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The Effects of Goal Orientations and Supervisor Concerns on MBA Intern Learning and Performance

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Achievement goal orientations provide a useful framework for understanding what motivates MBA intern learning and performance. A study of 508 MBA interns working in over 245 organizations showed learning mediated the relationship of intern learning goal orientations to performance, while intern performance goals only had direct effects on performance. As situational inducements, supervisor concern for learning and performance explained unique variance in performance beyond interns' own goal orientations. Support was found for a supplementary fit perspective between interns with prove-performance goals and supervisor concern for performance. Interns also performed better when they viewed their supervisors as advocating a balance of concerns for both learning and performance during the internship. Implications for interns, business schools, and employers are discussed.

Achievement in school or at work involves pursuing both learning and performance (Barron & Harackiewicz, 2001; Harackiewicz, Pintrich, Barron, Elliot, & Thrash, 2002). For instance, teachers expect students to learn and achieve good grades, while supervisors expect subordinates to develop on-the-job skills and perform well in their roles. Master's of business administration (MBA) internships are one such context of growing importance to students and employers, where students in short-term, temporary jobs experience both novel responsibilities that require learning and normative pressure to perform (Beenen & Rousseau, 2010; Liu, Xu & Weitz, 2011; Narayanan, Olk, & Fukami, 2010). That management educators develop a better understanding of the motivational dynamics of intern learning and performance in MBA internships is critical for several reasons.

First, MBA internships are a key source of career development and employment for MBA students (Baron & Kreps, 1999). In terms of career development, 50–60% of MBA students intend to pursue their degree to build skills in a new function or industry, while the rest aim to enhance their skills in the same career area (GMAC, 2010). Developing managerial skills in an MBA internship is an important part of that learning process. Performing well in internships provides graduates with employment possibilities and job search leverage upon graduation (Boswell, Boudreau, & Dunford, 2004; Zhao & Liden, 2011), and increases the chances of receiving a job offer (Rynes & Bartunek, 2013), making internships a vital source of employment at graduation. For example, 38% of a recent graduating MBA class reported accepting full-time job offers with their internship employers (Harvard Business School, 2012).

Second, MBA interns generally experience comparatively greater pressure to learn and perform

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than undergraduate interns simply because the stakes are higher. For instance, MBA interns typically are given more responsibility and receive higher pay than undergraduate interns. Average monthly pay for interns from highly ranked full-time MBA programs is about US$7,000, or about 2–4 times higher than typical undergraduate interns (e.g., Carnegie Mellon University, 2012). Undergraduates can experience several internships or cooperative learning assignments, often without pay, during their 4-year education. MBA students have one chance to learn and perform well in an internship, typically in the summer between their first and second years. Consequently, potential employers put substantial weight on MBA internship performance.

A third reason why understanding the motivational dynamics of learning and performance in MBA internships is important is to provide a context for addressing the research–practice gap that has become a common criticism of management education (Datar, Garvin, & Cullen, 2010; Navarro, 2008; Rousseau, 2012; Rubin & Dierdorff, 2011). For instance, MBA programs have been criticized for failing to offer a curriculum that matches the needs of employers and content of managerial work (Rubin & Dierdorff, 2011). This mismatch between MBA learning and employer needs is reflected in the fact that recruiters have noted MBA programs often fail to instil critical skills they value most (e.g., interpersonal skills, leadership skills, communication skills, negotiation skills; GMAC, 2005; Rynes & Bartunek, 2013). Internships offer a research context for addressing this gap by enhancing our understanding of how MBA students apply such valued skills through experiential learning (Brown, Arbaugh, Hrivnak, & Kenworthy, 2013). MBA internships provide an on-the-job experience in which the rubber of managerial learning meets the road of managerial performance.

Despite the importance of learning and performance for MBA interns, researchers have not yet investigated their motivational antecedents. The sparse research on internships is focused exclusively on undergraduates and has been characterized as "largely descriptive and anecdotal" (Narayanan et al., 2010: 62). A limited number of studies in this area with theoretical underpinnings have investigated the relationship between job characteristics and intern satisfaction (D'Abate, Youndt, & Wenzel, 2009; Rothman, 2003), and impression management and selection (Zhao & Liden, 2011). D'Abate et al. (2009) found interns' perceived learning opportunities predicted satisfaction, although the authors did not investigate predictors of learning. Narayanan and colleagues tested an exploratory input-process-outcome model (Narayanan et al., 2010) and found a complex set of project, adviser, and curricular antecedents to intern satisfaction. In their model, learning mediated the relationship between helpfulness of university studies and satisfaction. Other studies use a newcomer socialization perspective to show that structured entry experiences, job design, proactive behavior, and positive emotional expression results in positive learning and socialization outcomes (e.g., Beenen & Rousseau, 2010; Feldman, Folks, & Turnley, 1998; Feldman & Weitz, 1990; Gruman, Saks, & Zweig, 2006; Liu et al., 2011; Taylor, 1988). For instance, Liu and colleagues (2011) investigated learning as an antecedent to satisfaction, commitment, and positive career attitude, although they did not investigate antecedents of learning itself. No studies with undergraduate or MBA students have focused explicitly on the motivational dynamics of both learning and performance in internships. Thus, the goal of this study is to answer a basic question: "What motivational antecedents predict the learning of key managerial skills, and job performance in MBA internships?"

I answer this question here by examining the critical role of achievement goal orientations in MBA internships. *Achievement goal orientations* impact learning and performance by focusing one's attention and effort on developing competence (learning orientation), demonstrating competence (prove-performance orientation), or avoiding the appearance of incompetence (avoid-performance orientation; see Payne, Youngcourt, & Beaubien, 2007 for a meta-analytic review). Although organizational researchers typically consider a learning orientation as "adaptive" and a performance orientation as "maladaptive" (Porter, Webb, & Gogus, 2010: 935; see also Dragoni, Tesluk, Russell, & Oh, 2009; Janssen & Van Yperen, 2004), educational researchers acknowledge prove-performance goals also can be adaptive particularly in short-term contexts (e.g., Elliot & Church, 1997; Elliot, 1999; Harackiewicz et al., 2002). Consistent with this latter view, my work here investigates how both orientations may contribute to successful outcomes for MBA interns. Three important considerations inform this view.

First, in many achievement settings, particularly MBA internships, people face novel responsibilities that require both learning and achievement of normative performance standards (Deshon & Gil-

lespie, 2005). In such situations, both learning and prove-performance orientations may offer complementary paths to performance. For instance, research with college students showed learning goals predicted intrinsic interest, while performance goals predicted grades (Elliot & Church, 1997). In a similar manner, if interns are expected to both learn and perform in their short-term roles, combining learning and performance orientations may help focus their attention on achieving performance without the deleterious effects on learning that a performance orientation can engender over a longer period of time (Elliot & Church, 1997). Furthermore, although learning is theorized to mediate the relationship of learning goals to performance (e.g., Ford, Smith, Weissbein, Gully, & Salas, 1998; Kozlowski, Gully, Brown, Salas, Smith, & Nason, 2001), this mediated relationship has not been tested in an on-the-job setting such as an internship. I address these gaps by examining both the direct effects of performance goals on intern performance and the mediating effects of intern learning on the relationship of learning goals to intern performance.

Second, in addition to their motivation to learn and perform, interns also may experience supervisory expectations that serve as situational inducements that activate learning or performance mindsets (e.g., Chen & Mathieu, 2008; Kozlowski & Bell, 2006). The newcomer socialization literature, which provides a useful framework for understanding internships (e.g., Gruman et al., 2006; Taylor, 1988), indicates people who are new in their roles will begin monitoring their work environment to understand what supervisors expect (Chan & Schmitt, 2000). Consequently, I also investigate whether interns' perceptions of their supervisors' concerns for learning and performance explain unique variance in these outcomes, beyond the interns' goal orientations.

Third, a situational inducement approach also implies a potential person–situation interaction between intern goal orientations and supervisor concerns for learning and performance (Chen & Mathieu, 2008). A supplementary fit perspective suggests an intern's goal orientation should match the supervisor concern (e.g., performance goal and concern for performance), while complementary fit advocates a balance of both (e.g., learning goal and concern for performance). This study is among a few to investigate such interactions (Chen & Mathieu, 2008).

