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Advances in Developing Human Resources 2005; 7; 505
DOI: 10.1177/1523422305279686

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Protégés' Learning in Mentoring Relationships: A Review of the Literature and an Exploratory Case Study

Sarah A. Hezlett

The problem and the solution. This study addresses the gap in the literature on learning and mentoring. A descriptive case study was conducted to explore what and how protégés learn from their mentors. Participants were cooperative education students and interns who were assigned mentors while working for a large public agency. Consistent with the dynamic process model of formal mentoring, protégés' learning outcomes included cognitive, skill-based, and affective learning. Protégés primarily learned through observation, explanations from their mentors, and interactions with their mentors but also used other processes to learn from their mentors. Certain learning outcomes were associated with particular learning methods. The favorability of learning experiences (positive/neutral vs. negative) also was explored. Implications for human resource development professionals involve using mentoring to support diverse organizational interventions, aligning formal mentoring policies and practices with program goals, and preparing mentors and protégés for their roles. Recommendations for future research are suggested.

Keywords: *learning; mentoring; protégés; formal mentoring; cooperative education*

Although *teacher* is often included in definitions of *mentor*, teaching and learning have rarely been the focus of research on mentoring relationships (Allen & Eby, 2003; Hale, 2000). This gap in the literature needs to be addressed to thoroughly understand mentoring relationships and to fully utilize them as a means of human resource development (HRD).

Wanberg, Welsh, and Hezlett (2003) developed a dynamic model of mentoring that incorporates learning. Integrating past research on mentoring with a taxonomy of learning outcomes (Kraiger, Ford, & Salas, 1993),

Advances in Developing Human Resources Vol. 7, No. 4 November 2005 505-526
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this model asserts that protégé changes, including cognitive, skill-based, and affective learning, partially mediate the relationship between the support mentors provide and the favorable career outcomes protégés experience. A critical step in testing this proposition is to more precisely specify *what* protégés learn from their mentors. Further theory building in this area also requires developing an understanding of *how* protégés learn from their mentors.

The present study seeks to advance understanding of learning in mentoring relationships in two ways. First, prior research is reviewed to glean insights into *what* and *how* protégés learn from their mentoring relationships. Second, the results of a descriptive case study of protégé learning are presented. The implications of the findings for HRD are discussed.

The Role of Protégé Learning in Mentoring Relationships

Preliminary research suggests that protégé learning plays a pivotal role in mentoring relationships. When asked to rate the benefits of mentoring for organizations, mentors and protégés in informal mentoring relationships at an organization in the United Kingdom gave the most favorable ratings to two statements related to employee development: "Mentoring speeds the development of talented staff" and "Mentoring helps develop a wider pool of talented managers" (Singh, Bains, & Vinnicombe, 2002).

Consistent with mentors' and protégés' recognition of learning as an important outcome of mentoring relationships, a recent quantitative study of alumni of a large university in the southeastern United States found meaningful relationships between experiences in mentoring relationships and learning (Eby, Butts, Lockwood, & Simon, 2004). As hypothesized, the researchers observed negative relationships between all five dimensions of negative mentoring experiences (Mismatch Within Dyad, Distancing Behavior, Manipulative Behavior, Lack of Mentor Expertise, and General Dysfunctionality) and a five-item, self-report measure of learning. Although not a focus of the study, substantial correlations were also discovered between learning and career ($r = .65$) and psychosocial ($r = .62$) mentoring. Therefore, protégés reported learning less when they view their mentoring relationships as having dysfunctional attributes and perceived themselves as learning more when they see their mentors as providing more support.

An interesting case study suggests that, at the extreme, the lack of opportunity to learn may lead to the collapse of mentoring relationships. Surveys completed by middle and junior managers of a public hospital in the United Kingdom revealed that most did not find the informal or formal mentoring they were receiving as they completed a university-based management development program helpful (Beech & Brockbank, 1999). Interviews conducted separately with four pairs of mentors and protégés showed that with-

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drawal from the relationships was initiated by the protégés. In all cases, protégés' perceptions that their mentors lacked sufficient knowledge was a key factor contributing to their withdrawal. Additional research is needed to determine the extent to which these findings generalize. However, the results highlight that the opportunity to gain knowledge from others may drive the dynamics of mentoring.

Furthermore, a quantitative study conducted in the United States suggests that learning may not only be an outcome of mentoring relationships but also may serve as a catalyst for other benefits that have been linked with mentoring. In a study of employees of a not-for-profit hospital, Lankau and Scandura (2002) found learning fully mediated the relationship between certain mentoring functions and job outcomes. For example, the positive relationship between career mentoring and job satisfaction, as well as the negative relationship between career mentoring and role ambiguity, were fully mediated by learning about how one's job connected to others (relational job learning).

Looking across these qualitative and quantitative studies, an intriguing picture of the role learning plays in mentoring begins to emerge. Mentors and protégés appear to recognize learning as an important objective and outcome of their relationships (Singh et al., 2002). Receiving support from mentors is associated with increased protégé learning, while having negative experiences in mentoring relationships is linked with decreased protégé learning (Eby et al., 2004). Learning may foster additional favorable outcomes for protégés (Lankau & Scandura, 2002); lack of learning may ultimately contribute to the demise of mentoring relationships (Beech & Brockbank, 1999). Additional research is needed to extend these findings and assess their generalizability. Two areas meriting further investigation are the content and process of protégé learning.

