

**ORGANIZATIONAL LEARNING CONTRACTS
AND MANAGEMENT EDUCATION**

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Abstract

We present a new concept called an organizational learning contract. A learning contract creates specific, shared expectations among students, faculty and educational administrators concerning the learning outcomes, learning environments and educational assessment system of an institution. Learning contracts can serve as diagnostic tools to help educational institutions assess their effectiveness; they also can help prepare students for their university training by aligning their expectations with forthcoming experiences. We find little evidence that the main ideas underpinning learning contracts are being implemented by business education standard-setters, management educators or leading business programs. We discuss how learning contracts can be used in the diagnosis and redesign of management education.

INTRODUCTION

The goal of this paper is to demonstrate how the concept of a learning contract can enhance learning in schools of management. An organizational learning contract is a shared agreement among the major parties in a college or university setting regarding their roles and responsibilities with respect to learning. These parties include students and agents of the educational institution (faculty, instructional support personnel, and so on). As an agreement, there are commitments by all the parties to engage in certain activities, acceptance of certain roles and responsibilities and various forms of payment or consideration. The learning contract is “organizational” in nature because the contract is initiated by the institution and is between the institution and its students. The focus is only on learning. For example, in the management education context, it would be a contract between the institution and its students addressing what, how and when students will learn.

We introduce the concept of an organizational learning contract as a potential tool that management schools can use to cope with many external forces of change that are challenging institutions of higher education (Duderstadt, 2004; Rhodes, 2004; Zemsky and Duderstadt, 2004) and with specific criticisms about the educational value or contribution of management schools (Ghoshal, 2005; Pfeffer & Fong, 2002). Others (cf., Chen, Donahue and Klimoski, 2004; Earley and Peterson, 2004; Yamazaki and Kayes, 2004) have proposed redirecting the focus of management education to important issues such as globalization, disruptive technologies (Friga, Bettis and Sullivan 2003) and ethics (Ghoshal, 2005; Giacalone and Thompson, 2006). The learning contract is a

redesign tool that can enable educational institutions to respond constructively to these concerns.

The paper is organized in the following way: We identify some features of the organizational learning contract and its functions. Then delineation of the basic elements of a learning contract is presented. Second, we provide some empirical data from our NSF study to sharpen the meaning of learning contracts. The third step is to look into three data sources about management education (i.e., The Association to Advance Collegiate Schools of Business (AACSB) web site, Academy of Management Learning & Education (AMLE) articles, and business school websites) to examine whether contract dimensions are recognized and discussed. The closing discussion is on how to use the learning contract in the diagnosis and redesign of management schools.

Before we explore the functions of the learning contract, let us introduce some of its features. These include:

- The contract is a set of shared, explicit understandings about learning articulated by the institution of higher education to its students.
- These understandings begin during recruiting, and the contract is initially agreed on during admission and acceptance by the institution of the student, and vice versa. Experiences during the educational program further shape the contract. Thus, the contract is a product of specific interactions between the student and institution over time.
- Its contents include learning outcomes, learning environments and the institutional system for enacting the contract.
- It makes explicit what, how, why and when learning occurs.

Given this preliminary description of the learning contract, let's begin by considering how it can be a useful design tool for deans, curriculum committees, faculty, and administrators.

First, the organizational learning contract can be used to diagnose and assess how effective institutions are at educating management students. That is, it addresses to what extent are institutions clear with their students about what they should be learning and how. This bears on the effectiveness of the institution. As an example, we interviewed undergraduate students in a highly ranked traditional professional school to articulate their expectations about the learning environment. They said they expected the school to provide them opportunities to accomplish the following outcomes:

- “Give me a good solid education and help me in job placement.”
- “Challenge me by providing research opportunities above and beyond class work Require me to do a lot of work Provide education as good as any other school.”
- “A high-quality education take both technical and nontechnical classescloser relationships with professors.”
- “Gain mastery in this field of study Also the best academic experience – good professors, challenging course materials

These are representative expectations held by students who came to this institution as freshmen. How can we characterize their expectations? First, they are

fairly general. “Getting a solid education” or “getting a job” are not very specific expectations about learning. Second, the students were expressing commonly held beliefs about college gathered from a variety of socialization experiences prior to coming to this institution. In many families one learns at an early age that if you get good grades, you get into a good college, and a good college increases your chances of a good job. Similarly, you learn that a top-10 university will present much greater academic challenges than a lower-ranked institution. These beliefs – acquired prior to entering an institution of higher education – are functional in that they provide a way to think about the college experience. However, for the most part, they are not expectations unique to a particular institution. They do not qualify as part of a learning contract, where specific terms are created between the student and the institution. Therefore, not all educational institutions have organizational learning contracts. Most of these students will go to class, get reasonable grades, graduate and get a job. However, as they go through this educational experience, they do not have a very explicit model of what to learn, how to do it or why. An extensive learning literature (cf., Anderson, 2000) and the management education literature (cf., Whetten, 2007) indicate effective learning is more likely to occur when students have explicit understandings of what, how and why they are learning.