The following section develops the theoretical framework (see Figure 1) for understanding how intern goal orientations and supervisor concerns influence intern learning and performance. Hypotheses are tested with a sample of 508 MBA interns who worked for over 245 organizations. Finally, the results and implications of the study are discussed.

INTERN LEARNING AND PERFORMANCE GOAL ORIENTATIONS

Goal orientations are cognitive frameworks people use to interpret and respond to achievement situations (Dweck, 1986 Elliot & Dweck, 1988). More general than challenging goals (Locke & Latham, 2002), and more specific than motives or intentions (Fryer & Elliot, 2007), goal orientations affect learning and performance outcomes by influencing how people allocate attention and effort (e.g., Kozlowski & Bell, 2006; Elliot & Church, 1997; Lee, Sheldon, & Turban, 2003). Approach or prove goals focus on pursuit of gains (i.e., achieving learning or performance) and are distinguished from avoid goals focused on averting losses (i.e., loss of skills or poor performance; e.g., Elliot & Church, 1997; Elliot & McGregor, 2001). Since MBA interns should be less likely to focus on losing skills in an internship, my study concentrated on the dominant trichotomous framework of learning, prove-performance, and avoid-performance goals.

Researchers have treated individual goal orientations as experimentally induced states, as context-specific states tied to a particular task setting (Payne et al., 2007), and as "situation-specific regulators of achievement behavior that are energized or impelled by underlying motive dispositions" (Elliot & Church, 1997: 228; see also Button, Mathieu, & Zajac, 1996; Deshon & Gillespie, 2005; Dweck, 1986; Mangos & Steele-Johnson, 2001; Porter et al., 2010). Although traits such as *implicit theory of intelligence* (i.e., beliefs about whether one's intelligence is fixed or malleable; Dweck, 1986; Elliot, 2005) influence one's goal orientation, the task context can be even more critical. For instance, Dweck (1986) posited that one may be learning oriented in one context (e.g., an internship) but not in another (e.g., a finance course). Consequently, most prior goal orientation measures account for the specific task context (e.g., a particular college course, one's job; e.g., Elliot & Church, 1997; Elliot & McGregor, 2001; VandeWalle, 1997). An internship is a unique context in which goal orientations have not yet

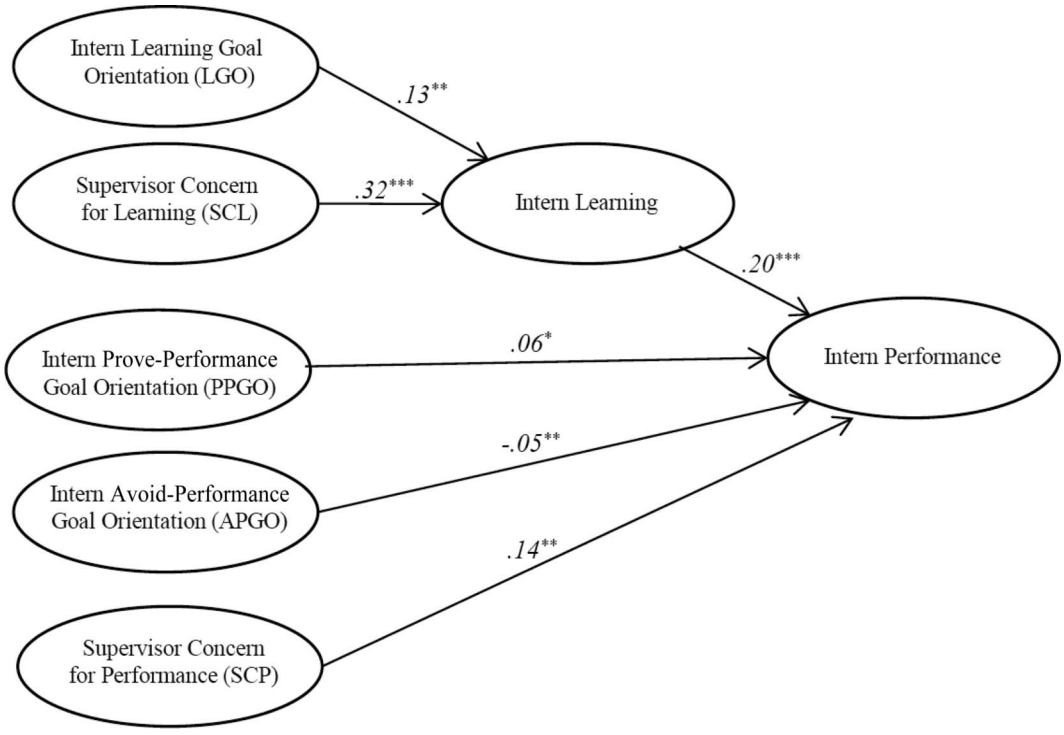

FIGURE 1
Coefficients for OLS Mediation Model. *Note*. LGO and SCL *B* coefficients are for Model 2, all other *B* coefficients are for Model 3. Only significant coefficients for hypothesized variables are displayed. * $p < .05$. ** $p < .01$. *** $p < .001$. Mediation results also are supported by SEM analysis.

been investigated, and thus should be accounted for in measuring an intern's goal orientation.

In this study, the intern's goal orientations specific to the MBA internship are distinguished from situational inducements to learn or perform in the form of perceived supervisor concerns. Both are rooted in the internship context, yet they focus on different referents (oneself, and one's supervisor). Prior research has not investigated whether both potential sources of motivation are uniquely associated with learning and performance. Intern goal orientations are defined and the mechanisms by which they affect learning and performance are addressed first, followed by the rationale for distinct supervisor concerns in the same internship context.

A *learning goal orientation* is defined here as an intern's proclivity to develop competencies and skills in an internship. A *prove-performance goal* is an intern's proclivity to display competence and gain favorable judgments about it by outperforming peers in an internship; an *avoid-performance goal* is an intern's proclivity to avoid unfavorable judgments about competence in an internship (Elliot & McGregor, 2001; VandeWalle, 1997). Thus, intern goal orientations are both "situation specific" to the internship context and energized by interns' "underlying motive dispositions" (Elliot & Church, 1997: 228). A distinguishing feature in this study is that the work setting is new to the intern, rather than one in which workers are experienced (Janssen & Van Yperen, 2004; Kohli, Shervani, & Challagalla, 1998; Porath & Bateman, 2006; Sujan, Weitz, & Kumar, 1994; VandeWalle, Brown, Cron, & Slocum, 1999).

Organizational researchers often view a learning goal as an optimal form of work motivation (e.g., Dragoni et al., 2009; Salas & Canon-Bowers, 2001; Porter et al., 2010; Seijts & Latham, 2005) that enhances intrinsic motivation by eliciting "challenge appraisal, excitement and task absorption that foster interest and enjoyment" (Elliot & Church, 1997: 220). This focuses attention and effort on skills one wants to improve, setting specific improvement goals, and seeking feedback (Elliot & McGregor, 2001; Lee et al., 2003; VandeWalle & Cumings, 1997). These activities result in *learning*, defined here as skill improvement as a conse-

quence of experience in a job (Anderson, 2000; Weiss, 1990). A learning goal orientation helps interns both learn and transfer their learning into tangible skills that will contribute to their performance (e.g., Ford et al., 1998; Kozlowski et al., 2001; Porath & Bateman, 2006). Although not previously tested in an internship or on-the-job setting, learning is expected to mediate the learning goal–performance relationship by motivating interns to acquire skills that are instrumental to their performance.

In research with experienced workers, prove-performance goals were positively associated with job performance in some studies (e.g., Kohli et al., 1998; Porath & Bateman, 2006; Sujan et al., 1994) and not in others (e.g., Janssen & Van Yperen, 2004; Potosky & Ramakrishna, 2002; VandeWalle et al., 1999). One explanation for this discrepancy is prove-performance goals focus attention and effort on activities in which one is most competent or where one enjoys a relative performance advantage (Elliot & Church, 1997; Elliot & McGregor, 2001; Kozlowski et al., 2001). Although this enables short-run performance, it can stifle short-run learning, thereby impairing long-run performance (Elliot & Harackiewicz, 1996). Thus, a prove-performance goal is a suboptimal form of long-run worker motivation (Kozlowski & Bell, 2006; Porter et al., 2010; Seijts & Latham, 2005). Some educational researchers, however, advocate that prove-performance goals also can be adaptive in settings where short-run performance has positive consequences (Elliot, 1999; Elliot & Church, 1997).