What Protégés Learn From Mentors

Recent theory building offers useful guidance for considering what protégés learn from their mentors. Drawing on the research showing that learning mediated the relationship between mentoring functions and other protégé outcomes (Lankau & Scandura, 2002), Wanberg and colleagues (2003) integrated a taxonomy of learning outcomes (Kraiger et al., 1993) into their model of formal mentoring. They proposed that the relationship between mentoring received and more distal career outcomes (e.g., career satisfaction, promotions) would be partially mediated by cognitive, skill-based, and affective learning.

Cognitive learning includes increases in verbal knowledge, knowledge organization, or cognitive strategies (Kraiger et al., 1993). Verbal knowledge involves information that has been encoded or stored in memory. It

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includes declarative knowledge (encoded information about what, such as facts or principles), procedural knowledge (stored information about how, such as knowledge of the steps in a process), and strategic or tacit knowledge (having information about which, when, or why) (Kraiger et al., 1993). Knowledge organization refers to how knowledge is structured or mapped to represent the interrelationships among information. Cognitive strategies are mental activities that enhance the acquisition and application of knowledge. They include an awareness of what one knows and the capacity to self-regulate one's thinking and learning processes (i.e., metacognition). *Skill-based learning* involves improvements in being able to execute a sequence of organized behaviors smoothly and efficiently. Skill development proceeds through recognizable stages, including initial skill acquisition, skill compilation, and skill automaticity. Kinds of skills that can be developed include motor and technical skills (Kraiger et al., 1993). Finally, *affective learning* includes changes in attitudes and motivation (Kraiger et al., 1993).

Combing through the literature on mentoring yields evidence that both supports and extends the model proposed by Wanberg and colleagues (2003). For example, based on semistructured interviews and questionnaire data collected from mentors and protégés participating in formal mentoring programs at two organizations in the United Kingdom, Hale (2000) concluded that protégés can acquire knowledge, skills, and certain behaviors and qualities that may be challenging to learn in traditional training programs, such as action orientation and self-confidence. In addition, previous research has provided examples of specific kinds of protégé knowledge, skills, attitudes, and motivation that are influenced by mentoring.

This research can be loosely grouped into two categories. First, several studies have examined the mentoring of new employees. These include a few quantitative studies that have explicitly examined the relationship between mentoring and socialization. Socialization refers to the process through which newly hired employees adapt to their work environments by learning the culture and values of their organizations and developing the skills needed for their new jobs (Bauer & Taylor, 2001). In addition, several qualitative studies of mentoring received by recently hired employees have identified specific things protégés learn from their mentors. Second, a number of qualitative studies investigating a variety of questions about mentoring also have generated information about what protégés learn from their mentors. Both sets of research are included in the following summary.

Two types of verbal or declarative knowledge are prominent in the limited amount of research that has provided information about what protégés learn from their mentors: organizational knowledge and technical knowledge. Both quantitative and qualitative studies of new hires have illustrated that new employees gain knowledge of their organizations from their mentors. First, Chao, Walz, and Gardner (1992) found both protégés in formal and informal relationships learned significantly more about their organiza-

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tions' politics, people, and goals and values than their counterparts without mentors. Protégés in informal mentoring relationships also learned more than those without mentors about key professional and organizational language and organizational traditions. However, in these two areas, protégés with formal mentors did not differ significantly from either their peers without mentors or those with informal mentors. Second, Ostroff and Kozlowski (1993) examined the sources that recent engineering and business graduates used to obtain information about their new employment settings. New employees with mentors learned significantly more from them about their organizations and roles than about job-related tasks and their work groups. In addition, new employees with mentors reported knowing significantly more about their organizations than employees without mentors. "These findings suggest that the mentor is a critical source for learning about organizational issues" (Ostroff & Kozlowski, 1993, p. 179). Third, Bard and Moore (2000) reported the results of a successful pilot for a formal mentoring program in which six employees who were new graduates with less than a year of organizational tenure were matched with six mentors at the director level. Benefits related to learning that were mentioned by protégés included increased knowledge of the company, particularly outside their own business area, and a better understanding of what people are appropriate to approach with questions (Bard & Moore, 2000). Fourth, Hetherington (2002) conducted an evaluation of a mentoring program for new staff with less than 12 months tenure used by a college of higher education at a university located in the United Kingdom. Although interviews with protégés and their assigned mentors revealed a number of problems with the mentoring program, those staff members who established relationships with a mentor reported a number of benefits. These included learning about the culture of the organization and discovering strategies to handle formal and informal organizational structures. Finally, Gallo and Siedow (2003) reported an evaluation of a medical surgical unit's use of mentoring to orient new nurses. Among other things, mentors introduced the new hires to organizational policies. Although what was learned was not formally assessed, new hires felt they received a thorough orientation. Orientation costs and vacancy rates declined. Overall, these studies indicate that new hires may learn a great deal about their organizations from their mentors, gaining a better understanding of organizational politics, people, goals or values, language, traditions, policies, and culture.