Second, the learning contract framework can help identify either discrepancies or consistencies between “espoused” theories and theories “in use” (Argyris and Schon, 1974). In the specific institution where we generated these interviews, there is an “espoused theory” by the institution to provide undergraduates with research experiences. This is an explicit educational strategy in this institution. If one looks at recruiting

materials or visits the campus, the opportunity to do research is mentioned as a key part of the undergraduate education. Relative to other, similar institutions, it is a distinguishing part of the educational experience. Yet our interviews with 54 students revealed only two students mentioned this expectation. This indicates a discrepancy between the school's intended and actual learning contract with respect to "research opportunities" and a possible issue to redress.

The learning contract focuses on what has been promised and what will be delivered, both in terms of what is to be learned and how. In this specific example regarding undergraduate research, there is a discrepancy between what was promised and what was delivered. Sometimes there is a natural drift in contract expectations. Sometimes, because of changes in personnel, certain expectations are not delivered. One function of the learning contract is to highlight consistencies and discrepancies between contract expectations and contract performance.

Third, the learning contract can help educational leaders design new institutions and programs. For example, the senior author has had the opportunity to design a new school of management and another technical professional school (i.e., IT Management). To design these institutions we needed a model to implement. The learning contract concept helped because it required us to be explicit about what we wanted students to learn, how we envisioned that learning would take place, and what systems we would need to enact and assess these learning activities.

Lastly, the contract also links meta-objectives or goals to the total curriculum. In one of the new schools, global understanding and awareness was a key learning outcome. Using a school-level organizational contract lens, we asked "what are the different

learning experiences both within and outside of class that would create global awareness?” Our analysis indicated very few learning experiences were included in the curriculum. This meant our meta-objectives, while espoused, would not be accomplished. It was then necessary for us to redesign how and where learning would occur. .

BASIC ELEMENTS IN A LEARNING CONTRACT

Figure 1 portrays the three basic elements in the learning contract. First is a set of learning outcomes, which represent what the student should learn. Learning environments specify how learning will take place to achieve the outcomes. Lastly, there is an institutional learning system in place that is responsible for designing, implementing, evaluating and redesigning the outcomes, environments and their intersections. In a sense, this system is responsible for the “management” of the elements in Figure 1.

Insert Figure 1 about here

Learning Outcomes

Learning outcomes are the new repertoire of knowledge, skills, and abilities acquired in the process of learning. The actual set of outcomes varies by institution and educational domain. For example, the Accreditation Board for Engineering and Technology (ABET), the accreditation association for U.S. engineering schools has proposed a set of learning outcomes for all undergraduate engineers. Within this set of 11 ABET outcomes, some have a strong technical orientation, such as designing experiments or systems. Others

have both a human and technical component, such as team or communication skills. Some seem quite general, such as ability to apply knowledge of mathematics, science and engineering, while others seem more specific (i.e., the ability to design and conduct experiments). Note that the counterpart in business education, AACSB, has not established specific outcomes, but requires schools to adopt their own “learning goals” which can vary between schools. Table 1 illustrates an adaptation of learning outcomes to a specific new school of engineering (College A) and to a proposed new management school (College B).

Insert Table 1 about here

Let’s explore in a little more detail five features of these learning outcomes. First, the outcomes in Table 1 are all explicitly communicated to students. That is, if we went to the website, reviewed recruiting materials or went for a “recruiting visit,” these outcomes would be mentioned. Second, these outcomes are stated at the school level, reflecting both course and non-course experiences at the institution. For example, one might acquire collaborative tools from a specific set of classes or from working on a research experience outside of class. Also, a study abroad experience or internship during the summer might sharpen other skills (e.g., global/multi-cultural skills). The distinction between course-level and school-level learning outcomes is important. The outcomes in Table 1 cut across course and non-course experiences over the duration of one’s stay at the institution. A third feature of these outcomes is that they are, in most cases, complex and multi-dimensional in nature. Therefore, it is necessary to be able to specify the relevant subdimensions for a particular outcome. For example, competency

in quantitative analysis requires some level of specification of what specific quantitative skills one should demonstrate to be considered proficient. In the case of team skills, one subdimension that might be specified is conflict resolution skills. The specification of outcome dimensions sets up the fourth feature: being able to measure changes in these outcomes. The ability to assess and measure changes in a set of outcomes is an obvious rationale for proposing outcomes in the first place. The fifth and last feature, which is fundamental to learning, is the availability of opportunities to practice the subdimensions for each of the learning outcomes. The reason this is a challenge is that these outcomes can be practiced across multiple courses and non-course experiences. While there may be a course or workshop on team skills in these new institutions, such skills truly are acquired or practiced across multiple courses, including many that focus primarily on other types of learning as well. If we view the total course and non-course learning experiences, there needs to be practice opportunities to develop these outcomes. .

These outcome features are fundamental to effective learning. People need to explicitly know what skills they are to acquire (e.g., conflict resolution skills in a team context). They need to have multiple different opportunities (class and non class) to practice this specific skill. One needs to measure changes in skills in order to redesign how to learn this skill or to provide summative evaluations about the acquisition of this skill. All these features enhance motivation to learn focus of attention on what to learn and a feedback process to sustain learning.

A reasonable set of questions for a curriculum committee might be: “To what extent are our learning outcomes explicitly stated in a variety of settings at the curriculum level?” “To what extent are our students aware of these learning outcomes?” “What are

the practice opportunities for acquiring these outcomes, and how are we measuring changes in these outcomes?”