In MBA internships, short-run learning and performance outcomes both have positive long-run consequences. For example, MBA interns are evaluated for permanent positions or endorsed for employment elsewhere based in part on how well they performed their job duties (Baron & Kreps, 1999; Beenen & Rousseau, 2010). At the same time, interns who are prodigious learners will improve their employability inside and outside the organization (Hall, 2002). Thus, for interns, the deleterious effects of prove-performance goals on long-run learning are less critical. Instead, prove-performance goals during the time-pressured period of the internship should elicit challenge appraisals that facilitate interns' task engagement, thereby enhancing their performance (Bakker, van Emmerick, & Euwema, 2006). Avoid-performance goals are broadly viewed as maladaptive by the fact they have dispositional roots in fear of failure and are known to elicit threat appraisals in achievement settings (Elliot & McGregor, 2001; Payne et al., 2007). They have been demonstrated to be negatively related to work performance and are, consequently, expected to be negatively related to intern performance (Porath & Bateman, 2006).

To summarize, learning goals should motivate interns to develop skills that will in turn help them perform well in their internships. Given the short-run performance period for interns, prove-performance and avoid-performance goals respectively should have positive and negative direct effects on performance that are not mediated by learning.

Hypothesis 1a: Intern learning will mediate the relationship of intern learning goals to intern performance.

Hypothesis 1b: Intern prove-performance goals will be positively related to intern performance.

Hypothesis 1c: Intern avoid-performance goals will be negatively related to intern performance.

SUPERVISOR CONCERNS AS SITUATIONAL INDUCEMENTS FOR LEARNING AND PERFORMANCE

The newcomer socialization literature suggests interns will try to make sense of their new role by monitoring signals in their work environment (Chan & Schmitt, 2000; Morrison, 1993a,1993b: 2002). Supervisors are a key source of these signals in regards to both learning and performance standards (King & King, 1990). Signals regarding performance expectations have especially important consequences for a successful internship experience and a potential job offer (Baron & Kreps, 1999; Beenen & Rousseau, 2010).

Dragoni (2005) theorized how goal orientations can be transmitted from a team leader to individual team members through supervisory expectations. Supervisors who are "relatively consistent in their practices over time" facilitate a pattern of behavior that is interpreted by subordinates as "an achievement pattern orientation" (Dragoni, 2005: 1086). Consistent with this perspective, supervisor behavior patterns observed by subordinates are a form of situational inducement that enables a subordinate to make inferences about supervisor attributes (Trope & Liberman, 1993). Situational inducements also have been used in experimental settings to activate a learning or performance mind-set by signaling a task as an opportunity to develop skills or to assess competence (e.g., Chen & Mathieu, 2008;

Kozlowski & Bell, 2006). Supervisor concerns about an intern's skill development and competitive performance in an internship are expected to act as situational inducements that activate learning or performance mind-sets.

Specifically, as interns observe their supervisors' behavior through interpersonal exchanges, they will make dispositional inferences about their supervisors' relative prioritization of activities that contribute to their own learning and performance. *Supervisor concern for learning* is defined here as an intern's perception that a supervisor expects him or her to develop on-the-job skills. Supervisor concern for learning is expected to activate a learning mind-set that motivates interns to allocate their attention and effort to activities that develop their skills. Given the competitive nature of the internship context, *supervisor concern for performance* is defined here as an intern's perception that a supervisor expects him or her to demonstrate on-the-job competence relative to peers. Supervisor concern for performance is expected to activate a performance mind-set that motivates interns to allocate their attention and effort to activities that highlight their abilities.

Since MBA interns should be highly motivated to fulfill supervisor expectations, supervisor concerns for learning and performance should have additive effects to their own goal orientations. Furthermore, the skill development and transfer that interns experience as a consequence of supervisor concern for learning should in turn be positively related to intern performance. That is, intern learning should mediate the relationship of supervisor concern for learning and intern performance. Supervisor concern for performance should have direct effects on performance that are not mediated by learning.

Hypothesis 2a: Intern learning will mediate the relationship of supervisor concern for learning to intern performance.

Hypothesis 2b: Supervisor concern for performance will be positively related to intern performance.

INTERACTIVE EFFECTS OF INTERN GOAL ORIENTATIONS AND SUPERVISOR CONCERNS

Since goal orientations are expected to interact with situational inducements of learning and performance (e.g., Chen & Mathieu, 2008; Murayama & Elliot, 2009), it is important to consider how intern goal orientations and supervisor concerns also may interact. A person–environment fit perspective offers insight.

Person–environment fit distinguishes supplementary and complementary views of fit (Cable & Edwards, 2004). Supplementary fit matches an intern's goal orientation with the corresponding supervisor concern (e.g., learning goal and supervisor concern for learning). Complementary fit balances an intern's goal orientation with a dissimilar supervisor concern (e.g., performance goal and supervisor concern for learning). Although such interactions have been investigated rarely, a few studies suggest complementary fit may be best for learning-oriented interns (Chen & Mathieu, 2008), while supplementary fit may be favored for performance-oriented interns (Kristof-Brown & Stevens, 2001; Murayama & Elliot, 2009).

Chen and Mathieu (2008) developed competing hypotheses based on the need for "congruence between goal orientation dispositions and situational stimuli" (supplementary fit) and the need to balance motivation to "learn task-related material" with motivation to "excel at performing" (complementary fit; Chen & Mathieu, 2008: 26–27). In an experimental study of performance trajectories (i.e., skill improvement) on a training task, their results were more supportive of a complementary fit for learning-oriented only, and not performance-oriented, subjects.[1] This is consistent with the rationale that an overemphasis on learning can impair task performance (e.g., Bunderson & Sutcliffe, 2003; Elliot & Church, 1997). In line with this perspective, interns who adopt learning goals are expected to perform better under conditions of high supervisor concern for performance (complementary fit).

For performance-oriented interns, supplementary fit may be optimal because of the incompatible ways in which competence is defined by learning and performance goal structures. Murayama and Elliot (2009) found performance-oriented students were more intrinsically motivated and had more favorable academic self-concepts in classroom environments that emphasized performance

[1] Although Chen and Mathieu (2008) found a supplementary interaction for Learning Goal × Self-Referent Feedback (a learning-oriented situational inducement), they interpreted this result as self-referent feedback activating subjects "to be concerned about performing, as opposed to learning." This plausible explanation was based on the fact that the plotted interaction was nearly identical to a complementary fit interaction for Learning Goal × Performance Frame (Chen & Mathieu, 2008: 34).

over learning. The rationale was that students who adopted prove-performance goals (emphasizing normative competence) in a learning-oriented environment (emphasizing intraindividual competence) were likely to be viewed as overly competitive or antagonistic and to have a "frustrating experience rather than an enjoyable one" (Murayama & Elliot, 2009: 442). Consistent with this view, Kristof-Brown and Stevens (2001) found performance-oriented individuals in performance-oriented teams experienced the highest levels of satisfaction and interpersonal contributions. Furthermore, in a training simulation, Dierdorff and Ellington (2012) found self-efficacy was attenuated for performance-oriented individuals in learning-oriented teams. Consequently, interns who adopt prove-performance goals are expected to perform best under conditions of high supervisor concern for performance.

Hypothesis 3a: There will be a positive interaction consistent with supplemental fit between intern learning goals and supervisor concern for performance such that interns will perform better (worse) under conditions of high (low) supervisor concern for performance.

Hypothesis 3b: There will be a positive interaction consistent with complementary fit between intern prove-performance goals and supervisor concern for performance such that interns will perform better (worse) under conditions of high (low) supervisor concern for performance.

METHODS

Research Context, Sample, and Design

Survey data were collected from intern subordinates enrolled in 10 full-time MBA programs in the United States. Typically MBA internships are used to recruit for full-time positions, much like 90-day probationary periods for new employees or other work forms where longer term employment is contingent on short-term success. For the schools in this study, internships were not required for the MBA degree, although virtually all participated to enhance their employment prospects. Interns across the 10 schools had comparable jobs (e.g., comparable consulting or financial services firms hired MBA interns from the sample schools).