Several studies suggest that the relationship between having a mentor and gaining organizational knowledge is not limited to new hires. For example, in a longitudinal, quantitative study, Chao (1997) observed that over a 5-year period, current and former protégés continued to be better socialized than employees without mentors. At the end of 5 years, former protégés knew more about organizational politics and traditions than those who did not have mentors. Several qualitative studies that either did not specify protégés'

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organizational tenure or included protégés with varying lengths of tenure also found evidence that protégés learn about organizations from their mentors. First, nurses, police officers, and teachers reported their mentors helped them learn about the administration of their organizations (Fagan & Fagan, 1983; Fagan & Walter, 1982). Second, Dirsmith and Covaleski (1985) concluded that mentoring helped protégés who worked for public accounting firms understand their firms' politics, values, and leadership philosophies later in their careers. Finally, Dymock (1999) noted that team leaders and potential leaders receiving formal mentoring as part of a 10-month development program in Australia "believed they were learning from the mentoring process in terms of improving their general understanding of the company's operations" (p. 312). Thus, there is a small body of evidence that protégés learn about their organizations from mentors throughout their careers.

The same three qualitative studies that support the idea that protégés learn about organizational knowledge from their mentors throughout their careers also suggest that a second area of cognitive learning facilitated by mentors is the acquisition of technical knowledge. Protégés who were nurses, police officers, teachers (Fagan & Fagan, 1983; Fagan & Walter, 1982), management trainees (Dymock, 1999), and accountants (Dirsmith & Covaleski, 1985) have reported that their mentors helped them learn the technical aspects of their jobs. Interestingly, Dirsmith and Covaleski (1985) concluded that accountants gain technical knowledge from their mentors early in their careers. The career stage at which the individuals in other occupations learned technical knowledge from their mentors was not specified. Additional research is needed to more fully evaluate the extent to which there are systematic differences across occupations when protégés learn technical information from their mentors.

A few studies have suggested that mentoring also helps employees early in their careers with a closely related area of learning: the acquisition of technical or job-related skills. This type of knowledge or skill is distinct from the organizational knowledge previously discussed in that it is general job knowledge (e.g., core technical proficiency) rather than organization-specific knowledge (e.g., policies and politics). In their study of accountants, Dirsmith and Covaleski (1985) mentioned that in addition to gaining technical knowledge from their mentors, protégés early in their careers also acquire technical skills. That is, mentors not only help clarify protégés' understanding of what audit practices are but give them a better understanding of how to complete audit tasks, such as how to go about understanding a client's business and which staff at clients should be asked what questions. In the orientation program evaluated by Gallo and Siedow (2003), new nurses were introduced to patient care routines by their mentors. As the new nurses became increasingly familiar with their jobs, they were given more patients to care for, suggesting skill acquisition was occurring. Similarly, in

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another pilot of a formal mentoring program, new hires reported one of the benefits of having a mentor was learning about work practices (Bard & Moore, 2000). One quantitative study provides mixed evidence that new hires learn job-related skills from their mentors. In their study of alumni, Chao and colleagues (1992) found protégés in informal mentoring relationships learned more than those without mentors about how to perform job-related tasks. However, protégés with formal mentors did not differ significantly from either their peers with informal mentors or no mentors in terms of learning job-related tasks (Chao et al., 1992).

Taken together, these studies tentatively suggest that mentors may help protégés with several phases of acquiring technical skills related to their jobs. Protégés may gain from their mentors' verbal or declarative knowledge related to their jobs (i.e., gain an understanding of *what* to do, such as being able to state the steps in a process). In addition, mentors may help protégés acquire procedural knowledge (i.e., knowing *how* to do something), enabling protégés to increase their ability to perform a sequence of organized behaviors smoothly, efficiently, and ultimately, automatically. A challenge in synthesizing previous research in this area is to determine whether protégés have gained technical knowledge, technical skills, or both. As the acquisition of declarative knowledge is widely recognized as the first step in skill acquisition (Kraiger et al., 1993), the two areas of learning are closely linked. Ambiguity in reporting by some researchers makes it difficult at times to definitively judge if mentors have helped protégés learn technical knowledge or technical skills. Evidence of both appears in the literature. HRD researchers are encouraged to provide sufficient detail in future reports to more thoroughly describe the nature of protégés' learning.

Several studies indicate working with mentors may facilitate employees' acquisition of other skills. Improvements in interpersonal skills were reported by new hires as a benefit of participating in a pilot of a formal mentoring program (Bard & Moore, 2000). Nurses and police officers also have credited their mentors with helping them develop skills at working with people (Fagan & Fagan, 1983; Fagan & Walter, 1982). From mentoring relationships, both new hires and individuals transitioning into management roles may also acquire time management skills (Dymock, 1999; Gallo & Siedow, 2003). In addition, management trainees may gain other management skills, such as self-organization skills, from their mentors (Dymock, 1999). Thus, preliminary evidence suggests mentoring relationships may help protégés learn a variety of nontechnical skills.

Consistent with the model proposed by Wanberg et al. (2003), several studies also have suggested mentoring supports protégés' affective learning. Increases in self-confidence have been the type of protégé affective learning identified most often in the literature. New hires participating in a pilot of a formal mentoring program (Bard & Moore, 2002) and new staff at a university that were assigned mentors by their immediate supervisors

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(Hetherington, 2002) mentioned gaining self-confidence as one of the benefits of participating in their respective programs. Nurses, police officers, teachers (Fagan & Fagan, 1983; Fagan & Walter, 1982), and management trainees (Dymock, 1999) also have reported their mentors helped them increase their self-confidence. At least one quarter of the protégés who were nurses, police officers, or teachers also said their mentors influenced their work persistence (a form of affective learning) (Fagan & Fagan, 1983; Fagan & Walter, 1982). Thus, several qualitative studies provide preliminary evidence that protégés' motivational learning is facilitated by mentors.