Learning Environments

Learning comes about through various learning environments. Lecture, discussion and labs would constitute the learning environments for most institutions of higher education over long periods of time. However, there have been departures from these more traditional modes of instruction. Table 2 presents some alternative learning environments. All represent a more active learning format than lecture-discussion mode.

Insert Table 2 about here

Though the case method has dominated professional business education, project-based learning is becoming very popular. Many management programs have moved to group-based projects as an important form of learning. In peer learning, another alternative form, students assume the teacher role. The studio, which has its origins in architecture, has been extended to other disciplines (Wilson, 2002). Learning on your own is an opportunity in which the student learns a new competency with structured feedback mechanisms in place to facilitate learning.

Each of these learning environments contributes to the learning process in a distinct way. The lecture has persisted for such a long time because it is an efficient way to provide information to large groups. Project-based learning is a good mechanism for improving group skills. Mentoring, on the other hand, traditionally has been a useful way to pass on tacit knowledge. Each environment has certain advantages. The major recent change is that the portfolio of learning environments is becoming richer.

The linkage between learning environments and learning outcomes is quite complex. A detailed analysis is beyond the scope of this paper. However, we know there is no simple 1:1 relationship. For example, project-based learning is not the mechanism for learning group or team skills. A lecture on group effectiveness and determinants of effectiveness would be a contributing learning environment. Similarly, labs, studios and peer-based instruction all could contribute to team-based skills. The principle of equifinality is relevant-- a number of alternative combinations of learning environments contribute to building team skills. It also is likely that project-based learning would appear in some manner in all these combinations. This general point about equifinality applies to all of the environments and outcome linkages.

Learning System

A functioning learning contract requires a “management system.” That is, there is a need to design the contract, implement it, assess its effectiveness and then initiate a redesign process to address gaps. Several stakeholders are relevant to this process, including students, faculty, employers, administrators and alumni. First, the relevant stakeholder groups need to agree on relevant outcomes and identify some way to design appropriate learning environments. Second, a socialization process must help people develop a shared understanding of the contract. We suggest this process begins during the recruiting-selection phase, unfolds during the person’s time in school, and continues as they become alumni. Another task is to assess the learning contract. Do students (and faculty) understand the learning outcomes? Similarly, to say there should be different learning environments is different from whether they are actually put in place. A system-wide feedback mechanism is needed to assess whether the outcomes and environments

are understood and shared by the relevant parties. If not, a set of redesign efforts are initiated. For example, one of the new schools we examined requires professors to state what learning outcomes are priorities in a course, and then evaluate their students' progress on these outcomes. In this case, the professor grades students on their course performance (which relates to course objectives) and progress on relevant learning outcomes. In another case, students assess their development on the set of learning outcomes, and design a plan of action to strengthen these outcomes. Again, simply specifying intended outcomes and appropriate learning environments is not enough. Systematic processes must be in place to determine if the contract is properly understood and effectively implemented.

The learning contract represents the psychological reality of the educational experience among different players. In any contract there may be discrepancies among the relevant players as well as between intended and perceived reality (c.f., Rousseau 1995). In any case, there needs to be mechanisms to effectively introduce and sustain the learning contract. The third component, the learning system, provides the socialization mechanisms for creating the contract, for assessing the current state of contract “compliance,” and for using this information to generate new ways of redesigning to enhance the level of shared outcomes.

Alternative Perspectives

It is useful to distinguish our view of learning contracts from other concepts. In the past, the concept of a learning contract (e.g., Chickering, 1977; Gilbert, 1977) was used to facilitate individualized learning. Students in a given course were given the opportunity to develop their own plan for learning. This use of the concept of a learning

contract applies to one professor and one student in the context of a course with the goal of individualized learning. In other words, it is an individual-level contract nested within a specific course. In this case, different students in the same class may have different contracts. Our conceptualization is at the program or college level. The goal of the contract in terms of outcomes and environments would be the same for all students within the program or college. In other words, it is an organizational-level contract between the program or college and its students.

Our conception of a learning contract is consistent with the thinking of management educators who emphasize the need to make course learning outcomes explicit (cf., Whetten, 2007). We also think making outcomes explicit, practicing and measuring them is critical. What is distinct about our conception of a learning contract is it occurs at the organizational-level of analysis, not at the course level. There are experiences across courses and noncourse activities that the institution should design to build these learning outcomes. For example, a course in supply chain management would build some knowledge and skills about supply chain issues. At the same time, it could build team-based skills. The latter might be one of the outcomes in the learning contract that occurs across courses.

Learning Contracts– A Contrasting Perspective

Let's examine the basic elements of the learning contract across two contrasting institutions. The first is a start-up institution, and the second is a highly regarded, established institution. Both are colleges focused on professional education that are part of our NSF study. Both institutions value face-to-face education and producing high-

quality research. Students in both institutions are comparable with regard to where they applied and where they were accepted. The established institution serves as a “control.”