To recruit MBA intern participants, career services directors were contacted at 15 schools; the 10 who agreed to invite full-time MBA students to participate sent invitation e-mails to 3,360 students about a week before internships started. The e-mail contained a link to Survey 1, which focused on intern goal orientations and demographic information. It was completed by 721 interns (22% response), comparable to similar populations (Beenen & Rousseau, 2010). The population was 36% female, had 5.0 years of experience, and reported average Graduate Management Admissions Test (GMAT) scores of 688. The sample did not differ significantly from the population in these attributes (36% female, 5.2 years of experience, 690 GMAT).

Participants worked in consulting (15%), financial services (30%), manufacturing or consumer goods/services (28%), technology or healthcare (21%), and nonprofit/utilities (6%). Survey 2 was completed 1–2 weeks after internships ended by 508 interns (70% retention) who worked for over 245 different employers (7 declined to identify employers). Survey 2 assessed interns' perceived supervisor concerns, their learning and performance outcomes, and more demographic information. Because intern goal orientations (Survey 1) and perceived supervisor concerns (Survey 2) were conceptualized in this study as both being tied to the internship, they were measured at different times so as not to contaminate one another. Participating schools would not permit any job performance data to be collected from intern employers. Consequently, interns were asked to nominate a primary supervisor to complete a brief survey to assess the validity of subordinates' self-rated performance with a nonthreatening performance criterion: the likelihood that the intern would receive a full-time job offer (from 0 to 100%). Interns nominated 101 supervisors (20%) and 72 responded. There was a US$200 lottery incentive for completing each survey, and two $200 bonus lotteries for completing both.

Measures

Validation Study With an Independent Sample of Undergraduate Interns

True to the context-specific nature of intern goal orientations and supervisor concern for learning and performance, prior goal orientation measures (Elliot & McGregor, 2001) were adapted to the internship context, and a learning index and perfor-

mance scale were developed for this study. These measures all were validated with an independent sample of undergraduate interns who completed two surveys early in their internships ($n = 216$) and a mean of 7.3 weeks later ($n = 135$). For the undergraduate validation sample, intern goal orientations and supervisor concerns for learning and performance focused on the internship context correlated with the corresponding Elliot and McGregor measures focused on a classroom context ($r = .48$ to $.80$). These measures also showed acceptable reliability ($\alpha = .75$ to $.94$) and temporal stability ($r = .59$ to $.72$), and a confirmatory factor analysis (CFA) showed the best fit for a 5-factor model (3 intern goal orientations and supervisor concerns for learning and performance; root mean square error of approximation (RMSEA) = .07; comparative fit index (CFI) = .96; incremental fit index (IFI) = .96; $\chi^2[df: 80] = 136.18$, $p < .001$). The intern learning index was strongly correlated with Lankau and Scandura's (2002) personal learning scale ($r = .66$), and the intern performance scale correlated with Williams and Anderson's (1991) task performance scale ($r = .46$) and was reliable ($\alpha = .94$). A CFA showed the best fit for a 2-factor model for intern learning and performance (χ^2 [df: 89] = 304.07. RMSEA = .10, CFI = .96, IFI = .96). Further details on validity and reliability of the same measures for the present study sample are reported below. All scale items may be obtained from the author.

Intern Learning and Performance Goal Orientations

Elliot and McGregor's (2001) 3-item subscales (intended for college course contexts) were adapted for the internship context. Since pretesting showed MBA interns are very attentive to achieving high levels of learning and performance, superlative language was used to reduce ceiling effects (e.g., "I am *highly motivated* to learn new skills *over and above* what will be required in my internship." 1 = *strongly disagree* to 7 = *strongly agree*).

The prove-performance goal orientation (PPGO) and avoid-performance goal orientation (APGO) scales had acceptable reliability ($\alpha = .85$ and $\alpha = .82$). The learning goal orientation (LGO) scale had lower reliability ($\alpha = .62$) than the validation sample ($\alpha = .78$), which may reduce the strength of reported effects (Cortina, 1993). Similar samples showed lower reliability with learning goals including MBA applicants using Elliot and McGregor's (2001) scale ($\alpha = .66$, $n = 5{,}305$; GMAC, 2005) and undergraduates using Button et al.'s (1996) scale ($\alpha = .70$, $n = 443$).

Supervisor Concerns for Learning and Performance

Subordinate reporting was the best way to measure this perceptual construct. An example item from the supervisor concern for learning scale is "My supervisor helped me learn new skills that went beyond what I needed to do my work." (1 = *strongly disagree;* 6 = *strongly agree*).

The supervisor concern for learning (SCL) and supervisor concern for performance (SCP) subscales were reliable ($\alpha = .88$ and $.89$) and were administered in Survey 2 so subordinates could use their entire internship experience as a frame of reference to evaluate supervisor concerns. This reduced the likelihood that interns' learning and performance goal orientations would influence their perceived supervisor concerns.

Intern Learning and Performance

Because this study aimed to address employer interests with regard to MBA learning, a 10-item self-reported learning index also was developed to assess changes in 10 key skills employers considered as both important and deficient in MBA graduates (GMAC, 2006; e.g., interpersonal skills, leadership skills, negotiation skills, thinking strategically about business problems). Although there are limitations to self-reported cognitive learning in classroom settings (Sitzmann, Ely, Brown, & Bauer, 2010), self-reported intern learning was appropriate for this study for several reasons. First, learning in this study entailed substantial interpersonal skills content which has higher self-rated accuracy than cognitive learning (Sitzmann et al., 2010). Second, MBA interns are more familiar with their own skill changes than supervisors who had no prior knowledge of interns' skill levels. Third, explicit self-reported learning measured by an index correlates strongly with objective skill changes (Honkimaki, Tynjala, & Valkonen, 2004). Based on pretesting, an asymmetrical scale was used (−2 = *worse*, to *0 = not changed*, to +2 = *moderately improved to* +4 = *very much improved*) to account for neutral or positive skill changes being more likely than negative changes. This variable was converted to a 1–7-point scale by adding three to each item to aid interpretation.

The intern learning index was administered in Survey 2 with good reliability (α = .89). "Negotiation skills" were least improved (M = 3.79, SD = 1.01, between *not changed* and *a little improved*), and "thinking strategically about business problems" was most improved (M = 4.96; SD = 1.16, *moderately improved*). Inflated skill changes did not appear to be an issue with the measure or sample.

Since participating schools would not permit collection of job performance data from employers, an independently validated 5-item self-reported job performance scale appropriate for the internship context was developed for this study. Prior research showed self-appraised performance correlates strongly with supervisor appraisals (r = .78; Farh, Werbel, & Bedeian, 1988), although recent meta-analytic results showed a moderate correlation (ρ = .34; Heidemeier & Moser, 2009). Interns assessed their work quality (e.g., "my analytical work"; "work deliverables I completed during my internship"). Comparative anchors were used ("compared to others your employer may consider hiring": 1 = *far below average* to 7 = *far above average*) to improve rating accuracy (Olson, Goffin, & Haynes, 2007). The scale was validated by testing if it predicted an objective indicator of performance: supervisor reports of whether an intern received a full-time job offer (job offer 1) at the end of the internship. A logistic regression (0 = no job offer, 1 = job offer) was run that controlled for other potential predictors of a job offer, including the intern's Time 1 motivation to accept such an offer (1 = *highly unlikely to accept an offer*, 6 = *highly likely to accept an offer*), and Time 2 person–organization (P–O) fit (Saks & Ashforth, 2002). Controlling for these other possible predictors of a job offer, the logistic regression showed each 1-point increase in the performance scale yielded a 212% higher likelihood of a job offer (N = 72, log odds = 2.12, $p < .05$). The same result was found for an intern's own report of receiving a full-time job offer (job offer 2). Thus, the job performance scale accurately predicted whether an intern received a job offer beyond P–O fit and motivation to accept such an offer, thereby supporting its validity.

Controls

To control for qualitative differences in ranking between schools (e.g., top 5 vs. top 30), an ordinal variable ranked each school's quality into five groups corresponding to *US News and World Report* rankings (2007, 2008). The five groups included schools ranked in the top 5 (n = 87); top 6–10 (n = 108); top 11–15 (n = 156); top 16–19 (n = 33); and top 20–30 (n = 124). This approach conserved degrees of freedom in the regression models by using one ordinal variable instead of nine dummy variables to represent each school. Self-reported Graduate Management Admissions Test (GMAT) scores (a valid indicator of actual scores (GMAC, 2006) collected at Time 1 controlled for individual differences in ability that could affect learning or performance (e.g., someone with higher ability may learn less).