Finally, two qualitative studies hint that the other type of affective learning—attitudinal changes—also may be enhanced by mentoring. Some nurses, police officers, and teachers reported that their neatness, honesty, and tactfulness were influenced by their mentors (Fagan & Fagan, 1983; Fagan & Walter, 1982). In addition, new staff with formal mentors at a university said their mentors encouraged them to take responsibility for their own learning (Hetherington, 2002). These findings suggest additional research on protégés' affective learning may be worthwhile.

In summary, research to date tentatively supports the proposition that mentoring enhances protégés' cognitive, skill-based, and affective learning. Specifically, there is some evidence suggesting that through their mentoring relationships protégé gain at least two kinds of verbal knowledge—organizational knowledge and technical knowledge; several skills, including technical, interpersonal, time management, and self-organization skills; and affective changes, particularly self-confidence. More systematic research explicitly directed toward understanding what protégés learn from their mentors is needed to develop a more comprehensive taxonomy of the content of protégé learning.

How Protégés Learn

Although close scrutiny of prior research on mentoring yields some information about what protégés learn from their mentors, the literature offers only limited insights on how protégés learn from their mentors. Little conceptual or empirical work has explicitly been directed toward the actual processes underlying protégé learning. However, examining the available work in this area reveals interesting similarities between it and the mentoring functions traditionally used to describe and assess mentoring relationships. These similarities hold promise for bridging the knowledge gap between what mentors do (mentoring functions) and what protégés gain (career outcomes) on one hand and how or the process by which they actually benefit (learning theory).

For example, social learning theory/social cognitive theory has been argued to offer one theoretical rationale for the positive outcomes observed

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in mentoring relationships (Gibson, 2004; Zagumny, 1993). According to this theory, individuals learn by observing the consequences others receive as a result of their behaviors. This vicarious reinforcement helps accelerate learning because individuals do not have to engage in their own trial and error learning. Protégés therefore may speed their learning through observing their mentors' behaviors and the reinforcements or punishments that stem from their behaviors (Zagumny, 1993). This idea is consistent with research on the nature of assistance mentors provide their protégés.

Kram (1985) initially identified two kinds of assistance, or mentoring functions, that help distinguish mentoring from other workplace relationships: career functions and psychosocial functions. She suggested that role modeling was one of the major kinds, or facets, of psychosocial support. Subsequent research has either supported this idea or suggested that role modeling is a separate mentoring function, related to but distinct from career and psychosocial functions (Wanberg et al., 2003). In either case, role modeling is clearly a central part of mentoring. Additional research is needed to determine what, when, and how protégés learn from observing their mentors.

Other processes through which protégés learn from their mentors were suggested by Hale (2000). Based on semistructured interviews and questionnaire data collected from mentors and protégés participating in formal mentoring programs at two organizations in the United Kingdom, he proposed that protégés gain insights from combining their knowledge and experiences with the knowledge and experiences their mentors share. Four "windows" through which protégés may learn include (a) mentors sharing their own views and experiences, (b) mentors discussing key strategies and activities being discussed at higher organizational levels, (c) mentors discussing the politics and interpersonal interactions among more senior-level personnel, and (d) reflection. The first three of these windows are reminiscent of coaching, a facet of the career mentoring function, whereas the fourth may be facilitated by counseling, a psychosocial mentoring function. Hale also argued that mentors facilitate learning by identifying opportunities for their protégés to have new experiences that will foster the development of insights. Sponsoring protégés for promotion, exposing protégés to key senior personnel, and providing challenging assignments are aspects of career mentoring that involve arranging opportunities for protégés.

Thus, the learning processes identified in the limited literature on how protégés learn have striking similarities with several facets of mentoring functions. In other words, initial research and theory on protégé learning processes suggests protégés learn using methods that are consistent with variables that have traditionally been used to describe mentoring. This tentatively suggests that some of the fundamental ways that mentors assist protégés is with the process of learning. Substantially more research is

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needed to develop a comprehensive theory that describes and explains the factors affecting and mechanisms behind protégé learning.

The present study seeks to advance understanding of protégé learning by addressing two research questions:

> *Research Question 1:* What do individuals making the transition from school into the workforce perceive that they learn from their mentors?
> *Research Question 2:* How do individuals making the school to work transition think that they learn from their mentors?

In addition, this research explores whether there are any consistent patterns between what and how protégés learn and whether the favorability of learning experiences are related to what and how protégés learn.

Method

As part of a larger descriptive case study, data were collected from protégés who were cooperative education students and interns working in the midwestern United States for a large federal agency. Each protégé had been assigned a mentor who worked at the same agency. All of the mentors had managerial responsibilities. This formal mentoring program has been in operation several years and is facilitated by a full-time coordinator. At the time of the study, all but two of the protégés had been working with their assigned mentor for at least 18 months. The average duration of the relationship up to that time was almost 2 years ($M = 23$ months, $SD = 10.6$).

The researcher met with protégés for 2 hours as a group during the third phase of the research project. (Data were collected from mentors during the first two phases.) Fourteen protégés participated in the session. An open-ended survey on protégé learning was included in the packet of the data collection instruments used during the session.