While these institutions have similar inputs (i.e., quality of students and faculty) and outputs (i.e., placement in a profession), there also are differences. The start-up institution is four years old (College A), while the more established institution (College B) has been around for 100 years. The start-up institution was set up as a way of exploring new forms of education. The established institution is highly ranked and prides itself on high-quality education. Our data, collected by individual interviews, includes a sample of 54 students from the traditional institution and 56 students from the new institution.¹

Table 3 presents the number of learning outcomes reported by students from both institutions. We wanted to distinguish between the institutions’ stated outcomes and the students’ perception of these outcomes. In the start-up (College A), 40 percent of the students knew five or more outcomes. No student in the traditional school (College B) knows more than four outcomes. The fact that some students in the new institution did not report any outcomes indicates the difficulty in building a learning contract even when there is explicit socialization.

Insert Table 3 about here

To explore learning environments, we generated a list of possible environments. Then we asked students to think about the total learning time associated with their

¹ The data were collected by semi-structured interview schedules. The one-on-one interview lasted about one hour. Specific questions focused on the student’s expectations framed in terms of a learning contract, both in terms of what the college was going to do for them, their obligations with respect to learning at the college, how they learned about these expectations, and whether they were met.

courses. This means formal time in the classroom and all other activities associated with completing the work for the courses. The students then reported allocating their time to different learning environments. Figure 2 displays the results. We can see several differences between the two institutions. The lecture discussion format is used more in the traditional institution (34.5%) than the start-up (23.9%). In the start-up, we see more diversity in learning environments. There is a stronger focus on project-based learning (21% vs. 9.5%) and in the use of other learning options.

Insert Figure 2 about here

The third element in the learning contract is the learning system encompassing the institutional mechanisms that support the learning contract. That is, one can easily state a set of learning outcomes, but a very different challenge is to share, enact and evaluate these outcomes. Similarly, there is a big difference between stating the desirability of different learning environments, and actually enacting the environments and using them to engage professors and students in learning. The institutional mechanisms ensure that learning outcomes and environments are enacted.

What forms do these institutional mechanisms take? We argued earlier that the contract is formed during initial interactions between the student and the institution. In the case of the start-up, the institution's extensive recruiting materials not only extol the institution but also provide detailed information on the learning outcomes and different ways learning comes about. There also are visits – either bringing students to the campus or taking administrators to students' high schools. During these visits, there is explicit discussion about outcomes and environments. Note that as a new institution there is no

reputation to drive recruiting. In this case, the school had to invest heavily in recruiting in order to attract high-quality students. A key idea was that all this publicity highlighted how learning was to unfold on campus. In addition to recruiting, all the potential candidates visited the new school at the same time and participated in a variety of formalized activities (e.g., teamwork projects) that served to provide additional data on the college and the students' qualities.

After the accepted students came to campus, other mechanisms helped to create understandings about outcomes and environments. The actual coursework used different learning environments. In a given course, professors were required to identify priority learning outcomes. Every course would not reflect all outcomes. In addition, the professor provided both a course grade and a rating for each student on the priority outcomes. That differentiation reflects the difference between achievement in a specific course relative to objectives and progress on overall learning outcomes. Initially in this start-up, students kept personal logs to chart their progress on these outcomes. The critical impact of these mechanisms was to (1) make salient through different means both the outcomes and learning environments and (2) provide different ways for professors and students to enact these elements of the learning contract.

In the traditional university there obviously were extensive recruiting efforts, in the form of materials, websites and visits. The materials emphasized the ranking, quality and accomplishments of the college. However, the material is focused less on highlighting specific learning outcomes or the diversity of learning environments. There was no event where all candidates were invited together to visit the campus. Unlike the start-up, there were no mechanisms to rank learning outcomes for a given course or to

grade students both on the course and on learning outcomes. While both of these schools have high-quality students and dedicated faculty, the institutional mechanisms highlighting the learning outcomes and the enactment of learning environments vary quite a lot.

LEARNING CONTRACTS AND MANAGEMENT EDUCATION

Are Learning Contracts used in Management Education?

Given this more detailed description of the learning contract concept, we wanted to explore to what extent it is enacted in traditional management education. To assess whether aspects of a learning contract have been discussed or implemented in management education, we reviewed materials from three pertinent sources that serve important roles in defining institutional and student expectations associated with management education. The three sources include: 1) the Association for the Advancement of Collegiate Schools of Business (AACSB) website (www.AACSB.edu), 2) Academy of Management Learning & Education (AMLE) Journal, and 3) websites for five top-tier research universities that each offer both undergraduate and graduate business degrees.

AACSB is the oldest and most prominent organization to accredit U.S. and international business schools, and is influential in establishing, disseminating and assessing educational standards and practices for colleges and universities offering undergraduate or graduate business degrees. AMLE is a forum for scholarly discussion on management education and provides a representative sample of the views and contributions of management educators. Top-tier business schools serve as role models

for developing and adopting innovative educational approaches; each school’s website communicates the institution’s educational values and priorities to potential students. The five schools we focused on are University of California, Berkeley (Haas); Carnegie Mellon University (Tepper); University of Michigan (Ross); Massachusetts Institute of Technology (Sloan); and University of Pennsylvania (Wharton). We selected these schools because they offer both graduate and undergraduate programs in business, are highly regarded, and represent a diversity of public and private institutions.