Steps to Address Common Method Variance

Steps taken to reduce potential common method variance from self-report measures (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003), included 12–14 weeks between Surveys 1 and 2; random order of scale items; different anchors for predictors and dependent measures; validation of the performance measure using an objective criterion (noted above); and testing if a common method factor improved model fit (see below).

Confirmatory Factor Analysis

A CFA was done with a 7-factor model representing intern learning, prove-performance and avoid-performance goal orientations (LGO, PPGO, APGO; three factors); supervisor concerns for learning and performance (SCL, SCP; two factors); and intern learning and performance (two factors). Reasonable model fit is indicated with RMSEA less than .08, and Tucker-Lewis index (TLI), IFI and CFI above .90. The 7-factor model had good fit (RMSEA = .045; TLI = .97; CFI = .97; IFI = .97; $\chi^2[df: 303] = 616.09$, $p < .001$). To assess common method variance, a latent methods factor was added to the 7-factor model (Podsakoff et al., 2003). This model had good fit (RMSEA = .039; TLI = .98; CFI = .98; IFI = .98; $\chi^2[df: 347] = 613.05$), although not significantly better than the 7-factor model (χ^2 = 3.04 with Δdf = 43, *ns*). Thus common method variance was not an issue.

Mediation Analysis

Ordinary least-squares (OLS) regression with bootstrapping was used (Edwards & Lambert, 2007) to test Hypotheses 1 and 2. Tests of mediation guided by Baron and Kenny's (1986) approach require the independent variable to have a direct effect on the

TABLE 1
Means, Standard Deviations, and Correlations of Study Variables

Variable	*M*	*SD*	1	2	3	4	5	6	7	8	9	10	11
1. LGO	*5.76*	*0.84*	(.62)										
2. PPGO	*5.09*	*1.32*	.30**	(.85)									
3. APGO	*3.90*	*1.74*	.01	.18***	(.82)								
4. SCL	*4.16*	*1.06*	.08	.04	.02	(.88)							
5. SCP	*4.55*	*1.03*	−.03	.10*	.05	.64**	(.89)						
6. Intern learning	*4.43*	*0.82*	.19**	.09*	−.03	.48**	.35**	(.89)					
7. Intern perf.	*5.58*	*0.81*	.13**	.13**	−.09×	.32**	.31**	.35**	(.82)				
8. Job offer 1 (1 = yes)	*39%*	—	−.12	.15	.01	.12	.18	.08	.23	—			
9. Job offer 2 (1 = yes)	*44%*	—	.03	.12**	.06	.16***	.23***	.10*	.13**	.60***	—		
10. GMAT score	*690*	*131*	−.11**	−.01	−.14**	.04	−.00	−.12**	−.04	.21	.04	—	
11. School rank	*3*	*1.39*	.11*	−.02	.06	12**	.00.	.16***	.14***	−.19	.16***	−.30***	—

Note. $N = 72$ for job offer 1. $N = 508$ for all other variables. Reliability coefficients displayed on diagonal. LGO = intern learning goal orientation; PPGO = intern prove-performance goal orientation; APGO = intern avoid-performance goal orientation; SCL = supervisor concern for learning; SCP = supervisor concern for performance. Job offer refers to whether the supervisor (Job offer 1) and the subordinate (Job offer 2) reported a full-time job offer would be made to the intern.

*$p < .05$. **$p < .01$. ***$p < .001$. Two-tailed tests.

dependent variable. Shortcomings with this approach show a significant direct effect is not required for mediation (Kenny, Kashy, & Bolger, 1998; MacKinnon, Fairchild, & Fritz, 2007). As the mediation process becomes more distal (e.g., through use of longitudinal data), the *X* to *Y* association typically decreases in size due to competing causes and random factors (Shrout & Bolger, 2002). With the present sample, the direct effect of an intern learning goal (Time 1) on performance (Time 2) would not be required to show mediation (Hypothesis 1a).

The SPSS MEDIATE macro developed by Hayes & Preacher (in press) was used to test mediation since it relies on bootstrapping. The Sobel (1982) test commonly has been used as an alternative significance test of the indirect effect of the independent variable through the mediator (*ab*). Since this test assumes *ab* is normally distributed and the distribution of *ab* has been demonstrated to be non-normal (even when *a* and *b* are normally distributed), bootstrapping is recommended over the Sobel test (Edwards & Lambert, 2007). Bootstrapping allows one to avoid Type I errors that may result from non-normal distributions of an indirect effect (MacKinnon, Lockwood, & Williams, 2004).

Interaction analysis was used to test supplementary fit (LGO × SCL; PPGO × SCP) and complementary fit (LGO × SCP; PPGO × SCL) between intern goals and supervisor concerns.

RESULTS

Descriptive Statistics

Table 1 displays means, standard deviations and correlations for study variables. Intern goal orientations and supervisor concerns for learning and performance were weakly correlated (LGO and SCL = .08, *ns*; PPGO and SCP: $r = .10$, $p < .05$), showing intern goal preferences (Survey 1) did not appear to influence perceptions of supervisor concerns (Survey 2). Since supervisor concerns for learning and performance were strongly correlated ($r = .64$), collinearity was assessed with the variance inflation factor (VIF), which should be below 6 or 7 (Cohen & Cohen, 1983). The variance inflation factor was less than 2.

Tests of Hypotheses

Hypotheses 1a–c predicted intern learning would mediate the intern learning goal–performance relationship, while performance goals would only have direct effects on intern performance. Hypotheses 2a, 2b made similar predictions for supervisor concerns for learning and performance. As shown by results displayed in Table 2, and Figure 1,[2] Hypotheses 1 and 2 were supported.

[2] SEM analysis yielded the same results as the OLS analysis for Hypotheses 1 and 2.

TABLE 2
Hierarchical Regression Models for Testing Mediation of Intern Learning on the Relationship of Intern Learning Goal Orientations and Supervisor Concern for Learning on Intern Performance (Hypotheses 1a–c, 2a, b)

Model and variables	*B*	*SE*	*T*	
Direct and total effects				
(1) Intern performance $R^2 = .16^{***}$				
Constant	3.725	0.37	10.06	
GMAT	−0.004	0.007	−0.55	
School rank	0.063	0.025	2.51*	
LGO	0.072	0.042	1.71	
PPGO	0.068	0.027	2.53*	
APGO	−0.06	0.02	−3.09**	
SCL	0.132	0.042	3.16**	
SCP	0.151	0.043	3.53***	
(2) Intern learning $R^2 = .28^{***}$				
Constant	2.377	0.349	6.83	
GMAT	−0.019	0.007	−2.67**	
School rank	0.042	0.024	1.78	
LGO	0.13	0.04	3.27***	
PPGO	0.022	0.025	0.88	
APGO	−0.033	0.018	−1.78	
SCL	0.315	0.039	8.03***	
SCP	0.077	0.04	1.91	
(3) Intern performance $R^2 = .20^{***}$				
Constant	3.24	0.38	8.53	
GMAT	−.000	0.007	−0.04	
School rank	0.055	0.025	2.19*	
Intern learning	0.202	0.047	4.34***	
LGO	0.046	0.042	1.09	
PPGO	0.064	0.027	2.41*	
APGO	−0.054	0.019	−2.79**	
SCL	0.068	0.044	3.22	
SCP	0.136	0.042	2.19***	
Bootstrap results for indirect effects through intern learning	Effect	*SE*(boot)	**LL** 95% CI	**UL** 95% CI
LGO	0.026	0.01	**0.009**	**0.049**
SCL	0.063	0.017	**0.034**	**0.101**

Note. $N = 508$. Unstandardized regression coefficients reported. Bootstrap sample size = 5,000. GMAT = self-reported GMAT score. LGO = intern learning goal orientation; PPGO = intern performance-prove goal orientation; APGO = intern avoid-performance goal orientation; SCL = supervisor concern for learning; SCP = supervisor concern for performance; LL = lower limit; UL = upper limit.
*$p < .05$. **$p < .01$. ***$p < .001$.