The instructions for the survey encouraged protégés to think broadly about the variety of things people can learn, providing some examples to stimulate their recall (e.g., facts, principles, how to drive a car, how to interact with a bank teller, and beliefs about people). In addition, protégés were directed to be moderately specific in the information they provided. Protégés were asked to record "What have you learned from your mentor?" For each thing they listed as learning, protégés also were asked to report "How did you learn this from your mentor?"

The analysis of protégés' responses drew on the philosophy and methods of content analysis. Content analysis is a technique designed to systematically and rigorously summarize the content of communications that typically has been recorded in writing (Stemler, 2001). It may be used for a variety of purposes, including coding responses to open-ended survey questions (Weber, 1990). Major steps in content analysis include defining the unit of written text to code (e.g., words, sentences, paragraphs), defining the cate-

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gories used to code the text, testing the category definitions by beginning to apply the coding, checking the reliability of coding, revising the category definitions, finalizing the coding, and assessing the reliability of the coding (Weber, 1990). The definitions of the categories used in coding may either be established a priori, based on theory, or be emergent, deriving from a preliminary examination of the data (Stemler, 2001). After the coding is complete, the units placed in each category are counted. Thus, "Content analysis procedures create quantitative indicators that assess the degree of attention or concern devoted to cultural units such as themes, categories, or issues. The investigator then interprets and explains the results using relevant theories" (Weber, 1990, p. 70).

Content analysis can be used to draw inferences about a population when the communications analyzed are representative of that population (Carney, 1972; Weber, 1990). For example, a content analysis of lesson plans prepared by a random, representative sample of instructional designers could be used to draw conclusions about this population's use of instructional techniques. However, content analysis is used in this descriptive case study to explore what and how protégés learn from their mentors to stimulate and generate ideas for future research on protégé learning. Thus, although the results of this study are summarized quantitatively, the findings may not generalize to other cases or groups. Instead, content analysis is used here in order to obtain the benefits of a quantitative summary of the themes reflected in open-ended survey responses.

Using content analysis to analyze open-ended survey responses has a number of advantages (Carney, 1972; Weber, 1990). By defining the categories into which information is coded, the nature of the information captured is clearly specified. The systematic coding procedures help minimize the possibility that information of interest is overlooked (Carney, 1972), make it possible to estimate the reliability of the coding, and facilitate the replication of the study (Stemler, 2001; Weber, 1990). In addition, the relative amount of attention devoted to different topics can be determined, and associations among coded variables can be examined (Weber, 1990).

In this study, each separate response to the open-ended questions was treated as a unit of analysis. A combination of a priori and emergent approaches was used to define the coding categories. What protégés learned was initially categorized into the three broad learning outcomes (cognitive, skill-based, and affective learning) defined by Kraiger et al. (1993). Within each category of learning outcomes, major themes represented in the responses were then identified by the author. Existing taxonomies of knowledge and/or skills were referenced for ideas (Borman & Brush, 1993, O*Net), but no single extant taxonomy was used to guide the derivation of the categories. Definitions of each theme or category were written. A second set of themes was derived and defined from the author's initial review of protégés' responses to the question "How did you learn this from your men-

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tor?" Finally, definitions were established to classify each reported example of learning as either positive/neutral or negative. A second coder, a graduate student studying human resource development, used the three sets of definitions to code the responses. An initial comparison of the two coders' work revealed several areas where the definitions were unclear. An iterative process of discussion, definition refinement, independent classification of responses using the refined definitions, and comparison of the categorizations then occurred. After the definitions were finalized, the agreement between the two coders was 88%, 88%, 85%, and 98% on the overall learning outcomes, the more specific themes characterizing what was learned, the themes reflecting learning processes, and the nature of the learning experience (positive/neutral vs. negative), respectively. Remaining disagreements were resolved through discussion.

Descriptive statistics (frequencies and percentages) were computed to summarize how often particular types of learning and learning processes were reported and to describe the favorability of learning experiences. To explore relationships among the coded variables, several statistics were used. The chi-square statistic is often used to assess the association between a pair of variables. However, because it is recommended that the chi-square statistic be interpreted cautiously when there may be dependency among the data and if any expected frequencies are less than 5 (Hays, 1988), the asymmetric index of predictive association also was used. This index, often referred to as Lambda (λ), indicates the proportional reduction in the probability of error in predicting one variable from another. The index can range from 0 to 1, with a value of 0 meaning that the first variable does not help predict the second and a value of 1 indicating that the first variable predicts the second perfectly, without error. Information about one variable may help predict a second without the second being useful in predicting the first. That is, the index yields different values depending on which variable is specified to be the dependent variable (Hays, 1988). In the situation where the causal direction of a relationship has not been established, it can be informative to explore the treatment of each variable as the dependent one.

Results

Protégés listed a total of 41 things they had learned from their mentors. On average, each protégé identified almost 3 things he or she had learned ($M = 2.9$, $SD = 1.9$). One protégé did not report learning anything from the mentoring relationship. Interestingly, this protégé had worked with the mentor for a relatively long period of time but did not trust the mentor. The maximum number of things a protégé listed as learning was 7.

