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Too little of a good thing? How organizational learning contracts can refocus B-schools on the business of learning ☆

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ABSTRACT

The distractions of higher rankings and better facilities are diluting business schools from their intended focus on facilitating student learning. We propose organizational learning contracts (OLCs) can help B-schools regain their focus by creating shared expectations about the roles and responsibilities of relevant parties in regards to learning. We show students at an institution with a stronger OLC displayed more effective, self-regulated conceptions of the learning process (e.g., being self-motivated, seeking feedback), and less conventional beliefs regarding how to learn (e.g., attending class, doing homework). Given these benefits, we discuss how to implement an OLC, and its implications for management education.

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Business education around the globe is undergoing a legitimacy crisis in regards to student learning (e.g., Ghoshal, 2005; Pfeffer & Fong, 2002; Rousseau, 2012). Business schools have been criticized for not preparing managers for their future challenges (Datar, Garvin, & Cullen, 2010), for inadequately addressing the gap between the skills that employers expect and the training that MBA graduates receive (GMAC, 2005; Navarro, 2008; Rubin & Dierdorff, 2009, 2011), for producing research of limited use to practicing managers (Rousseau, 2012), and for failing to teach critical thinking skills to undergraduates (Korn, 2012). At the same time, a two-year MBA degree from a top tier private school now costs over US$250,000, including opportunity costs for lost wages (Harvard Business School, 2012). Yet, ask MBA students what they expect from an MBA program and clear specific expectations about the learning process, learning outcomes or how to become a competent manager are noticeably lacking. A recent survey of U.S. and Canadian MBA applicants showed career advancement trumps learning as the most important reason for pursuing an MBA degree (GMAC, 2010). Consequently, business schools have engaged in a never ending race to attract the most talented students who can help institutions boost their own rankings through higher salaries and better job placement (Pearce, 2007). It comes as no surprise that given these misplaced priorities that are diverting attention away from learning, there is a growing perception that business schools have lost their way.

A key implication of these misplaced priorities is that business schools need to regain their focus on the business of learning. That is, the current obsession with recruiting smarter students, achieving higher rankings and building better facilities needs to be transformed. Business schools would do well to put student learning back in the spotlight. They need to create an environment that encourages students to be more engaged and focused on the learning process.

The goal of this paper is to show how organizational learning contracts can help business schools do just that. An organizational learning contract (OLC) is a shared understanding among faculty, staff, and students about the roles and responsibilities pertaining to learning (Goodman, 2011; Goodman & Beenen, 2008). These shared understandings include what to learn, how to learn, where, when and why. To this end, an OLC can help redirect a B-school's effort and attention to its focal mission of enabling student learning. More specifically, we show that OLCs facilitate an environment that develops self-regulated learners. Self-regulated learners are engaged in the learning process by planning, monitoring and controlling their learning activities (Pintrich, 2004). Creating conditions that facilitate self-regulated learning is critical to encouraging intrinsically motivated students in business education (Minnaert, Boekaerts, de Brabander, & Opdenakker, 2011). We distinguish self-regulated learners from conventional learners who view the learning process through a less critical lens, placing emphasis on routine activities such as attending classes, completing assignments, and earning grades. Self-regulated learners reflect on both what and how they have learned and are competent critical thinkers (Wolters, 1998).

It is not our intention to specify the particular skills to include in a management school's curriculum. A persuasive case for the skill-mix that management schools should adopt has been made elsewhere (Rubin & Dierdorff, 2009, 2011). Rather, we aim to show how OLCs can help management schools regain their focus on learning by exploring differences in students' conception of the learning process between a college with a strong, formal OLC and a college with a weak, informal one. Our analysis shows an OLC adds momentum to the renewal management education. A strong OLC provides educational institutions a theoretical framework that gives students a clearer understanding of the higher-order competencies they need to learn. A shared understanding of these learning outcomes helps students envision the activities and processes that will help them achieve their learning goals. A strong OLC also energizes students to become self-regulated learners (Pintrich, 2004) who reflect on both what and how they have learned and are competent critical thinkers (Wolters, 1998). Students who are self-regulated learners ultimately should be better prepared to adapt their skills to meet the dynamic challenges in today's rapidly changing global economy.

The OLC framework bridges theory and educational practise. We will present the theoretical basis for the organizational learning contract and supporting empirical qualitative and quantitative data from two institutions. In addition, we will focus on the question of practise and offer guidelines on how to implement an OLC in a new or existing institution. The second author has used this framework to design several new institutions of higher education. OLCs also can be used to redesign existing institutions.

1. Organizational learning contracts: key concepts

An organizational learning contract (OLC) is a shared understanding among faculty, students, and staff about their roles and responsibilities for learning. The key idea is *shared*. This means a collective understanding exists about what is to be learned, how, when, where, and why. The unit of analysis is the institution (i.e., across its administrators, students, faculty, and staff), though our focus is on students. In the higher education (e.g., Chickering, 1977; Gilbert, 1977) and business education literatures (Zarzeski, 1998), learning contracts between faculty and individual students have been widely discussed at the course level. Such course-level contracts are often agreed to in writing as a unique arrangement between an instructor and each individual student. An OLC differs in three main respects. First, it is at the school, college or program level, not the classroom-level. Second, it is unwritten, not written. Third, it involves collectively held expectations among the institution's members, not a customized arrangement for each student. In this regard, it is both similar to and distinct from, psychological contracts which are unwritten agreements between an individual employee and an employer concerning terms of employment (e.g., compensation, benefits, career paths) (Rousseau, 1995). OLCs are similar to psychological contracts as both are comprised of shared *expectations*. They are distinct as these expectations are focused on each party's roles and responsibilities solely in regards to learning, not to the more general expectations between students and the educational institution (e.g., Howard, 2005).

There is a literature on institutional image, culture and mission that deals with shared values and beliefs in higher education at the institutional level. For instance, salient institutional images have been positively associated with student engagement, retention and learning (e.g., Belanger, Mount, & Wilson, 2002; Pike, Kuh, & Gonyea, 2003). Institutional culture can be positively related to students' personal development and learning (Kuh, 1995) and is a critical component of a learning organization (Schein, 1996). Furthermore, institutional typologies can reflect different patterns of student engagement (Pike et al., 2003). The OLC, however, is a more specific construct as it involves a subset of beliefs and expectations that are exclusively focused on learning. Institutional image, culture and mission are broader constructs that include but are not constrained to learning alone. The OLC also is more specific than institutional typologies of student engagement in that its focus is three components of shared expectations: learning outcomes, learning environments, and learning systems (Goodman & Beenen, 2008).

