perceived effectiveness. For instance, match input may lead to less apprehension about entering the relationship, which in turn facilitates more frequent interaction among mentors and protégés, which ultimately leads to perceptions of program effectiveness. It is also likely that different program characteristics may be linked to unique variables that mediate the relationships with program effectiveness. For example, the method used to match mentors and protégés possibly relates to relational variables such as interpersonal attraction and perceptions of fit whereas training may result in the specification of more high quality and achievable goals for the relationship.

In addition to mediating processes, there may be moderators that impact the relationship between formal mentoring program characteristics and perceived program effectiveness. Organizational factors such as climate for employee development and immediate supervisor support for the mentoring program may impact the extent that even the best designed programs will be perceived as effective. Likewise, individual differences on the part of the mentor (e.g., Conscientiousness, altruism) or protégé characteristics (e.g., learning orientation, Emotional Stability) may moderate the relationship between program design and program effectiveness.

Another issue for future research is the examination of other characteristics of formal mentoring programs. Other factors needing investigation include organizational support for the program, program objectives, degree of program oversight and ongoing relationship support, rewards for program participation, and the specific procedure used to match mentors and protégés.

As our knowledge about the relationship between program features, processes, and outcomes matures, researchers might use multiple-group path analysis to examine differences in path coefficients between parallel mentor and protégé models. However, there would also be value in the development of models that are unique to the perspectives of the mentor and the protégé. It is noteworthy that the total variance associated with perceived effectiveness was 48% in the protégé model but only 33% in the mentor model. Although we posited similar models for protégés and for mentors in this study, it is possible that mentors and protégés consider different factors in determining the effectiveness of a formal mentoring program. For example, although mentor commitment may be especially important to protégés, mentors may be more attuned to characteristics of the protégé such as protégés' willingness to learn (Allen, 2004).

Limitations

Several limitations to this study should be recognized, which highlight additional areas of future research needs. Although it is hard to argue reverse causality regarding some of our observed relationships (it is impossible that perceived program effectiveness caused training prior to the mentorship), because the data were collected at a single point in time firm conclusions concerning causality cannot be made. The training quality variable in particular could be misspecified. Because it is subjective and based on a retrospective report, it is feasible that it was influenced by participant perceptions of the overall effectiveness of the program. Research is needed in which training evaluation data are collected immediately after training, and overall program evaluations are collected at a later date. Moreover, because our models did not demonstrate self-containment, omitted variables are a possibility. For example, the actual content of the training might influence evaluations of training quality. The model that we proposed is an initial one and will require further development along these lines as research regarding formal mentoring programs matures.

Another limitation is that our low response rate renders the generalizability of our results questionable. It is possible that those who did not respond to the survey differ from those who did respond (e.g., nonrespondents were those who were unhappy with the program). We also cannot say with certainty the extent to which our results generalize to the

organizations investigated or to other formal mentoring programs. It also should be noted that our items were worded in the past tense when about 25% of the participants were in a mentorship that was ongoing. Additional research is needed to examine how perceptions of commitment, program understanding, and program effectiveness vary across time. For example, a mentor's commitment to the protégé and the program may wane during the later stages of the relationship. It may be useful to examine relationship duration as a moderator in future research studies.

The use of a subjective measure of program effectiveness rather than an objective measure such as participant retention or promotion rates also limits our study. In training evaluation terms, perceived program effectiveness would be considered as an affective outcome (Kraiger, Ford, & Salas, 1993). Additional research examining cognitive, skill-based results and return on investment outcome criteria in order to evaluate the effectiveness of formal mentoring programs would be valuable. For example, quasi-experimental research examining indicators of performance and job attitudes before and after the mentoring program, with a control group included, would be helpful to further our understanding of the effectiveness of mentoring programs. Moreover, research conducted within a single organization comparing outcomes among those who receive training and those who do not might better isolate the effects of training.

Future research might also expand the criterion space to include other stakeholders' perspectives of effectiveness, such as top management and human resource managers. Notwithstanding these limitations, we contend that because mentors, and especially protégés, are "customers" of formal programs it is important to understand the factors that contribute to their favorable affective reactions. It is our hope that the present data will be used to provide a strong basis for additional research aimed at linking perceived program effectiveness to other types of outcomes.

This study represents one of the first attempts to systematically examine how the design of formal mentoring programs relates to their perceived effectiveness. Our findings demonstrate the importance of considering design characteristics as well as taking into consideration both mentors' and protégés' experience in formal mentoring programs. As organizations continue to adopt formal mentoring programs, it is imperative that researchers continue work that will close the scientist-practitioner gap with respect to the design and delivery of this important personnel management intervention.

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