A summary of the content of what protégés learned is shown in Table 1. Of the 41 "lessons learned," 11 (26.8%) involved cognitive learning, 25 (61%) involved skill-based learning, and 5 (12.2%) involved affective

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TABLE 1: Summary of What Protégés Learned

Learning Theme	Example	*f*	%
Cognitive learning (*f* = 11, 26.8%)			
Organizational knowledge	Past history of various offices	9	22.0
	Language/acronyms		
	Organizational politics		
Cognitive strategies	Learning something from every experience	2	4.9
Skill-based learning (*f* = 25, 61%)			
Interpersonal	How to deal with noncooperative team members	14	34.1
	How to network		
	Work with different personalities		
	It's annoying to wait for the chronically late		
	How to be a friend with a person in the office while remaining professional		
Organizational	How to organize projects	5	12.2
	Not to take on more responsibilities than you can handle		
Communication	How to listen to new employee completely	3	7.3
	Not to be afraid to ask questions		
Problem solving	How to look at a situation from different angles	2	4.9
	How to respond to problems		
Supervising	How not to be a good supervisor	1	2.4
Affective learning (*f* = 5, 12.2%)			
Motivation	If you made a commitment stick with it	5	12.2
	Take initiative		

learning. Most instances of cognitive learning dealt with the acquisition of organizational knowledge. Examples related to gaining (or failing to gain) knowledge of the organization's history, language, culture, and politics as well as an understanding of the operations of diverse business units. The two remaining instances of cognitive learning were examples of learning how to learn from mentors, or cognitive strategies. The majority of examples of skill-based learning, representing more than one third of the "lessons learned" listed by protégés, were related to interpersonal skills. Instances of learning classified as interpersonal skills included protégé reports of learning to manage relationships, work with people with different personalities, network, work in teams, and perceive the impact of social behavior on others. Organizational, basic communication (e.g., active listening), problem-solving, and supervisory skills were additional kinds of skill-based learning reported by protégés. Finally, all examples of affective

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TABLE 2: Summary of How Protégés Learned

Learning Process	Example	f	%
Observe	By example By observing him By showing When witnessing her speak she usually has a tone to which people take offense	12	29.3
Explain	Explain "who" is who in the organization He gave me a tip to use WORD and document everything (phone calls; meetings; etc.); He said half the battle is organization & presentation Through his advice	10	24.4
Interact	From waiting for him	7	17.1
Ask	Asking questions pertaining to this matter	2	4.9
Encourage	Through meetings he always encourages me to do my best in everything and do in the workplace	1	2.4
Shadow	She brings me to events and functions	1	2.4
Trial and error	I always had to look for things on my own, and use others as sources	1	2.4
Working together	By working through a variety problems together	1	2.4

Note: Percentages do not sum to 100% because six instances are not listed here; insufficient detail was provided in two instances, and four instances included multiple methods of learning.

learning involved motivational changes. Motivational comments mentioned persistence, working hard, taking initiative, following one's own goals, and not being "too hard" on oneself.

Table 2 displays a summary of how protégés indicated they learned from their mentors. The method of learning most frequently mentioned by protégés (29.3%) was observation. In many cases, this involved protégés witnessing their mentors interact with others. One protégé specifically mentioned that the mentor explicitly demonstrated something for the protégé. Almost one quarter (24.4%) of protégés' descriptions of how they learned involved mentors explaining something. Mentors provided advice, gave tips, offered information, and explained how to do things. Protégés also learned from their own interactions with their mentors (17.1%), gaining insights from the impact their mentors' behavior had on them. Each of the remaining methods through which protégés learned from their mentors was reported less frequently. These included asking questions, being encouraged, shadowing or accompanying the mentor, completing work with the mentor, and trial and error. In four cases, protégés reported learning something from their mentors in two different ways, twice through a combination

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TABLE 3: Relationship Between the Content and Process of Protégé Learning

	Learning Process			
Learning Content	Explain	Observe	Interact	Total (*f*)
Cognitive	5	0	1	6
Skill-based	4	12	5	21
Affective	1	0	1	2
Total (*f*)	10	12	7	29

of explanation and encouragement and twice through both explanation and observation. Insufficient information was provided in two cases to classify the learning process used.

The relationship between what and how protégés learn from their mentors was examined. Table 3 shows the learning outcomes for the 29 instances in which protégés learned through explaining, observing, or interacting. The three types of learning outcomes (cognitive, skill based, and affective) appear to have a meaningful association ($\chi^2 = 11.01$, $df = 4$, $p = .026$) with the most frequently reported processes of learning (observing, explaining, and interacting). Protégés relied primarily on explaining ($f = 5$) and, to a lesser extent, interacting with their mentors ($f = 1$) to achieve cognitive learning. Examples were given of gaining organizational knowledge through explaining ($f = 4$), interactions with mentors ($f = 1$), asking questions ($f = 1$), and multiple methods ($f = 1$; explaining and being encouraged). In two instances, the information about how organizational knowledge was acquired was too imprecise to permit classification. Cognitive strategies were gained through explaining ($f = 1$) and asking questions ($f = 1$). In contrast, protégés appeared to gain skills more often through observing ($f = 12$) than from explaining ($f = 4$) or from interacting ($f = 5$). Observing was used in acquiring communication, interpersonal, organizational, and supervisory skills (fs = 2, 6, 3, 1, respectively). Explaining was also used in gaining communication ($f = 1$), interpersonal ($f = 2$), and organizational skills ($f = 1$). Interacting with mentors helped protégés learn interpersonal ($f = 4$) and organizational skills ($f = 1$). Interestingly, less frequently used learning methods were reported as means of obtaining what appear to be more complex or advanced skills. One protégé provided an example representative of gaining problem-solving skills through working on a task with the mentor. A second instance of acquiring problem-solving skills involved learning through multiple methods: explaining and observing. Both instances of learning how to network, a kind of interpersonal skill, were learned through unusual means: in one case, trial and error, and in the other, shadowing. Affective learning was achieved in several ways. Protégés' motivation was shaped by explaining ($f = 1$), interactions with mentors ($f = 1$), encouragement ($f = 1$),

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and multiple methods ($f = 1$, explaining and observing; $f = 1$, explaining and encouragement). The asymmetric indices of prediction indicated that the process of learning could be predicted from what was learned ($\lambda = .35$, approximate significance = .01), but having information about how something was learned did not make it possible to predict what was learned ($\lambda = .28$, approximate significance = .15).