Learning outcomes are the higher-order skills and competencies students are expected to acquire. They can include quantitative skills, collaboration skills, global awareness skills, and so on. Learning outcomes can correspond to program-level learning goals that the Association to Advance Collegiate Schools of Business (AACSB) requires of its accredited institutions (Thomson, 2004). In an OLC, what is distinctive about learning outcomes is they are explicitly communicated to all relevant parties to ensure shared understanding. A key idea is to recognize these skills are multidimensional and need to be translated into measureable micro-skills. For example, collaboration as a set of higher-order skills may include micro-skills such as understanding others' perspectives, active listening, conflict resolution skills and so forth. Learning environments represent how learning is to take place. This includes traditional lecture discussion formats, unstructured group problems, applied

projects, studios (Wilson, 2002), and so on. These environments can play out within and outside of the classroom (e.g., team-based projects, extracurricular activities, internships). Learning systems, the third component, create and make the contract work. To develop a shared understanding about learning, there needs to be multiple socialization methods at different points in time (pre-recruiting, recruiting, acceptance, orientation, etc.). There also need to be mechanisms to measure learning outcomes, provide feedback to students and faculty, and conduct design or redesign activities based on these outcomes. For instance, AACSB (2012) requirements for assessing learning goals would be considered part of an OLC's learning systems, assuming there is an explicit shared understanding of the relevant processes.

Although one may argue that all institutions of higher education have OLCs in the form of their norms and values for learning, the key differentiation is whether these contracts are strong and more formalized, or weak and more informal in nature. For example, some of the student participants in our research held general expectations as they entered their programs such as "I expect me to work hard"; "I expect to have a challenging experience"; or "I expect to get a good job when I graduate". These are virtually universal expectations acquired while growing up. Other students we have interviewed had more specific expectations such as "I expect to learn by working in teams"; "I expect to be working on very unstructured problems"; or "I'll expect to learn how to be a good presenter". These expectations are different in two respects. First, they are much more specific. Second, they are unique to a particular institution as a consequence of its student socialization mechanisms (e.g., application process, admissions visit).

Strong vs. weak OLCs are distinctly different. Strong OLCs have multiple formal socialization mechanisms over time vs. informal mechanisms. Students may be introduced to the school's learning outcomes on its website, through an on-campus visit or interview process, through new student orientation, and various other socialization mechanisms. A strong OLC has an explicit statement of learning outcomes that is consistently communicated to students, vs. a diffuse set of beliefs that students may have difficulty articulating. There is a diverse set of learning environments all targeted to improving these explicit learning outcomes. Institutions with strong contracts also have multiple measurement systems in place.

For instance, a College can use explicit measurement systems (e.g., AACSB learning goals assessment) to capture students' skill changes, along with formal mechanisms to provide feedback and to facilitate redesign. An institution may require students to track their progress against these learning outcomes with an online portfolio, may require faculty to align their course syllabi with these outcomes, and may solicit structured feedback from students and employers about the relevance of these outcomes. A key distinguishing feature is that there is a shared understanding at the program level about these features of learning. Institutions with weak, informal OLCs lack these distinctive and explicit features.

One might argue that since AACSB-accredited institutions are required to have learning goals and mechanisms for achieving and assessing these goals, most schools meet the conditions for having a strong, formal OLC. However, a recent review of websites for 10 top tier AACSB-accredited programs in the U.S. showed none had content indicative of all three OLC components, and only one had content indicative of both learning outcomes and learning environments (Goodman & Beenen, 2008). Further, AACSB's standards provide substantial leeway in the content, specificity and assessment mechanisms to achieve accreditation. Unlike engineering education, which has a common set of student learning goals determined by the Accrediting Board for Engineering and Technology (ABET), the AACSB gives business schools free rein to determine their own learning goals. Some have argued these more flexible standards simply make it easier for institutions to achieve accreditation (Lowrie & Wilmott, 2009).

2. Organizational learning contracts and self-regulated learning

Self-regulated learning is a perspective that recognizes students are active participants who control critical aspects of the learning process (i.e., their cognition, affect, motivation and relationship to their environment) (Pintrich, 2004; Sitzman & Ely, 2011). Put simply, self-regulated learners are masters of their own destiny when it comes to skill development. They plan, monitor, control and reflect upon their learning activities. They exercise planning and foresight by setting their own learning goals and having more realistic expectations about the difficulty of the material. They are aware of their own motivation and view this as key to the learning process. They proactively seek help when needed. They also develop sophisticated learning strategies that go beyond what we call conventional learning. That is, going to and perhaps participating in class, doing homework assignments, and completing assigned reading. Self-regulated learners may engage in these activities, though they do not view them as central to their learning. Instead, they challenge themselves, reflect and monitor their learning activities, seek feedback, look for alternative ways to practise, and apply or rehearse material in a variety of learning environments. Ultimately, students who have more self-regulated learning styles should be more employable than those who rely on conventional and passive learning approaches (Hagar & Holland, 2006).

An OLC provides a useful framework for renewing management education by facilitating self-regulated learning in several ways. First, an OLC focuses students' attention and effort on acquiring a specific set of skills through a shared understanding of their targeted learning outcomes. This is because a key element of self-regulated learning is that there is a goal or criterion against which learners can assess their progress and regulate their learning process accordingly (Pintrich, 2004). Having a clear understanding of explicit learning outcomes provides students this specific goal or criterion (Whetton, 2007). If students enter a program expecting to develop their knowledge and skills in order to get a better job that still does not provide a sufficient understanding of what needs to be learned. The expectations about learning are too general. If students share an expectation that they want to develop better group or collaboration skills, that is more specific, but still not good enough. If they have a shared understanding that they expect to learn conflict resolution skills as part of improving group skills, that is

better. In this respect, the OLC is consistent with the concept of the learning organization whereby collective values, beliefs, norms and patterns of behavior are supportive of learning (Schein, 1996). Thus, the OLC directs attention and effort to the acquisition of a specific, shared understanding of targeted skills, and ways to measure and to improve these skills. Though our focus here is on students, administrators, faculty and staff also play a critical role in creating and sustaining a shared understanding of key learning outcomes.