Three models were run to test mediation: (1) a total effects model with intern performance regressed on intern goals and supervisor concerns; (2) intern learning regressed on intern goals and supervisor concerns; (3) and an indirect effects model with intern performance regressed on learning, controlling for intern goals and supervisor concerns. The bootstrap generates lower and upper level 95% confidence intervals for the indirect effects of the independent variables. For mediation to occur, intern learning goal (LGO) and supervisor concern for learning (SCL) must predict learning in Model 2, learning (although not LGO and SCL) must predict performance in Model 3 (Kenny et al., 1998), and confidence intervals for LGO and SCL in Model 3 must exclude zero (Edwards & Lambert, 2007; Hayes & Preacher, in press).

In Model 1, PPGO ($B = .07$, $t = 2.53$, $p < .05$); SCP ($B = .15$, $t = 3.53$, $p < .001$); and SCL ($B = .13$, $t = 3.16$, $p < .01$) were related to intern performance, and APGO was negatively related to intern performance ($B = -.06$, $t = -3.09$, $p < .01$). Learning goal orientation (LGO) had a nearly significant relationship to performance ($B = .07$, $t = 1.71$, $p = .09$). Intern goal orientations and supervisor concerns, respectively, predicted 3.9 and 10.8% of the variance in performance in Model 1 ($p < .001$). In Model 2, only LGO ($B = .13$, $t = 3.27$, $p < .01$) and SCL

($B = .32$, $t = 8.03$, $p < .001$) were related to intern learning. Intern goal orientations and supervisor concerns, respectively, predicted 3.4 and 21.9% of the variance in performance in Model 2 ($p < .001$). In Model 3, only PPGO ($B = .06$, $t = 2.41$, $p < .05$); APGO ($B = -.05$, $t = -2.79$, $p < .01$); SCP ($B = .14$, $t = 2.19$, $p < .05$); and intern learning ($B = .20$, $t = 4.34$, $p < .001$) were related to performance, and only the confidence intervals for LGO (.01–.05) and SCL (.03–.11) excluded zero. Learning predicted 3% of the variance in performance in this model ($p < .001$). An alternative model with performance as the mediator and learning as the dependent variable did not support mediation. This result supports the mediation hypotheses for intern learning goal and supervisor concern for learning (H1a, H2a). Subordinate avoid-performance goal also had a nearly significant negative relationship to learning in Model 2 ($B = -.03$, $t = -1.78$, $p = .08$). Thus, intern performance goals and supervisor concern for performance had only direct relationships to intern performance (H1b, c; H2b).

Note that interns at lower ranked schools rated their performance higher than those at higher ranked schools. This effect did not appear to be an artifact of the self-report performance measure since school rank and performance had a similar correlation ($r = .14$, $p < .001$) as school rank and full-time job offer (an objective indicator of performance; $r = .13$, $p < .001$). Also interesting is that GMAT scores were negatively associated with learning, which suggests interns higher in ability reported less learning.

Hypotheses 3a and 3b, respectively, predicted complementary and supplementary fit interactions for intern goals and supervisor concerns for performance. Coefficients, standard errors, and significance levels for the interaction coefficients are displayed in Table 3, and plotted interactions are displayed in Figures 2 and 3. To test both hypotheses, four interaction terms using centered variables (Aiken & West, 1991) were added to Model 2, which predicted performance (cf. Table 2): two complementary fit (LGO × SCP; PPGO × SCL) fol-

TABLE 3
Hierarchical Regression Models for Testing Interactions of the Effects of Goal Orientations and Supervisor Concerns on Intern Performance (Hypotheses 3a, 3b)

Step and predictor	1	2	3	4	5	6
1. Control variables						
School rank	.08** (.03)	.08** (.03)	.06* (.03)	.07* (.03)	.07** (.03)	.07** (.03)
GMAT	.00 (.01)	.00 (.01)	.00 (.01)	.00 (.01)	−.01 (.01)	.00 (.01)
2. Intern goal orientations						
LGO		.07† (.04)	.07† (.04)	.07 (.04)	.07 (.04)	.08† (.04)
PPGO		.08** (.03)	.07* (.03)	.07* (.03)	.07** (.03)	.07* (.03)
APGO		−.06** (.02)	−.06** (.02)	−.06** (.02)	−.06** (.02)	−.06** (.02)
3. Situational inducements						
SCL			.13*** (.04)	.14*** (.04)	.14*** (.04)	.15*** (.04)
SCP			.15*** (.04)	.15*** (.04)	.15*** (.04)	.18*** (.04)
4. Complementary interactions						
LGO × SCP (H3a)				−.02 (.03)	−.04 (.04)	−.07† (.04)
PPGO × SCL				−.03 (.04)	−0.0045	−0.0055
5. Supplementary interactions						
LGO × SCL					.01 (.04)	.03 (.04)
PPGO × SCP (H3b)					.10* (.04)	.11* (.04)
6. Post hoc interactions						
LGO × PPGO						.05 (.03)
SCL ×SCP						.06* (.02)
LGO × GMAT						−.03 (.03)
R^2	.02**	.06***	.17***	.17***	.18***	.19***
Adjusted R^2	0.02	0.05	0.15	0.15	0.16	0.17
ΔR^2		.04***	.11***	0	.01†	.02*

Note. $N = 508$. Unstandardized regression coefficients and standard errors are reported. Bootstrap sample size = 5,000. Abbreviations: GMAT = self-reported GMAT score; LGO = intern learning goal orientation; PPGO = intern performance-prove goal orientation; APGO = intern avoid-performance goal orientation; SCL = supervisor concern for learning; SCP = supervisor concern for performance; LGO = learning goal orientation.

†$p \leq .1$. *$p < .05$. **$p < .01$. ***$p < .001$.

lowed by two supplementary fit interactions (LGO × SCL; PPGO × SCP). A significant positive interaction supported the supplementary fit hypothesis (PPGO × SCP; $t = 2.29$; $p < .05$; see Figure 2a). Also, a significant negative interaction between performance-oriented interns and supervisor concern for learning (PPGO × SCL; $t = -1.99$, $p < .05$) suggested a mismatch effect for performance-oriented interns and supervisor concern for learning. The plotted interaction (Figure 2b) showed performance-oriented interns were not impaired by supervisor concern for learning, they merely did not benefit from it. The results support Hypothesis 3b, but not 3a.

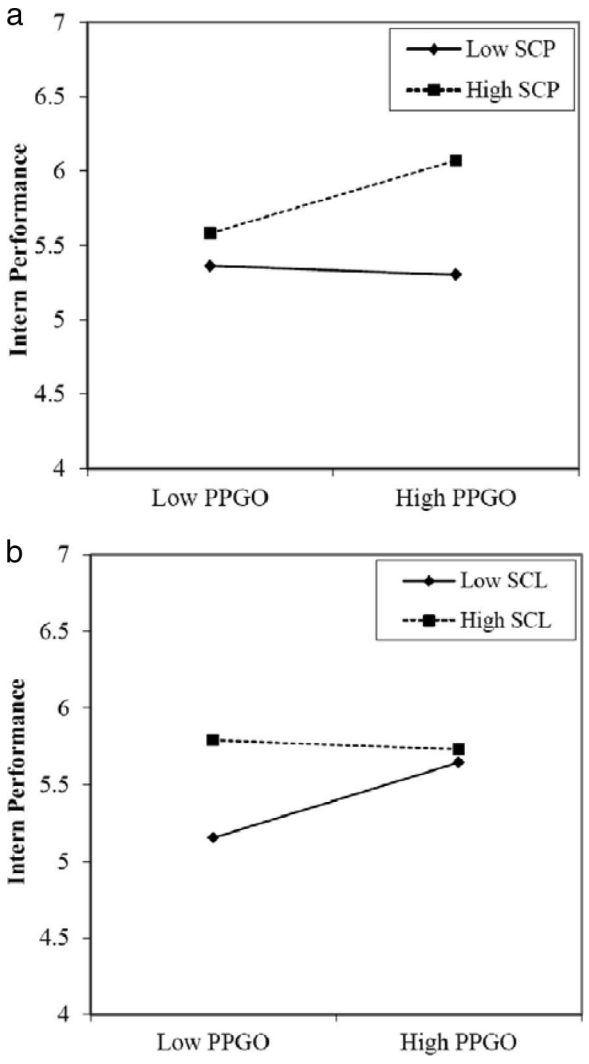

FIGURE 2
a. Plotted Interaction for Intern Prove-Performance Goal × Supervisor Concern for Performance (PPGO × SCP; Hypothesis 3b). b. Plotted Interaction for Intern Prove-Performance Goal × Supervisor Concern for Learning (PPGO × SCL; Hypothesis 3b)

Post Hoc Test for Interactions

Three interactions were tested as possible replications of prior findings including both intern goal interactions (LGO × PPGO; see Barron & Harackiewicz, 2001), situational inducement interactions (SCL × SCP; see Chen & Mathieu, 2008), and intern learning goal and cognitive ability (LGO × GMAT; see Bell & Kozlowski, 2002). Replicating Chen and Mathieu (2008), supervisor concerns for learning and performance (SCL × SCP) had significant interactive effects on performance ($t = 2.15$, $p < .05$; see Figure 3).