Review of the content and methods of learning suggests that protégés learn from both positive and negative interactions with their mentors. About one third (31.7%) of the 41 statements provided by protégés conveyed a negative tone or experience, and about two thirds (68.3%) had a positive or neutral tone. Protégés appeared to learn skills from both negative ($f = 11$) and positive ($f = 14$) experiences with their mentors, but cognitive and affective learning were primarily tied to positive ($f = 9$ and $f = 5$, respectively) rather than negative ($f = 2$ and $f = 0$, respectively) events. However, this pattern, suggesting certain outcomes (particularly affective ones) are more likely to be obtained through positive experiences, was at best marginally significant ($\chi^2 = 5.00$, $df = 2$, $p = .082$; λs = 0). Similarly, the pattern of relationships between how protégés learned and the favorability of experiences was suggestive but not definitive ($\chi^2 = 5.15$, $df = 2$, $p = .076$; $\lambda_{(\text{w/learning process dependent})} = .18$, approximate significance = .43; $\lambda_{(\text{w/favorability dependent})} = .09$, approximate significance = .82). Learning through explaining was almost always described in a positive or neutral way ($f = 9$) rather than a negative way ($f = 1$). In contrast, incidents of learning through observing or interacting with mentors were both positive ($f = 6$ and $f = 3$, respectively) and negative ($f = 6$ and $f = 4$, respectively). Protégés appear to learn what not to do from witnessing their mentors treat others poorly or from their own negative experiences with their mentors.

Discussion

This descriptive case study explored what cooperative education students and interns learned from mentors who were assigned to support them. The results are consistent with Wanberg et al.'s (2003) model proposing that protégés' cognitive, skill-based, and affective learning is enhanced by mentoring. Incidents of cognitive learning reported included increased organizational knowledge and cognitive strategies. Skill-based learning included interpersonal, organizational, communication, problem-solving, and supervisory skills. Affective learning was illustrated through examples reflective of heightened motivation.

In this study, which is one of the first to examine the process of protégé learning, protégés reported learning most frequently through observing their mentors. Protégés also often learned from mentors' explanations and by interacting with their mentors. Less frequently, protégés learned from asking questions, shadowing, trial and error, working with their mentors,

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and receiving encouragement. These results are consistent with the idea that social learning theory is an important framework for understanding some, but not all, protégé learning. Additional theories of learning appear to be needed to explain some of the mechanisms by which protégés learn.

This study has broken new ground by providing initial evidence about the relationship between the content and process of learning in mentoring relationships. Although protégés who participated in the research used a variety of methods to achieve learning outcomes, observation was only used to acquire skills. Cognitive and affective learning were achieved through other learning processes. Thus, for this group of protégés, the loss of the opportunity to observe the mentor probably would reduce the acquisition of skills but would not limit cognitive or affective learning. This finding merits further investigation.

Protégés in this study appeared to learn from both positive and negative experiences. To some extent, this finding is inconsistent with previous research reporting negative relationships between negative mentoring experiences and learning (Eby et al., 2004). The pattern of results suggests protégés who participated in the present research were somewhat more likely to obtain cognitive and affective learning outcomes from positive rather than negative events. Skill acquisition occurred through both positive and negative experiences. Similarly, protégé reports of learning by explanation tended to be classified as positive or neutral events, whereas learning via observation or interaction were about equally likely to be coded as positive/neutral or negative. These relationships between the favorability of experiences and the content and process of learning were not definitive but suggest interesting directions for future research.

Implications for HRD

To maximize the effectiveness of mentoring as a means of facilitating learning and enhancing performance, HRD professionals need to have a clear understanding of what types of learning outcomes are likely to occur from mentor-protégé interactions. This study suggests that mentoring may be useful in promoting a variety of learning outcomes. Therefore, when organizational initiatives, such as technological upgrades or cultural changes, are being considered, mentoring should be evaluated as a possible means of supporting employees' acquisition of new knowledge, skill development, or changes involving motivation or attitudes.

Furthermore, consistent with prior research, one of the things the individuals entering the workforce in this study gained from their mentors was organizational knowledge. Thus, this study contributes to a small body of research suggesting that mentoring may be a useful method of socializing new employees. An important question for HRD professionals to consider

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is: How does mentoring compare to other socialization practices? One study has suggested mentoring is less available than other socialization practices but moderately helpful for "learning the ropes" (Louis, Posner, & Powell, 1983). It is important to note however that this research did not specify whether the mentoring relationships were formal or informal. A second study determined that new hires with mentors gained more organizational knowledge than those without (Ostroff & Kozlowski, 1993). HRD professionals are encouraged to evaluate socialization practices at their own organizations and conduct additional research to advance understanding of how mentoring compares in terms of cost and effectiveness to other socialization practices.