Second, the OLC exposes students to very different learning environments, ranging from traditional lecture settings to peer teaching, mentoring and group project work. Though this range reflects learning in passive and active modes, greater emphasis is placed on active modes (e.g., being self-motivated, understanding your learning style), and a much lesser emphasis on conventional modes of learning (e.g., listening to lectures, studying on your own). Additionally, students are exposed to ways in which learning outcomes can be more or less compatible with different learning environments. For instance, some group skills are best acquired through team-based projects. Through exposure to a wider variety of learning environments, students are better able to gain self-understanding of how they learn, and what they are interested in learning. This enhances their motivation to learn. Learning how to learn in different environments is an important part of a strong OLC. That is, organizational members are predisposed to actively seek out opportunities to develop their individual and collective knowledge and skills. This facilitates an upward spiral of self-regulated learning. As more students become engaged in the learning process, self-directed learning becomes a normative style of learning for the institution.

Third, learning occurs with practise over multiple learning environments. Practicing skills across multiple learning environments is a key part of developing effective learning strategies, which is a component of self-regulated learning (Sitzman & Ely, 2011). Practise across multiple learning environments helps students develop a more comprehensive repertoire to apply their skills in different settings. If conflict resolution skills are learned in a particular class and then practised in group work in a non-class setting, the competency will be better learned. In a strong OLC institution, one should be able to draw a matrix of learning outcomes by learning environments. In the case of conflict resolution skills, one should find multiple learning environments where the student practises this skill, receives feedback, and then can improve the level of this skill. In many institutions there may be a course on groups or leadership or communication. Providing a course, without the addition of practise and feedback across learning environments, is insufficient to gain mastery of a competency. In this regard, the OLC is consistent with the experiential learning tradition (e.g., Kayes, 2002; Kolb, 1984). Learning is facilitated through an iterative process of action and reflection as skill repertoires are practised through a variety of experiences and contexts. The institution with a stronger OLC provides a more expansive set of such opportunities.

Each of these features of a strong OLC − a shared understanding of learning outcomes, a variety of learning environments, and opportunities to practise skills across these learning environments—is expected to facilitate self-regulated conceptions of learning among students. The learning outcomes component of the OLC in provides goals that direct students' attention and effort towards strategies and activities that are most effective for achieving these goals. Students who realize that developing group collaboration skills is a key outcome will seek out ways to develop these skills across a variety of learning environments. When learning outcomes are unknown, unclear or diffuse, students are directed toward more passive and conventional ways of learning (e.g., attending class, doing assignments). Less effort will be expended on developing an overarching set of skills that may cut across courses.

A shared set of learning outcomes also helps focus students on a future time perspective (FTP). For a strong OLC, students develop an understanding of what skills they expect to develop by their future graduation even before starting their first term. Students with a FTP envision future versions of themselves that incorporate specific desired outcomes. Consequently, they are more likely to embrace aspects of self-regulated learning such as persistence, effective time management, and deeper information processing (de Bilde, Vansteenkiste, & Lens, 2011).

There are a number of key premises in this discussion of OLCs. First, the OLC is at the program or college level. That is, there is a shared understanding, especially among students, about what to learn, how, when, where, and why. The contract is not unique to a course or area (e.g., accounting). It is a set of expectations or shared understandings at the program level. Second, the contract expectations need to be enacted so that expectations are met. If improving group skills via project work is promised, this promise needs to be fulfilled. Unfulfilled promises will adversely impact student motivation, satisfaction and commitment (Helland, Stallings, & Braxton, 2001−2002; Kuh, Gonyea, & Williams, 2005). Lastly, contracts differ in their strength (i.e., explicit, specific, shared), and strong OLCs promote learning. In a strong OLC this occurs because (1) competencies or skills are explicit which directs students attention and effort; (2) competencies are developed through different environments and practise opportunities, and (3) different support system mechanisms provide feedback and opportunities for redesign. In this setting, there are strong normative forces that encourage engagement and learning. Also, variety in learning environments, opportunities for accomplishment, and other intrinsic rewards are present.

In sum, a shared set of learning outcomes and wide variety of learning environments in which those outcomes are achieved are indicators of a strong OLC. We expect students at a school with a stronger OLC will be more likely to have self-regulated conceptions of learning than their peers at a school with a weaker OLC. Conversely, we expect students at a school with a stronger OLC will be less likely to have conventional conceptions of learning (e.g., attending class, completing assignments) than their peers at a school with a weaker OLC.

Hypothesis 1: Students at an institution with a stronger OLC are more likely to have self-regulated conceptions of learning than students at an institution with a weaker OLC.

Hypothesis 2: Students at an institution with a stronger OLC are less likely to have conventional conceptions of learning than students at an institution with a weaker OLC.

3. Methods

3.1. Research context and sample

We compared students ($N = 123$) at two business-minded engineering schools (colleges A and B, see Table 3) located in the U.S. Both schools were accredited by the Accrediting Board for Engineering and Technology (ABET), the AACSB's counterpart for engineering schools. We focused on these ABET-accredited schools rather than AACSB-accredited schools for two reasons. First, all ABET schools have a standardized core of learning outcomes, which controls for potential variation in outcomes between schools. It also provides a more robust test of a strong vs. weak OLC as both schools espoused virtually identical learning outcomes. In contrast, AACSB business schools do not have standardized learning outcomes. Instead, AACSB allows institutions to define their own learning outcomes, which results in substantial variation between schools (Goodman & Beenen, 2008). Second, ABET learning outcomes are nearly identical to those typically found in many business schools. For instance, both colleges in our sample included communication skills, teamwork, quantitative skills, and problem solving skills among their learning outcomes. Similar outcomes can be found at many accredited business schools. The results of our study therefore should generalize to business schools. The schools in our sample were comparable in terms the quality of students (upper 95th percentile in college entrance exam scores) and quality of faculty (as assessed from the international rankings of their Ph.D. universities).

To find a college with a strong and a weak OLC, we sampled both a new (College A) and established school (College B). This is because we expected the new school would be more likely to build a stronger OLC, while the established school would be more likely to have a weaker OLC. The new institution had to differentiate itself in order to attract top applicants, thereby motivating its development of a distinctive and strong OLC. The established school, on the other hand, was relatively well known with a stable history of attracting top applicants. Consequently, it had less incentive to distinguish itself via a distinct OLC. Before hypotheses could be tested, differences in the strength of the OLCs between these two colleges needed to first be validated. This was done by comparing both quantitative and qualitative indicators of OLC strength for both colleges as described below.