The goal of our review was to find specific content across the three sources that pertained to any of the three contract dimensions: learning outcomes, learning environments, and a learning system. For example, if an AMLE article focused on a specific set of outcomes (e.g., cultural intelligence, Earley & Peterson, 2004), we coded an article as containing relevant content. Because our focus was on face-to-face university settings, we did not include content that evaluated technology-mediated learning. Table 4 summarizes the results of our review, including the number and proportion of content relevant to each learning contract dimension across the three sources. Additional detail regarding our coding procedure and the results of the review for each of the three sources is contained in the Appendix.

Insert Table 4 about here

To summarize, our review indicates that management education policy makers, educators, and program administrators are making few attempts to address the importance of shared expectations for the three learning contract dimensions (outcomes, environments, system). For example, the AACSB website contains virtually no

description of specific required learning outcomes for accredited programs. Of 193 AMLE articles we reviewed, none addressed all three dimensions, three (1.6%) addressed outcomes and environments together, seven (3.6%) addressed outcomes only, and 21 (10.9%) addressed environments only. Finally, of 10 top business program websites we reviewed, only one (10%) described outcomes and environments together, three (30%) described outcomes only, and four (40%) described environments only.

We acknowledge this analysis is limited by the three information sources we examined. Visiting a management school might provide more or different data. At the same time, we believe that both the AACSB and these leading business schools are aware of the impact that their websites have on their constituents. Moreover, AMLE is a major source of leading edge ideas on management education.

Implications for Management Education

The learning contract concept can be a powerful tool for assessment and redesign of management education. Our analysis suggests that management schools and educators are not building explicit understandings about what, how, and when learning should occur, which is critical to effective learning. This is a missed opportunity for improving organizational effectiveness. In this concluding section, we consider some practical implications for administrators and teachers in business education.

A first strategy would be to use the organizational learning contract as a diagnostic tool. What are the expectations of your students about their roles and responsibilities in regard to learning? Or what are the learning outcomes they are expected to achieve, and how are they going to get there? This information is best collected by interviews rather than a survey instrument. One could train a set of student

interviewers and collect these data when students enter the institution and then at later points in time. If the reader goes back to the earlier responses we collected (p. 5) from students at a highly ranked school, their learning expectations were vague and general. There were no clear understandings about outcomes or environments. That is not a good basis for learning. One of the key features of this undergraduate program – doing research – was basically absent from the students’ reports. The practical implications should be clear. If there is a discrepancy between how students are expected to learn (i.e., doing research) and what they understand to be available, the discrepancy must be addressed.

This particular form of diagnosis should not be restricted to students. One should ask the same question of faculty and others directly involved in the learning process. Given the prior analysis of AACSB and school websites, and AMLE, we expect most business program administrators would find a good deal of ambiguity about learning contract dimensions in their programs. At the same time, having real data from relevant constituencies is an important stimulus for redesign.

Another form of diagnosis could be at the curriculum level. Some of the start-ups that we have been involved with developed a matrix listing learning outcomes by courses, by year. The question posed is: How are the learning outcomes reinforced and assessed across courses in the curriculum? Let’s use team skills as an example. It is unlikely you would really develop team skills by only having students take a course on teams or group work. You may offer such a course, but in addition there should be a series of opportunities in other courses to practice team skills. In addition, these skills need to be measured to determine if students are learning functional or dysfunctional group skills.

The matrix is an important design tool. It forces a discussion about how objectives at the course level support learning outcomes at the program or institution level. It also presents a visualization of learning over time. Integrating levels of analysis (course/curriculum) and time provides a powerful tool for redesign. (See Ducrot, Goodman and Miller, 2007.)

This type of diagnosis, which identifies misunderstandings or omissions about what and how learning is to take place, sets the next stage for redesigning the learning contract. A first step for business schools interested in redesign is to specify a set of outcomes that will enhance students' performance when they move into full-time employment. It is not within the scope of this paper to argue for a specific set of outcomes. We would expect to see a group of outcomes that is primarily technical in nature (e.g., quantitative skills) and a number that are less technical. In this latter category, given the changing nature of work, we probably would expect to see skills in teamwork, or skills for operating in a global environment.

While we would expect both commonalities and differences in the learning outcomes among the portfolio of business schools, we would expect some common features. These outcomes are not tied to a specific course; rather they are acquired over multiple course and non-course experiences over the time of the program. If quantitative analysis is a desired skill, for example, it comes not from a specific statistics course but from applications of quantitative analysis in a variety of other settings including finance courses, consulting project teams, management simulations, and so on.

Another component of explicitly stated learning outcomes is noting their multidimensional structure and identifying a means of measurement or assessment. For

example, team skills are a likely learning outcome in most professional schools because of the prominence of groups in work organizations. To state “team skills” as an outcome requires enumerating subskills. For example, conflict resolution is a subskill within the broad category of team skills. The challenge is to both articulate the subskills and develop a simple yet comprehensive measurement system to assess each skill.