Comparing what protégés reported learning in this study to prior research reveals an interesting difference. Protégés at this organization did not report learning technical knowledge or skills from their mentors. This may be a result of the structure of the protégés' work assignments and the roles of mentors in this particular formal mentoring program. Most protégés in this study were rotating through assignments in different departments or business units. In each assignment, protégés' work was supervised by a different person. One of the goals of the mentoring program was to maintain some continuity and stability in protégés' work experience by enabling them to have a constant source of support from their mentors. Protégés retained their mentor throughout their internship or cooperative education experiences with the agency. However, protégés' job rotation meant that they infrequently worked regularly with their mentors; often they were in different departments. This distance may have limited the opportunities protégés had to learn technical knowledge and skills from their mentors. Further research is needed to test this hypothesis. However, in the meantime, it is recommended that HRD professionals carefully think about the implications of work assignments and formal mentoring program guidelines, such as those involving mentor-protégé matching, for protégé development. The laudable goal of assigning employees a mentor outside their work group so that they have a more neutral and objective party to discuss concerns with may undermine the goal of enhancing the development of employees' technical knowledge and skills. The objectives and policies of any formal mentoring program must be carefully aligned.

The learning mechanisms identified in this study may be useful for HRD professionals responsible for setting realistic expectations for and training mentors and protégés. Mentors should be aware that protégés can learn from them in a variety of ways and be encouraged to create opportunities for different learning processes to be used. An important finding of this study is that observation was one of the primary means of protégé learning. Most opportunities to observe arose when protégés watched their mentors work with others. This suggests that mentors should be encouraged to interact with their protégés in more than just one-on-one meetings. Mentors also

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may benefit from training that gives them practice explaining information and introduces them to different ways their protégés may learn from them.

The prevalence of observing as a means of protégé learning raises an interesting issue for mentors and protégés who are dispersed geographically. Without face-to-face interactions, how do protégés learn from their mentors? Certainly not all observation requires in-person, synchronous communication. However, it will be important for HRD professionals working for organizations implementing virtual or e-mentoring programs to determine how protégés can learn effectively. It may be the case that virtual mentoring is not the best intervention to achieve particular learning objectives. For example, in this study, skill-based learning was more frequently reported as occurring through observation than through explaining or interacting. Additional research is needed to evaluate the extent to which cognitive and affective learning objectives are better suited to virtual mentoring.

Limitations

One limitation of this study is that all the protégés were early in their careers. As noted in the introduction of this article, studies involving research participants at different career stages have come to somewhat different conclusions regarding what protégés learn, suggesting that the content and process of protégé learning are not static but change across the course of individuals' careers. Two studies have directly taken up this issue. Dirsmith and Covaleski (1985) concluded that protégés were taught technical knowledge and skills by their mentors early in their careers. Later in employees' careers, mentoring helped protégés understand firm politics, values, and leadership philosophies. The researchers also observed that the process of learning shifted as what was taught changed over protégés' careers:

> It was commented by a few participants that earlier, lower level mentoring involved actively teaching the protégé, with the mentor actively guiding and giving advice. In the later, higher level mentoring, some of the essence of public accounting was viewed as not being readily taught, but only demonstrated through action. Here mentoring was seen as serving as a role model. (pp. 160-161)

Second, although a case study of 11 female executives working for *Fortune* 500 companies found women received mentoring throughout their careers (Bierema, 1996), the extent to which they used mentoring as a learning tactic changed as the women's careers evolved through three stages (Bierema, 1999). Although this study did not explicitly investigate how protégés learned from mentors during particular career stages, its findings suggest that the process of learning from mentors may not remain static. That is, during early career stages, protégés may rely more on receiving direct advice or direction from mentors; in later career stages, interactions with mentors may contribute to learning by enhancing reflection. Additional research is needed to determine what and how

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protégés learn later in their careers. This will enable HRD professionals to determine what organizational objectives mentoring can support at different stages in employees' careers.

A second limitation with this study is that data were collected from protégés participating in a formal program within a single organization. The extent to which the results obtained here will be observed at other kinds of employers (e.g., for-profit corporations, educational settings) with different specializations (e.g., medicine, high-tech) is unknown. Similarly, it is important that HRD professionals study what and how protégés learn in informal mentoring relationships.

In general, research on mentoring is fairly young (Wanberg et al., 2003). Within the literature on mentoring, research on learning and mentoring is in its infancy. This study adds to what is known about what and how entry-level employees learn from their mentors. Consistent with the dynamic process model of formal mentoring (Wanberg et al., 2003), the learning outcomes of protégés who participated in the research included cognitive, skill-based, and affective learning, with skill-based learning reported with the highest frequency. Protégés primarily learned through observation of their mentors, explanations from their mentors, and interactions with their mentors. Less often, protégés learned by asking questions, being encouraged, shadowing or accompanying the mentor, completing work with the mentor, and trial and error. Learning outcomes were associated with learning methods, with observation being used only to acquire skills. Protégés reported learning from both positive and negative experiences, and there was some evidence that the favorability of learning experiences (positive/neutral vs. negative) was related to learning outcomes and processes. To maximize the effective use of mentoring, HRD professionals must further develop knowledge of the content and process of both protégé and mentor learning.

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