Data were collected using in-depth structured interviews at time 1 near the end of a Fall term, and one year later at time 2. Interviews were transcribed and coded as described below. At time 1, students were asked if there was a set of required learning outcomes at their institution. If they answered yes, they were asked to list these. Colleges A and B respectively had 9 and 8 specific outcomes that they officially espoused, though students were not told this during the interview. Structured interviews ensured students relied on unaided recall to identify learning outcomes. This method avoided the priming of respondents. Students also were asked to estimate the percent of time they spent during their current semester in various learning environments. At time 2, students were asked to describe their views about learning as if they were providing advice to an incoming freshman at their institution. Again, this provided an unbiased picture of how students in each institution conceptualized their own personal models of learning. Responses from both time periods were coded as described below. The final study sample included 59 College A and 44 College B students who were interviewed at *both* times 1 and 2. The College A sample was 48% female, 80% Caucasian, 14% Asian, 4% Hispanic and 2% African American. The College B sample was 39% female, 63% Caucasian, 33% Asian, 2% Hispanic and 2% African American.

3.2. Variables

3.2.1. Learning outcome index

To assess whether College A had a stronger OLC than College B, at time 1, data on the number of learning outcomes recalled by each student were tabulated as a learning outcome index. Specifically, students were asked, "*Are there a specific set of competencies you're expected to learn? If so can you list them for me?*". Students who answered "no" to the first question were assigned a score of 0. Students who answered "yes" were assigned a score equal to the number of competencies they recalled correctly. Thus, a student who correctly recalled 4 competencies espoused by the institution received a score of 4. As an indicator of OLC strength, College A was expected to have a higher average learning outcome index than College B.

3.2.2. Learning environment index

As another way to validate that College A had a stronger OLC than College B, students were asked at time 1 to allocate the percentage of their learning time across 3 conventional learning environments (lecture, lab, learning on your own) and 7 less conventional, innovative learning environments (internships, peer teaching, group projects, research projects, student clubs, studio, other). The learning environment index was calculated as the percentage of time each student reported spending in less conventional learning environments divided by the percent of time spent in conventional learning environments. For example, a student who spent an estimated 25% of her time in group projects and research projects, and 75% of her time in lectures and learning on her own, was assigned a score of .33 (25%/75%). This provided an indicator of the diversity of learning environments to which students were exposed. College A was expected to have a higher average learning environment index than College B.

3.2.3. Other qualitative indicators of OLC strength

As additional validation of the strength of College A's OLC relative to College B, students were asked at time 1, "*What do you expect from your college?*", and "*How did you develop these expectations?*". College A was expected to have more specific and less generic expectations, and more specific sources for how students developed their expectations. "Good professors" is an example of a generic expectation, while "project-based learning" is an example of a more specific expectation (cf. Table 3b).

3.2.4. Conventional and self-regulated learning models

To test hypotheses 1 and 2 which concerned students' personal models of learning, students at time 2 were asked, "*What advice would you give to a new student in your institution about how to learn effectively?*" .Student responses to this question were reviewed iteratively to identify specific themes. Based on this iterative process, 20 categories of learning approaches emerged, 5 of which were classified as conventional (e.g., doing homework, attending class), and 15 of which were classified as self-regulated (e.g., practise skills in a new context, explore your own goals and motivation). The 15 self-regulated learning categories were further subdivided into three dimensions identified in a recent meta-analysis of self-regulated learning (Sitzman & Ely, 2011: p429f): learning strategies (e.g., applying learning in new contexts), motivation (e.g., being proactive) and planning and monitoring (e.g., time management, getting feedback). Table 1 displays the coding categories and representative student quotes for each category. Coding was done by at least two trained individuals blinded to the study hypotheses, with differences reconciled through discussion. To calculate a conventional and self-regulated learning score, the number of responses by category was summed for each student. For instance, a student who mentioned attending class (conventional learning), learning by doing (learning strategies), selecting classes of interest (motivation) and seeking help (other self-regulated learning) would have a conventional learning score of 1, and a self-regulated learning score of 3.

3.3. Analysis

Quantitative and qualitative analyses were done in two stages. The first stage involved validating that College A had a stronger OLC than College B. This was done both through quantitative comparison of the learning outcome and environment indices (with independent samples *t*-test), and qualitative comparison of the two other indicators of OLC strength (the specificity and source of students' expectations). Zero order correlations of the College variable with the learning outcome and environment indices also were examined. Quantitatively, College A was expected to have higher average learning outcome and learning environment indices than College B, and both the learning outcome and environment indices were expected to be negatively correlated with the College variable (College A = 1, College B = 2). Qualitatively, College A was expected to have more specific student expectations that were initiated by the college, while College B was expected to have more generic student expectations from more general sources such as family and friends.

The second stage involved hypothesis testing with independent samples *t*-tests comparing Colleges A and B students' conventional and self-regulated conceptions of learning. Qualitative differences between Colleges A and B also were examined.

Table 1
Typical student responses coded as conventional or self-regulated learning models.

Model	Coding category themes	Example student quotes
Conventional	■ Do assigned reading ■ Do homework ■ Attend class ■ Take notes in class ■ Pay attention in class	■ "Do your homework." ■ "Go to all the lectures. Don't miss any" ■ "Be sure you understand the lectures and the homework."
Self-regulated	Learning strategies ■ Apply learning in internships ■ Do research, practise skills in new context ■ Go beyond just focusing on grades or memorizing material ■ Interdisciplinary application of what's learned ■ Learn by doing, hands-on projects ■ Teach or mentor other students ■ Apply learning in the campus community or on group projects	■ "I think the combination of projects, groups and problem sets really helps people to learn." ■ "Look for other venues to learn. It is a good way to continue learning." ■ "It is important to learn by experience. Regardless of how you learn, experience is a good way to learn all these approaches."
	Motivation ■ Work hard and be persistent, but take time off ■ Explore your own goals and motivation to learn ■ Be proactive ■ Select classes that are of interest to you ■ Learn how to learn better	■ "Follow your passions and interests." ■ "I think school helped me understand how I like to learn when I'm interested in a topic." ■ "Know where the resources are. Learn how to look up resources."
	Planning and monitoring ■ Time management ■ Asking questions, get feedback ■ Understanding your learning style	■ "Plan your time. There's lots of competing demands." ■ "If you have a question, ask someone. ■ "Think about how you learn. What are your strengths and weaknesses?"

Table 2
Descriptive statistics and correlations for study variables.