Another part of the redesign process is to be clearer about alternative learning environments and how they link to learning outcomes. The case method and lecture are still dominant learning environments in business schools, but project-based learning is now more prevalent. Table 1 (p. 8) illustrates other methods. Our point is not to advocate a particular method or some constellation of models. Rather our task is to first identify the learning outcomes and then identify potential learning environments that should impact these outcomes. Let’s take a difficult example. “Learning to learn” has been an emerging outcome in some of the start-ups as well as more traditional institutions. The idea is this meta-competency will help people develop their abilities to learn, and to adapt to a rapidly changing world (Hall, 2002: 34). This should be particularly true in business where technology and practices are rapidly changing. Let’s assume one of the dimensions of “learning to learn” is knowing how to effectively and efficiently search for information. In order to introduce a concept such as learning to learn in a learning contract, we need to (1) specify its sub-dimensions (e.g., effective search skills), (2) think about a way to measure it and (3) identify what learning environments are likely to enhance this outcome. With regard to search capabilities, we would consider group projects, peer learning and mentoring to be possible candidates for enhancing this learning outcome. A lecture would not likely be an effective learning

environment for this sub-dimension. The key idea in this part of redesign is being explicit about which constellation of learning environments are likely to enhance search. The process of mapping environments and outcomes is a critical part of the learning contract process.

Another implication of the learning contract is to think about learning in a more holistic way. We want to visualize a set of learning outcomes and then show how learning interventions are used to create these learning outcomes over time. One important idea is not to think about learning from a course-only perspective. It is equally important to identify the non-course experiences that can contribute to learning. These could include research projects, summer internships or managing student organizations. The learning matrix should include outcomes, as well as course and non-course learning experiences, over time.

The other key part of the learning contract is the institutional system that links the components together. Without this institutional system the contract concept cannot be an effective tool for redesign. If we return to our experience with university start-ups, there are some clear lessons. Let's start with an institution where the learning outcomes and learning environments are explicitly stated. One challenge is to be sure they are understood and accepted by all the relevant players. In these start-ups, there typically are big investments in recruiting processes that make these learning outcomes and environments explicit. One can visit the websites, read recruiting materials, and observe what happens during candidate visits to these institutions. In all cases, recruiting provides continuous and consistent stream of information about expected outcomes and how they are to be acquired. On entering the institutions through orientations and

classroom experiences, messages regarding outcomes and environments are reinforced. Mechanisms are in place where both faculty and students assess progress on the learning outcomes, which are different from a student's performance in a specific course. One of our start-ups built an information system to track students' learning outcomes. This permits students to go online, assess their progress on learning outcomes and then develop a plan to improve these outcomes. Faculty members are also critical sources of feedback on this system (Ducrot et al., 2007). In another institution, during the school year there are school-wide conferences where learning outcomes are demonstrated and formally assessed. Without such institutional mechanisms there would not be shared understandings about the learning contract.

Creating an effective learning system requires a diverse set of activities to insure there is a shared understanding of learning outcomes and environments. Without a clear shared understanding, the beneficial functions of a learning contract will not be realized. Also, this is not a one-time activity. There needs to be continuous sets of experiences that reinforce the basic ideas in a learning contract. We want to emphasize that this truly is a challenging task. There are many counter forces to developing a shared understanding of the contract dimensions.

Most of the above implications focus on diagnosing and redesigning an existing institution or program. The basic arguments hold for setting up new educational initiatives. The senior author has been a member of a design team building educational programs across two institutions in different countries. The basic tasks of specifying outcomes, outcome sub dimensions, and measurement processes linked to different learning environments have been an important design methodology for creating this

program. The basic idea is that the learning contract components can guide both design and redesign.

CONCLUSION

The learning contract can be a powerful analytic tool for diagnosing and redesigning existing institutions or designing new educational institutions. One goal of this paper is to define the meaning of a learning contract. It is not about the general expectations people have about higher education. Rather, it is a specific set of shared expectations between the students and the institution about learning. The word “explicit” is critical. A true learning contract features specific learning outcomes and learning environments. In addition, there must be specific institutional mechanisms, beginning when the student first interacts with the institution to the time the student graduates, which continually reinforce the shared understanding about the contract. Different institutions can construct different contracts that reflect their unique values and comparative advantages.

Given these features of the learning contract, they can benefit management educators in the following ways: First, the learning contract provides a basis of accountability. The act of explicitly promising a set of learning outcomes becomes the base for assessing performance. If a school commits to a set of learning outcomes, that becomes one major criteria for assessing school performance. While indicators such as job placement rate are important indicators, the value proposition is whether the school was able to enhance the knowledge skills and abilities enunciated in the learning

outcomes. Assessing the institution in terms of value added changes in learning outcomes would be a powerful way to assess accountability.

Second, the learning contract can serve as an integration mechanism. The recipe for good management education is to mix good students with capable and exciting teachers. In many institutions, this unfolds in a relatively independent fashion. The marketing professor decides the best set of learning activities in his or her course, as does the accounting professor. There is some level of integration, but most programs are driven by the individual teachers. The idea of a learning contract is to pull these individuals together at the program level, focusing attention on a matrix of courses, outcomes, learning environments, and assessment mechanisms, all (or at least most) of which are explicitly understood by students, faculty and administrators. The matrix serves as an important mechanism to integrate what otherwise might be disparate units into a cohesive whole, while at the same time maintaining individual freedom in the classroom.