DISCUSSION

This study showed that both MBA students' goal orientations and their perceived supervisor concerns for learning and performance independently and interactively predicted their internship learning and performance. Measuring both outcomes here provided a more complete picture of success for MBA interns. As expected, learning mediated the learning goal–performance relationship. Interns' prove-performance and avoid-performance goals had only direct positive and negative relationships to performance.

A novel finding was that interns' perceptions of

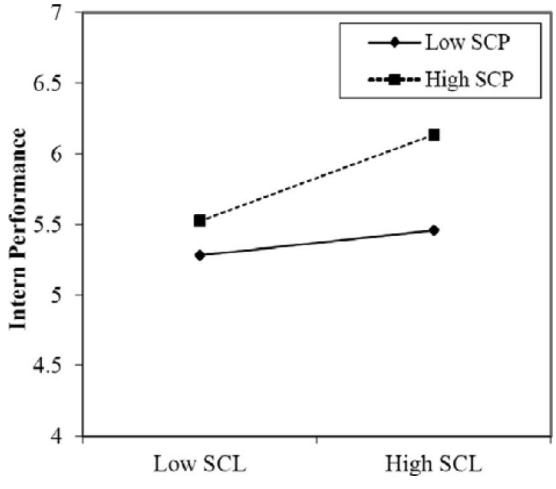

FIGURE 3
Post Hoc Plotted Interaction of Supervisor Concern for Learning × Supervisor Concern for Performance (SCL × SCP)

their supervisors' concerns for learning and performance appear to have acted as situational inducements that explained unique variance in these outcomes, beyond interns' own goal orientations. This finding was bolstered by the fact that intern goal orientations and supervisor concerns for learning and performance were only weakly correlated, indicating interns did not merely project their own goals onto their supervisors. Supervisor concerns also seemed to have a relatively stronger impact on intern learning and performance than interns' own goal orientations. When entering each set of goals separately into the regression models, supervisor concerns predicted 21.9% of the variance in learning (vs. 3.4% for intern goals) and 10.4% of the variance in performance (vs. 4% for intern goals). This may be due to the fact that intern goals were measured just before the internship, and supervisor concerns were measured at the end. It also is possible that perceived supervisor concerns had such a strong influence on interns during their work experience that it diminished the effects of interns' own pre-entry goal orientations.

This study also was among the first to test complementary and supplementary interactions between goal orientations and situational inducements in the form of supervisor concerns for learning and performance. The results were consistent with prior studies supporting a supplementary fit perspective for intern prove-performance goal and supervisor concern for performance (PPGO $\times$ SCP; see Murayama & Elliot, 2009; Kristof-Brown & Stevens, 2001). A mismatch effect when an intern prove-performance goal was paired with supervisor concern for learning (PPGO $\times$ SCL) replicated a similar mismatch effect in a training simulation for performance-oriented individuals in learning-oriented teams (Dierdorff & Ellington, 2012). It should be noted the plotted interaction suggests performance-oriented interns merely did not benefit from supervisor concern for learning (see Figure 3a).

Although a supplementary fit perspective that paired an intern learning goal with supervisor concern for performance was not supported, a post hoc interaction between supervisor concern for *both* learning and performance (SCL $\times$ SCP) was consistent with the logic of a balanced emphasis on both learning and performance. Chen and Mathieu (2008) had a similar result for two situational inducements, a learning goal frame combined with normative feedback (an inducement consistent with a performance goal), and a performance goal frame combined with self-referent feedback (an inducement consistent with a learning goal). In this study, situational inducements were from the same referent (i.e., perceived supervisory concerns).

This study adds to prior findings (e.g., Chen & Mathieu, 2008; Dierdorff & Ellington, 2012; Kristof-Brown & Stevens, 2001; Murayama & Elliot, 2009) that suggest a balanced emphasis on both learning and performance may operate differently when considering individual goal orientations, situational inducements that activate learning and performance mind-sets, and the combination of both. On the one hand, the positive effect of a prove-performance goal was amplified when combined with supervisor concern for performance, and unaffected when combined with supervisor concern for learning. On the other hand, supervisors advocating a balance of learning and performance activities had multiplicative effects on intern performance. Given the critical role of self-regulatory processes in achievement goals (e.g., Kozlowski & Bell, 2006), further research needs to identify how an intern's own goal orientations and situational inducements such as supervisor concerns may activate distinct self-regulatory patterns. Consistent with recent theory development on the activation of state goal orientations in teams and organizations (e.g., Chadwick & Raver, in press; Dragoni, 2005), it may be possible that supervisor concerns for learning and performance activate state goal orientations in subordinates that operate independently and interdependently with their own goal orientations.

Two findings were noteworthy concerning the relationship of the control variables (GMAT scores and school rank) to learning and performance. First, GMAT scores were negatively related to intern learning. It is possible that higher ability students expected less on-the-job learning, and lower ability students expected to learn more. Second, interns from more prestigious schools reported lower performance than those from less prestigious ones. Interns from lesser ranked schools may have worked harder to achieve full-time job offers than higher ranked ones. Future researchers may consider whether an "underdog" effect led those from less known institutions to work harder to overcome the lower reputational capital of their institutions.

Limitations, Future Research, and Contributions

This study relied on a voluntary versus randomly selected sample. Nonetheless, the sample participants were representative of the population of MBA

interns in the 10 participating schools and worked for over 245 organizations in industries underrepresented in organizational research (O'Leary & Almond, 2009). Future studies can extend these findings to undergraduate interns.

Self-reported measures in this study could be vulnerable to both common methods and cognitive biases, and may have limitations in assessing learning (Sitzmann et al., 2010). Yet, steps were taken to help ensure against such effects (Podsakoff et al., 2003). Self-report provided the most accurate measure for the constructs. For example, participants were most qualified to assess their own goals and learning, and people can accurately report objective changes in their own skills (Honkimaki et al., 2004). Both the intern learning index and performance scales were validated with an independent sample of undergraduate interns and converged with other well-established measures. Furthermore, much of the learning index content was interpersonal (e.g., leadership, negotiation), which provides an objectively more accurate self-assessment than cognitive or psychomotor content (Sitzmann et al., 2010). The intern performance measure also predicted supervisor reports of whether an intern received a full-time job offer, even after controlling for intern motivation to accept a job offer and P–O fit (Saks & Ashforth, 2002) with the employer. Intern goal orientations and supervisor concerns for learning and performance had weak correlations, so interns did not project their own goals on supervisors. Nonetheless, future studies should try to replicate these results with supervisor-rated performance, and measures of both objective and subjective learning outcomes.

Another potential limitation is that supervisor concerns were measured at the same time as intern learning and performance. This gave subordinates an opportunity to assess their perceptions of supervisors over their entire 8–12 week job, and to prevent the comingling of both types of goals measured here. However, it may account for stronger effects of supervisor concerns versus intern goals on the outcomes. It also raises the possibility of reverse causality—that subordinates' learning or performance may have been a cause, and not an effect, of their perception of supervisor concerns. Although this possibility cannot be eliminated completely, it seems implausible, as it conflicts with the fundamental attribution error—that people tend to attribute successful outcomes to their own efforts, and unsuccessful outcomes to external factors (Gilbert & Malone, 1995). Also, alternative mediation models with learning as a consequence of performing did not meet conditions for mediation. Researchers should consider measuring intern goal orientations and perceived supervisor concerns for learning and performance at the same time, and exploring whether supervisor concern may influence interns' goal orientations.