	Variable	M	SD	1	2	3	4	5	6	7
1	College (1 = A, 2 = B)	1.46	.5	–						
2	LO index	3.46	2.56	−.88***	–					
3	LE Index	1.94	1.25	−.51***	.46***	–				
4	Conventional learning	.58	.69	.32**	−.33***	−.29**	–			
5	Self-regulated learning	2.27	.99	−.32***	.24*	.17$^+$	−.30**	–		
6	SRL: learning strategies	.51	.61	.14	−.17$^+$	.10	−.14	.19*	–	
7	SRL: motivation	.88	.87	−.29***	.29**	.11	−.29**	.69***	−.12	–
8	SRL: planning and monitoring	.89	.75	−.20*	.13	.01	.05	.36***	−.42***	−.15

Notes. N=103–123. $^+p < .10$. $*p < .05$. $**p < .01$. $***p < .001$. (2-tailed). LO = Learning Outcome. LE = Learning Environment. SRL = Self-regulated learning.

4. Results

4.1. Validation that College A had a stronger OLC than College B

Table 2 displays descriptive statistics for all study variables. Tables 3a and 3b display both quantitative and qualitative analyses used to validate that College A had a stronger OLC than College B. First, an independent samples *t*-test showed students at College A had a higher learning outcome index ($M = 5.44$ vs. .93, $t = 19.68$, $p < .001$) and a higher learning environment index ($M = 2.48$ vs. 1.21, $t = 6.27$, $p < .001$) than students at College B. Also as expected, the learning outcome ($r = −.88$, $p < .001$) and learning environment ($r = −.51$, $p < .001$) indices had strong negative correlations to College B. These results validated that College A's OLC was stronger.

Qualitative indicators further validated that College A had a stronger OLC than College B. For instance, 65% of College A students' expectations came from specific sources such as college publications, meetings, visits, etc. vs. 25% for College B. The OLC is a specific contract learned from the college. In College B general expectations about college are learned from families and friends. College A had more specific expectations such as they would work in project-based teams, engage in interdisciplinary learning than College B. Finally, about 91% of College A's students said there was a specific set of learning outcomes they were expected to learn, compared to 22% in College B.

4.2. Hypothesis tests

Hypotheses 1 and 2 respectively stated that students at the institution with a stronger OLC would be more likely to have self-regulated conceptions of learning, and less likely to have conventional conceptions of learning, compared to their counterparts at the institution with a weaker OLC. To test our hypotheses, we analyzed quantitative and qualitative differences between students' personal learning models for Colleges A and B. Results are displayed in Tables 4 and 4b.

Since College A had a stronger OLC than College B as expected, an independent samples *t*-test displayed in Table 4a was used to examine differences between the two colleges for each of the study variables. As expected, College A students' reported more self-regulated learning behaviors in their personal descriptions of the learning process than College B students ($M = 2.57$ vs. 1.89, $t = 3.66$, $p < .001$). For each category of self-regulated learning, the difference was significant for motivation ($M = 1.12$ vs. .57, $t = 3.51$, $p < .001$) and planning and monitoring ($M = 1.0$ vs. .70, $t = 2.05$, $p < .05$), but not for learning strategies ($M = .45$ vs. .62, $t = −1.34$, ns). With the exception of learning strategies, these results supported hypothesis 1 for two of the three components of self-regulated learning. In support of hypothesis 2, College A students reported fewer conventional learning behaviors than College B students ($M = .36$ vs. .84, $t = −3.26$, $p < .001$).

Qualitative comparisons of responses for Colleges A and B students illustrate the quantitative results above. Below are some representative responses from College A students to the question, *what advice you would give to a new student in your institution about how to learn effectively?*

- Find a balance between how much you involve your friends with learning. Also look for other venues to learn. It is a good way to continue learning. It is better to fully understand something than to get a grade in class. Don't be discouraged on the small things, but think of the big picture.

Table 3a
Organizational learning contract (OLC) strength for College A vs. B (quantitative indicators).

OLC strength indicator	College A (Stronger OLC)		College B (Weaker OLC)		t
	M	SD	M	SD	
LO index	5.44	1.44	.93	.87	19.68***
LE index	2.48	1.23	1.21	.82	6.27***

Notes. Independent samples *t*-test, unequal variances assumed. LO = Learning Outcome. LE = Learning Environment. $N = 59$ (College A) and $N = 44$ (College B).

Table 3b
Organizational learning contract (OLC) strength for College A vs. B (qualitative indicators).

College A (Stronger OLC)	College B (Weaker OLC)
• 65% of expectations initiated by the college • More specific expectations (e.g., project-based teams, interdisciplinary learning) • 91% of students believe there are specific competencies to learn (learning outcomes) • 45% of students recalled 8 of 9 learning outcomes • More learning environments recalled, mentioned in more differentiated ways	• 25% of expectations initiated by the college • Less specific expectations (e.g., challenging work, good professors) • 22% of students believe there are specific competencies to learn (learning outcomes) • 0% of students recalled 7 of 8 learning outcomes • Fewer learning environments recalled, mentioned in less differentiated ways

- Follow your passions and interests. Search for who you are — that really helps. Try new things. Look for lots of opportunities. Research the classes for cool things. Do what you are really interested in.
- Plan your time. There are a lot of competing demands. Use whatever resources are available — fellow students, teachers, teaching assistants. Think about how you learn. What are your strengths and weaknesses?

Representative responses to the same question by College B students (weaker OLC) include:

- Do your homework all the time.
- Go to all the lectures. Don't miss any.
- Be sure you understand the lectures and the homework.

College A students responded in ways that offered more differentiated advice. They were more likely to suggest new students learn from others (53% vs. 34% in College B), and more likely to advocate group work (31% vs. 2% in College B). College B students were more likely to advise students to go to lectures (53% vs. 21% in College A) and do your homework (47% vs. 21% in College A). This also is reflective of College A's relatively higher learning environment index—that is, conventional learning environments such as lectures were less salient to College A students than more diverse learning environments such as study groups, and applied projects.

College A students also provided more strategic advice such as time management (31% vs. 17% in College B), being self reflective (18% vs. 0%), and the importance of motivation (34% vs. 20%). The findings listed above match the styles of the self-regulated or self-directed learner. That is, College A students are planning, using alternative sources of learning, concerned about time allocations, motivation, personal strengths and weaknesses about learning (Sitzman & Ely, 2011).

5. Discussion

Our results showed a stark contrast in the display of self-regulated vs. conventional learning models for students in two colleges with a strong and weak OLC. Strong OLCs are explicit, formalized and specific shared understandings about what to learn, when, where, how, and why. Quantitative data showed that College A students recalled more learning outcomes (what), and experienced a more diverse set of learning environments (when and where). Qualitative data showed they had more distinct expectations than their College B counterparts. One year later, College A students had more self-regulated models of learning (how and why). That is, they had more differentiated models of how to learn, were more engaged in the learning process, and had more favorable attitudes about their learning experiences. We suspect the relatively small number of learning outcomes (.93) that College B's students could freely recall is generalizable to most business colleges and MBA programs. More atypical was the relatively high number (5.4) of learning outcomes recalled by College A students. Given that students in College A were better able to focus on what they were expected to learn, they also were more likely to develop self-regulated personal models of learning, and less focused on conventional and obvious ways of learning such as attending class and doing homework. These results are even more meaningful given that data were collected using structured

Table 4a
Student learning models and organizational commitment for strong vs. weak OLCs (quantitative indicators).