A third benefit of the learning contract is as a mechanism of redesign. The focus is on the difference between the espoused theory and the actual learning environment that schools provide. We opened this paper with quotes from very good students at a good institution who had few, if any, clear expectations about what their responsibilities were for learning. The administrators of this school had different and more explicit views about the learning contract. Why the discrepancy? In the case of one of the new institutions (Table 3) where there were explicit attempts to build a clear contract, there was a group of students (19%) who had no clear understandings about the learning outcomes. This discrepancy between the espoused theory and the actual learning

environment is a natural basis for redesign. The basic questions are why the discrepancy occurs and what can be done to rectify the differences. The learning contract dimensions represent a way to organize this diagnosis and begin the redesign process.

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Figure 1
Dimensions of the Learning Contract (LC)

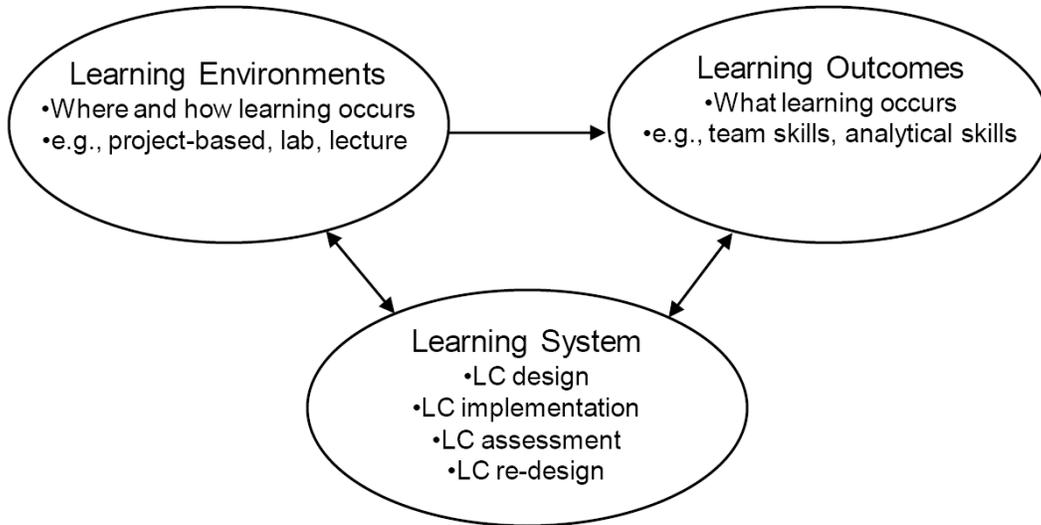
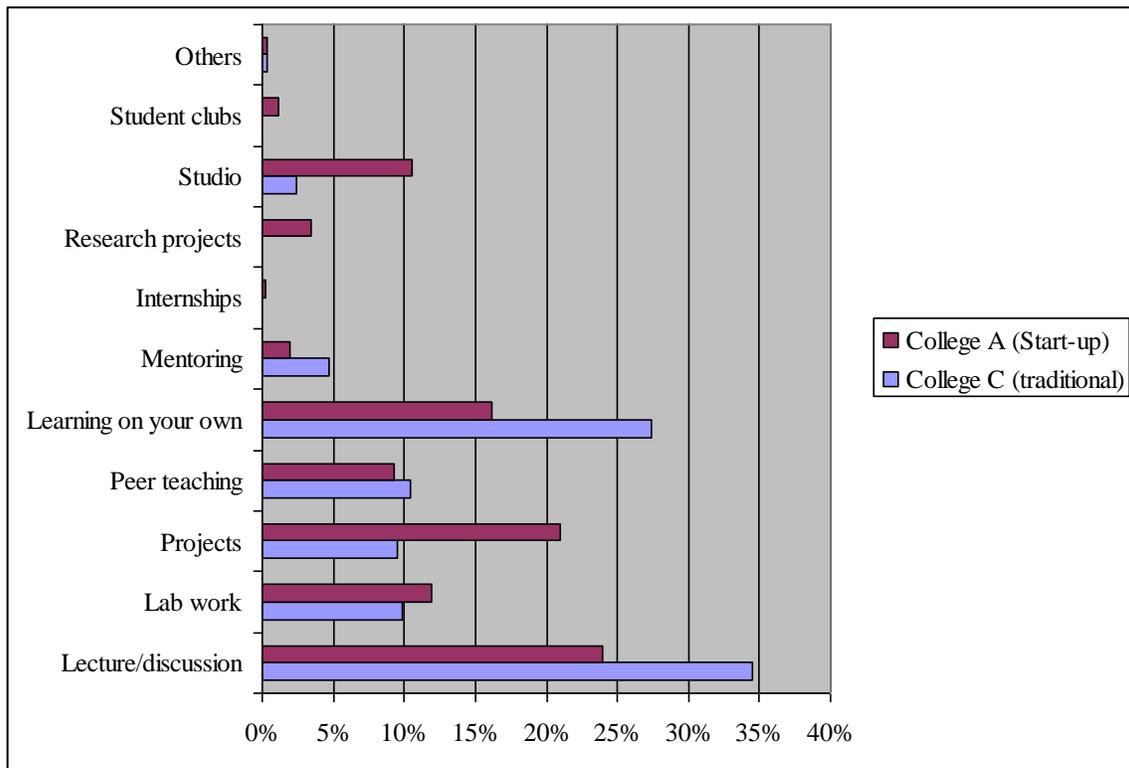


Figure 2
Percent of Student Learning Time Spent in Different Learning Environments



Note: The chart displays average portion of time spent in each learning environment for each sample; totals therefore do not equal 100% for each college.