Only one form of avoidance goal (intern avoid-performance) was measured here. Future researchers should consider including both performance and learning-avoid goals for interns and possibly for supervisor concerns. Also, intern learning was the only mediating variable measured in this study. Future studies should examine other possible mediators, including perceived competence and intern self-regulation.

Finally, stability of intern goal orientations is another concern, as goal preferences may have changed after they started their jobs. Yet, their initial goal orientations did predict learning and performance 12–15 weeks later, and test–retest reliability with an independent validation study showed reasonable stability. Future research should clarify why LGO measures have had lower reliability and temporal stability in this study and others (Button et al., 1996; Chen & Mathieu, 2008; GMAC, 2005; Payne et al., 2007). Lower reliability may understate the effects of LGO (Cohen & Cohen, 1983), as correcting for attenuation puts true correlations between LGO and learning and performance respectively at $r = .26$ (vs. .19) and $r = .18$ (vs. .13). Researchers also may want to consider investigating factors that influence and potentially change interns' goal orientations during the internship. For instance, it would be interesting to know whether simultaneous focus on both learning and performance goals, or shifting from learning to performance orientations at the midpoint of the internship may help interns acquire skills they need to perform well (Gersick, 1989; Miron-Spektor & Beenen, 2012). It also is possible that like college students, interns become more performance oriented over time as the consequences of high performance become more salient to them (Lieberman & Remedios, 2007).

This study makes a number of important contributions to research on goal orientations and internships in management education. First, it extends prior internship research that focused exclusively on undergraduates, (e.g., D'Abate et al., 2009; Liu et al., 2011; Narayanan et al., 2010; Rothman, 2003), by investigating goal orientations

as motivational antecedents of two success indicators for MBA interns—learning and performance. While prior studies with undergrads investigated learning as a predictor of intern satisfaction (D'Abate et al., 2009; Narayanan et al., 2010), this study investigated what motivates MBA intern learning. In this regard, it also addresses the research–practice gap in management education (e.g., Navarro, 2008; Rubin & Dierdorff, 2011; Rousseau, 2012) by showing goal orientations matter in a setting that combines learning and practice, and by providing tools to assess them. The practical significance of this study is further highlighted by the fact that learning was measured in terms of specific skills that employers seek, yet often find lacking, from MBA graduates (e.g., interpersonal skills, leadership skills, communication skills, negotiation skills; GMAC, 2006). Future research should consider different kinds of learning specific to the internship. For instance, interns could have learning goals focused on organizational features relevant for future employment (e.g., promotion and reward systems, formal and informal organizational structure; Beenen & Pichler, in press). Consistent with Dweck's (1986) view that goal orientations are domain-specific, different types of learning orientations may predict different types of learning (i.e., task learning, employer learning).

Second, this study extends both goal orientation and internship research by demonstrating the mediating role of intern learning in the learning orientation–performance relationship in an important management education setting. Prior research tested this mediating effect in training settings or experiments (e.g., Hertenstein, 2001; Kozlowski et al., 2001), not in a field setting with organizational newcomers. Interns who were motivated to learn or had supervisors perceived to advocate learning, performed better because they subjectively experienced improvements in problem solving, decision making, and interpersonal skills. Future research should investigate what mediates the performance goal–performance relationship in internships. Prior internship research showed the importance of impression management from an employer perspective (Zhao & Liden, 2011). Performance-oriented interns are motivated to prove themselves to others, which may activate impression management behavior. Managing their supervisors' impressions by making sure supervisors are aware of their performance accomplishments may be a mediating factor in the performance goal–performance relationship.

Third, this study broke new ground by showing supervisor concerns for learning or performance acted as situational inducements (Chen & Mathieu, 2008) that influenced interns' motivation to learn and perform, above and beyond their own goal orientations. It also highlighted the relevance of a newcomer socialization perspective for studying both interns (e.g., Beenen & Rousseau, 2010; Liu et al., 2011) and goal orientations by emphasizing the supervisor's role in setting learning and performance expectations for interns. Future research should investigate whether supervisor concern for learning and performance are rooted in supervisors' trait learning and performance goals.

Fourth, consistent with prior research (Kristof-Brown & Stevens, 2001; Murayama & Elliot, 2009), a supplemental fit view of intern prove-performance goals and supervisor concern for performance was supported. This result also was consistent with a view advocated by some educational researchers (e.g., Elliot & Church, 1997) that performance goals can be adaptive. A balanced emphasis on learning and performance was synergistic as situational inducements in the form of supervisor concerns for both outcomes, which also was consistent with prior research (Chen & Mathieu, 2008). Future research should investigate whether intern goal orientations and supervisor concerns activate distinct self-regulatory patterns.

Finally, two unanticipated findings are worth further study—the fact that ability negatively predicted learning, and a potential "underdog" effect where interns from less prestigious schools seemed to outperform those from more prestigious schools. Researchers may want to test if higher ability interns exert less effort to learn and perform, or if performance expectations for interns differ across schools. For instance, interns from more prestigious schools (and their supervisors) may have relatively higher expectations.

Implications for Business Schools, MBA Interns, and Employers

This study has important implications for business schools, interns, and hiring employers—before, during, and after internships are completed. Business school faculty and career services professionals should encourage students to better understand their own motivation before starting internships. The fact that both forms of approach goals had positive effects on performance, and only learning goals had mediating effects through

learning, suggests interns may benefit from a "learn-perform" mind-set by adopting both goal orientations. Business schools can foster a "learn-perform" mind-set by offering students pre-entry assessment and training that is integrated into the new student orientation and socialization activities common to most MBA programs. For instance, students can be encouraged to set specific, challenging goals aligned with their personal learning and performance objectives to increase their chance of success (Locke & Latham, 2002). Students can be advised to concentrate their learning on skills that will help them perform. Training interventions can use social learning through peer-mentoring programs, testimonials from previous interns and intern supervisors, role playing, and case studies of actual internship experiences. Engaging recent intern "alums" in this process will provide them with opportunities to reflect and learn from their experiences while mentoring the "incoming class" of future interns. Peer mentoring can occur during internships, as successive generations of intern "alums" become the next generation of mentors.

Consistent with research in work settings (Porath & Bateman, 2006), avoid-performance goals demonstrated maladaptive qualities, including a negative relationship to performance and a nearly significant negative relationship to learning. The assessment and training interventions suggested above should incorporate activities that help students recognize and reverse these negative effects as early as possible.

Business school advisers and employers who supervise interns need to know that the concerns they signal to interns can act as situational inducements to influence their learning and performance. Prior internship research showed supervisory or faculty support impacts intern satisfaction (D'Abate et al., 2009; Liu et al., 2011; Narayanan et al., 2010). This study extends these findings to interns' motivation to learn and perform. On the one hand, internship supervisors should be advised to promote a "learn-perform" mind-set by advocating both goals. Supervisors can ensure their expectations and behaviors send a consistent signal that demonstrates concern for intern learning by providing key resources (e.g., mentoring, access to expertise), constructive feedback, and guiding their focus toward job-relevant skills. They can signal concern for intern performance by clarifying evaluation standards through formal and informal feedback that helps interns identify corrective measures to ensure standards are met. Intern supervisors who promote both concerns may help interns maintain a balanced understanding of the importance of both outcomes by focusing their effort and attention on acquiring skills that are instrumental to their performance (Elliot & Church, 1997). On the other hand, given this study's support of supplementary intern–supervisor fit for performance goals (Kristof-Brown & Stevens, 2001; Murayama & Elliot, 2009), supervisors should be advised of potential "misfits" when advocating learning goals for performance-oriented interns. One approach supervisors can use is to advocate learning goals that encourage interns to acquire performance-enhancing knowledge and skills, while concurrently encouraging them to learn from mistakes (Edmondson, 1999). This should safeguard against "misfits" between performance-oriented interns and supervisors that advocate learning.

This study challenges a prevailing view in organizational research that learning goals are more "adaptive" than performance goals (e.g., Porter et al., 2010: 935), and supports an alternative view advocated by some educational researchers that prove-performance goals also can be adaptive (e.g., Elliot, 1999; Elliot & Church, 1997). By shedding light on MBA intern motivation, this study suggests attention to both learning and performance is an optimal strategy for interns and supervisors.

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