Variable	College A (Strong OLC)		College B (Weak OLC)		t
	M	SD	M	SD	
Conventional learning	.36	.58	.84	.71	−3.63***
SRL (total)	2.57	1.01	1.89	.89	3.66***
SRL: Learning strategies	.45	.57	.61	.65	−1.33
SRL: Motivation	1.12	.99	.57	.59	3.51***
SRL: Planning and monitoring	1.00	.75	.70	.70	2.05*

Notes. Independent samples *t*-test, unequal variances assumed. SRL = Self-regulated learning. $N = 58$ (College A) and $N = 44$ (College B) for all variables except for organizational commitment, $N = 33$ (College B).

Table 4b
Comparison of student learning models for strong vs. weak OLCs (qualitative indicators).

College A (Strong OLC)	College B (Weak OLC)
• "Learn in different environments" (e.g., in groups, with friends) • "Focus on learning from experience" • "Don't get discouraged, follow your interests, try new things" • "Don't just complete assignments, view school as not an end in itself, but part of a bigger picture" • "Learn about how you learn best" • "Plan your time well, be proactive in getting help when needed"	• "Do your homework" • "Go to all the lectures" • "Be sure you understand the lectures and the homework"

interviews where students freely recalled their expected learning outcomes, and their personal views about learning one year later. Respondents were at no time during the data collection process introduced to the concept of self-regulated learning. Nor were they reminded of their institution's espoused learning outcomes.

Results suggest that institutions that are better at helping their students internalize a clear, concise set of learning outcomes should be more likely to help those students focus on what they need to learn. By providing students with the overarching learning goals they need to accomplish, they should be more motivated to learn and to display behaviors such as seeking help, planning, and managing their time effectively. Self-regulated learners also are more likely to establish their own learning goals based on both their own motivation to learn and the feedback they receive about areas for improvement. This should benefit both students and the institution as students will be more energized to proactively seek experiences to help them define and achieve their learning goals. The institution will be more attuned to understanding which skills students and employers need.

Since self-regulated learners also are more intrinsically motivated to learn, they are more likely to enjoy their learning experiences. We suspect their enjoyment of learning will translate into a more satisfying experience as a student, better employment outcomes, and higher levels of satisfaction and identification with their business school. We would further expect that students who identify more with their institution would be more likely to give back to their school, perhaps even in the form of charitable giving. Future research should investigate linkages between stronger OLCs, student satisfaction, and institutional identification.

Learning strategies were the only category of self-regulated learning that were not related to a stronger OLC. It is possible the responses consistent with learning strategies (mainly elaborating and practicing by seeking out opportunities such as internships, research projects, hands-on activities) emerged out of dissatisfaction with the lack of clear learning outcomes. If so, we might expect conventional views of learning to correlate with learning strategies. However, this was not the case. Another explanation pertains to differences in each College's OLCs that were not captured simply by comparing their learning outcome and learning environment indices. For instance, interdisciplinary learning and problem solving are key features of College B's mission and institutional image that could impact student engagement (Pike et al., 2003). Both features are consistent with learning strategies (cf. Table 1). Further, since College B is more established, it may offer students more opportunities for extracurricular activities such as internships, research with faculty and so on. So a more likely explanation is both Colleges A and B provided students different kinds of opportunities to practise skills, and College B's cultural emphasis on interdisciplinary learning and problem solving may have been an implicit part of College B's OLC. These factors would have weakened the relationship between a strong OLC and learning strategies for this study.

5.1. Study limitations

One might argue these observed differences between Colleges A and B were caused by other factors than OLC differences. However, both institutions focused on the same type of subject matter, had similar espoused learning outcomes, and inputs (students and faculty) of comparable quality. It is true that College A was newer than B. We believe this helped motivate the leaders of College A to distinguish the school by creating the explicit shared understandings that are a hallmark of a stronger OLC.

Another limitation is this study relied mainly on mean comparisons of study variables to test hypotheses. However, given that the OLC is at the college level, it was appropriate to make comparisons at that level. Future research could examine larger samples of institutions to test a range of differences in OLC strength.

This study primarily focused on student reports and did not include faculty, staff and administrators. Ideally, a strong OLC is shared by all of these parties. We also focused our assessment of OLC strength mainly on learning outcomes and learning environments, with much less emphasis on the learning system component.

Given that our study sample relied on engineering undergraduates at two U.S. institutions, one might question whether our results generalize to international undergraduate and graduate business programs. However, we showed the learning outcomes espoused by each college were practically interchangeable with those typical of business schools both inside and outside the U.S. For instance communication skills, teamwork, quantitative skills, and problem solving skills were among their learning outcomes. Nonetheless, future research should focus more exclusively on business school students, and may consider using a broader sampling frame.

One weakness with the qualitative method that did emerge is our qualitative measure of learning strategies was narrow in its focus on elaboration and practise. Also, our measure of strong vs. weak OLCs was limited to the learning outcome and learning environment indices, and qualitative indicators of the learning system.

Finally, some might consider our relatively small sample size and qualitative data a weakness. We used structured interviews to obtain unbiased responses to questions about student learning outcomes, learning environments, and the advice that they would give new students about how to learn (i.e., their personal models of learning). In future research, it may be possible to develop a survey instrument to assess OLCs. We believe, however, structured interviews provided a more accurate picture of the shared expectations concerning learning outcomes, environments and systems that comprise an OLC.

6. Implementing the OLC: implications for business education

The OLC can be used in the startup of new business schools. The more senior author has set up new professional schools and has studied the startup of new professional schools in the U.S., Asia and Latin America. The advantages in a startup are that there are no traditions, there is a strong selection effect where people want to be part of a new university, are open to experimentation and change, and are highly motivated. The disadvantages in starting up a new institution are that it is very expensive, that building a strong OLC requires a lot of specific expectations about learning outcomes, different learning environments, elaborate socialization procedures multiple feedback mechanisms and so on. This new institution has lots of expectations to meet and not a lot of experience. Not meeting expectations leads to lower student engagement and learning. Also, startups are inherently complicated and can be chaotic whether we are talking about educational or business startups.

Using the OLC in an existing organization is also challenging. There are traditions already in place that may resist following the OLC framework. For AACSB institutions, there may be espoused learning outcomes, though most students are unlikely to be aware of them. It also is less likely that students can explicitly link these outcomes to a diverse set of learning environments. Of course, there will be general beliefs about developing skills or behaviors, but it is not clear there will be shared understandings about specific skills in these broad domain areas. Also, in most business schools that follow a North American model, faculty are fairly autonomous. They design their own courses and contribute to students learning, yet the OLC requires shared understanding among students, faculty, and staff about what to learn, how to learn, and when to learn it. That is not likely to happen in a decentralized operation. First, faculty resists AACSB-required assessments because of the time commitment and lack of expertise in conducting assessments (Kelley, Tong, & Choi, 2010). Anyone who has served on a curriculum committee has experienced this first hand. Second, although schools do curriculum reviews which pose an opportunity for change, a recent survey indicates only about 23% of improvements made involve major curriculum changes (Pringle & Michel, 2007), and we suspect fundamental change is even less frequent. Perhaps the number or the order of courses gets changed, a new course is added, another is revised slightly, but there are not fundamental learning changes that get put in place through most curriculum reviews. There is no specific strategy to build self-directed learning at a basic level.

There are some strategies, however, that might help get things started. First, focusing on a small number (two or three) generally accepted learning outcomes will facilitate the possibility of change. How would you select them? Most curriculum reviews today incorporate opinion surveys of key stakeholders (e.g., hiring firms, alums) about which skills they think are important to learn. For instance, if stakeholders say leadership, presentation, and group skills are important, this is a starting point for identifying a few learning goals. Alternatively, institutions seeking accreditation or reaccreditation for undergraduate and graduate business programs must have learning goals (AACSB, 2012). These are analogous to learning outcomes as conceptualized by the OLC. To achieve and retain AACSB accreditation, these learning goals must be assessed periodically, and demonstration of student achievement of these goals must be validated. The OLC provides a framework to align such learning goals across the curriculum with a diverse set of learning environments and assessment and improvement mechanisms. The OLC also helps keep learning goals in the forefront throughout the educational process, rather than emphasizing them in advance of the next visit from an accreditation assessment team. Business schools adhering to the tradition of UK higher education institutions are more apt to use a competency-based approach to learning. This approach, which is rapidly gaining momentum in North American higher education (perhaps due in part to the growth of online educational programs), could help speed the adoption of OLCs. We have shown that students with a shared understanding of such learning goals are associated with more self-regulated models of learning and more favorable attitudes about the learning process and the institution.

A second step is to specify learning outcomes more precisely. What do leadership skills mean, particularly in the context of a first job after an MBA? How would you measure these skills? Earlier, we noted group skills are part of many management programs, but that is too general a concept. More specific components of group skills, such as conflict resolution skills, need to be defined, as well as the learning environments that would change these skills over a two-year period. Who would work on the specification of these learning outcomes? That would include faculty, staff, and students who may be knowledgeable in these areas.

The third step is to integrate the development of these skills into a curriculum. Alignment of learning goals across different courses also is required for AACSB accreditation. But the OLC takes this idea much further. The easiest way to do this is to introduce a course, for example, on group skills, but this is not enough. Practise in different environments is critical for learning. The implications are that group projects need to appear in a variety of courses, (e.g., organizational behavior, marketing, finance). Many programs may already do this, but it still often is insufficient. One must know how well the group project is functioning across all relevant courses, including a finance course. The finance professor may not have the necessary skills to assess this. In an MBA program, one option is to have a trained second-year student be a group observer. For this student, peer teaching would be another powerful way for learning. There are other options available. The key idea is simply doing group work across the curriculum is not sufficient. Measurement and feedback are necessary.

Introducing the OLC in an existing institution is really a challenge in organizational change. This means the dean, as well as high status faculty, need to take a leadership role and create a perceived need for change. Another approach is to identify discrepancies between the espoused theory about learning and the theory in action (Argyris & Schon, 1974). For instance, a Dean once told us there were eight learning objectives in his school and was confident students understood this. Yet, no students knew eight, and most could only identify one or two. This discrepancy could stimulate a need for change. Stakeholder opinion surveys would help. Also, a curriculum review is a legitimate place to make some of these changes. This could start with a pilot program using learning outcomes that are generally acceptable to most faculty and students, not with controversial outcomes that create contention. We mentioned that any change requires several steps. It is not just creating a shared understanding about the learning outcomes and the different learning environments. It also includes processes that deal with measurement, feedback, and redesign, which are inherent in any change process.

Processes, particularly of feedback and redesign, occur at both the student and the program levels. Students need to know how their group skills are improving in different contexts. Most students do summer internships, but the question is whether they are able to transfer these selected skills to a work setting outside of their educational environment. Can they get feedback on these skills in a new environment, and how can they redesign these skills and be more effective? Program-level feedback and redesign poses a different set of questions such as how do we redesign the program experience to create better transfer? Paying attention to both student and program-level outcomes is important.

Fundamental to implementing a strong OLC is student exposure to different ways of learning as well as encouraging a continuous process of feedback and redesign. Schools that provide a variety of learning environments and resources will expand their students' models of how to learn and create more self-regulated learners. We asked students a simple question at the beginning of year 2: what advice would you give to a new student entering their institution about how to learn? This simple question elicited their model of learning. A stronger OLC addresses the fundamental issue of how their model of learning becomes more differentiated.

7. Conclusion

The OLC focuses students, faculty and administrators on achieving specific learning outcomes, using a range of learning environments, and assessment and feedback mechanisms to continually improve the learning process. Though the OLC is not a silver bullet, it has the power to create a shared understanding of what is to be learned, how, when, where, and why. Consequently, the OLC offers one potential solution to contemporary criticisms about the relevance of MBA education by helping institutions regain their focus on student learning by facilitating self-regulated learning styles. OLCs can be implemented in the manner of any other large scale change. The fact that OLCs reinforce the accountability standards required for institutional accreditation and the growing importance of competency-based learning can provide an impetus for that implementation. We suspect business schools that implement explicit and distinctive OLCs will find themselves more focused on the business of learning.

References

Argyris, C., & Schon, D. (1974). *Theory in practice.* San Francisco: Jossey-Bass.
Association to Advance Collegiate Schools of Business (AACSB). (May 7, 2012). *Business accreditation standards: Assurance of learning.* AACSB. Retrieved from http://www.aacsb.edu/accreditation/business/standards/aol/.
Belanger, C., Mount, J., & Wilson, M. (2002). Institutional image and retention. *Tertiary Education and Management, 8,* 217–230.
de Bilde, J., Vansteenkiste, M., & Lens, W. (2011). Understanding the association between future time perspective and self-regulated learning through the lens of self-determination theory. *Learning and Instruction, 21,* 332–344.
Chickering, A. (1977). Evaluation in the context of contract learning. *Journal of Personalized Instruction, 2,* 96–100.
Datar, S., Garvin, D. A., & Cullen, P. G. (2010). *Rethinking the MBA: Business education at a crossroads.* Boston, MA: Harvard Business School Publishing.
Ghoshal, S. (2005). Bad management theories are destroying good management practices. *Academy of Management Learning and Education, 4,* 75–91.
Gilbert, J. (1977). Contract learning. *Alternative Higher Education, 1,* 25–32.
Goodman, P. S. (2011). *Organisational learning contracts: New and traditional colleges.* New York: Oxford University Press.
Goodman, P. S., & Beenen, G. (2008). Organisational learning contracts and management education. *Academy of Management Learning and Education, 7,* 521–534.
Graduate Management Admissions Council (GMAC). (2005). *Corporate recruiters survey: General report.* Graduate Management Admissions Council (GMAC).
Graduate Management Admissions Council (GMAC). (2010). *Mba.com registrants survey 2010 survey report.* Graduate Management Admissions Council (GMAC).
Hagar, P., & Holland, S. (2006). *Graduate attributes, learning and employability.* Dordrecht: Springer.
Harvard Business School. (January 9, 2012). *MBA class of 2013 student budget.* Harvard Business School. Retrieved from http://www.hbs.edu/mba/admissions/costsummary.html.
Helland, P. A., Stallings, H. J., & Braxton, J. M. (2001–2002). The fulfillment of expectations for college and student departure decisions. *Journal of College Student Retention: Research, Theory, and Practice, 3,* 381–396.
Howard, J. A. (2005). Why should we care about student expectations? In T. E. Miller, B. E. Bender, J. H. Schub, & Associates (Eds.), *Promoting reasonable expectations: Aligning student and institutional views of the college experience* (pp. 10–23) San Francisco: Jossey-Bass.
Kayes, D. C. (2002). Experiential learning and its critics: preserving the role of experience in management learning and education. *Academy of Management Learning and Education, 1,* 137–149.
Kelley, C., Tong, P., & Choi, B. J. (2010). A review of assessment of student learning programs at AACSB Schools: a dean's perspective. *Journal of Education for Business, 85,* 299–306.
Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development.* Englewood Cliffs, NJ: Prentice-Hall.
Korn, M. (May 7, 2012). Wealth or waste? Rethinking the value of a business major. *Wall Street Journal.* April 5, retrieved from http://online.wsj.com/article/SB1000142405270230407072004577323754019227394.html.
Kuh, G. D. (1995). The other curriculum: out-of-class experiences associated with student learning and development. *The Journal of Higher Education, 66,* 123–155.

Kuh, G. D., Gonyea, R. M., & Williams, J. M. (2005). What students expect from college and what they get. In T. E. Miller, B. E. Bender, J. H. Schub, & Associates (Eds.), *Promoting reasonable expectations: Aligning student and institutional views of the college experience* (pp. 34–64). San Francisco: Jossey-Bass.

Lowrie, A., & Wilmott, H. (2009). Accreditation sickness in the consumption of business education: the vacuum in AACSB standard setting. *Management Learning, 40*, 411–420.

Minnaert, A., Boekaerts, M., de Brabander, C., & Opdenakker, M. C. (2011). Students' experiences of autonomy, competence, social relatedness and interest within a CSCL environment in vocational education: the case of commerce and business administration. *Journal of Vocational Learning, 4*, 175–190.

Navarro, P. (2008). The MBA core curricula of top-ranked U.S. business schools: a study in failure? *Academy of Management Learning and Education, 7*, 108–123.

Pearce, J. L. (2007). We are who we teach: how teaching experienced managers fractures our scholarship. *Journal of Management Inquiry, 16*, 104–110.

Pfeffer, J., & Fong, C. T. (2002). The end of business schools? Less success than meets the eye. *Academy of Management Learning and Education, 1*, 78–95.

Pike, G. R., Kuh, G. D., & Gonyea, R. M. (2003). The relationship between institutional mission and students' involvement and educational outcomes. *Research in Higher Education, 44*, 241–261.

Pintrich. (2004). A conceptual framework for assessing motivation and self-regulated learning in college students. *Educational Psychology Review, 16*, 385–407.

Pringle, C., & Michel, M. (2007). Assessment practices in AACSB-accredited business schools. *Journal of Education for Business, 82*, 202–211.

Rousseau, D. M. (1995). *Psychological contracts in organizations.* Thousand Oaks, CA: Sage Publications.

Rousseau, D. M. (2012). Designing a better business school: channeling Herb Simon, addressing the critics, and developing actionable knowledge for professionalizing managers. *Journal of Management Studies, 49*, 600–618.

Rubin, R. S., & Dierdorff, E. C. (2009). How relevant is the MBA? Assessing the alignment of required curricula and required managerial competencies. *Academy of Management Learning and Education, 8*, 208–224.

Rubin, R. S., & Dierdorff, E. C. (2011). On the road to Abilene: time to manage agreement about MBA curricular relevance. *Academy of Management Learning and Education, 10*, 148–161.

Schein, E. H. (1996). Culture: the missing concept in organization studies. *Administrative Science Quarterly, 41*, 229–240.

Sitzman, T., & Ely, K. (2011). A meta-analysis of self-regulated learning in work-related training and educational attainment: what we know and where we need to go. *Psychological Bulletin, 137*, 421–442.

Thomson, K. (2004). A conversation with Milton Blood: the new AACSB Standards. *Academy of Management Learning and Education, 3*, 429–439.

Whetton, D. (2007). Principles of effective course design: what I wish I had known about learning-centered teaching 30 years ago. *Journal of Management Education, 31*, 339–357.

Wilson, J. (2002). The development of the studio classroom. In P. Goodman (Ed.), *Technology enhanced learning: Opportunities for change* (pp. 265–288). Mahwah, NJ: Lawrence Erlbaum.

Wolters, C. A. (1998). Self-regulated learning and college students' regulation of motivation. *Journal of Educational Psychology, 90*, 224–235.

Zarzeski, M. T. (1998). The use and benefit of flexible student contracts. *Issues in Accounting Education, 13*, 585–594.