Table 1
Examples of Learning Outcomes

College A (Engineering)	College B (Business)
<ul style="list-style-type: none"> • Quantitative skills • Qualitative skills • Diagnosis skills • Teamwork skills • Lifelong learning • Communication skills • Contextual analysis • Design skills • Assessing/pursuing opportunities 	<ul style="list-style-type: none"> • Learning to learn • Problem solving skills in business • Collaborative skills • Global/multi-cultural skills • Skills in accessing and evaluating information • Character and complexity

Table 2
Examples of Learning Environments

Type	Explanation
Lecture/discussion	Faculty presentation to students with Q&A.
Lab work	Solving problems, doing experiments.
Case Method	Discussion focusing around a real business case.
Group project work	Learning in a group context with projects.
Peer teaching	Students teaching other students.
Learning on your own	Assigned tasks to learn new material concepts on your own.
Mentoring	1:1 relationship with professors.
Internships	Short-term work in a firm.
Studio	Borrowed from architecture, building or creating things individually or in a group setting
Computer Simulation	Working through simulated games to learn principles.

Table 3
Student Recall of Learning Outcomes

Number of Learning Outcomes Reported	College A (Start-up school) % Students recalling Outcomes (N=56)	College C (traditional school) % Students recalling Outcomes (N=54)
0	19.6%	25.9%
1	5.4%	16.7%
2	8.9%	31.5%
3	10.7%	18.5%
4	10.7%	7.4%
5	19.6%	
6	14.3%	
7	7.1%	
8	3.6%	

Table 4
Summary of Learning Contract Content contained in
Management Education Sources

Review Source	Number of Reviewed Materials	Number (%) of Reviewed Materials With Content Matches			
		LO	LE	LS	LO+LE*
Accrediting organization websites					
- ABET (engineering)	1	1	1	1	1
- AACSB (business & management)	1	0	1	1	0
AMLE peer reviewed articles					
- Sept. 02 to Dec. 06	193	7 (3.6%)	21 (10.9%)	0	3 (1.6%)
Top ranked business school websites					
- Undergrad programs	5	1	2	0	0
- <u>MBA programs</u>	<u>5</u>	<u>2</u>	<u>2</u>	<u>0</u>	<u>1</u>
- Totals	10	3 (30%)	4 (40%)	0 (0%)	1 (10%)

Note: LO=Learning Outcomes; LE=Learning Environments; LS=Learning System
 *No content matches for LO+LS; AACSB was the only content match for LE+LS

Appendix

Coding Procedure and Results for Review of Learning Contract Dimensions

1. AACSB and ABET Websites

a. Procedure

We printed all content for the AACSB (www.aacsb.edu) and ABET (Accrediting Board for Engineering and Technology- www.abet.edu) websites as of August 15, 2006. We used ABET as a comparative standard to AACSB because it serves the same role in engineering education as AACSB does in business education.

b. Results

- i. Learning outcomes. ABET's website included learning outcomes content in the form of 11 competencies required of accredited engineering programs; AACSB's website did not include any required competencies; it did indicate schools must select their own "learning goals."
- ii. Learning environments. ABET's website had two forms of learning environments content. First, it specified learning facility standards (e.g., to conduct experiments and complete projects) for engineering programs in different specialties (e.g., mechanical, electrical, computer). Second, it included a recently published report on its accreditation standards (Engineering Criteria 2000) that evaluates the extent to which instructors use alternative learning environments (e.g., design projects, group assignments).. The AACSB website did not describe learning environment requirements, yet did provide some resources on the use of alternative learning environments through conference seminars and workshop materials. This was counted as learning environment content, though it was more limited in scope than ABET's content.
- iii. Learning system. ABET's website included learning system content by provided evaluation approaches and criteria to enable student learning (e.g., workshop materials, accreditation assessment tools, and online resources for curriculum assessment). AACSB's website had learning system content in the form of "information tools, and discussion about assessment for management educators" (http://www.aacsb.edu/resource_centers/assessment/about.asp). Our concept of a learning system, however, includes a mechanism to redesign the learning contract, which neither web site mentioned.

2. AML&E Articles

a. Procedure

We identified 193 peer reviewed articles published from September 2002 through December 2006 to include in our review, excluding response articles, interviews and book reviews. We independently examined the 193 articles to identify those focusing on any of the three learning contract dimensions. We also did automated searches of article abstracts to identify additional articles we may have missed in our manual search process using these search terms: competency, environment, system, change, innovate and transform. We then counted the number of articles that focused on one or more learning contract dimensions.

b. Results

- i. *Learning outcomes*. Seven articles (3.6%) focused on learning outcomes, three of which (1.5%) also included content on both learning outcomes and environments. The three articles that addressed both outcomes and environments focused on one outcome each rather than a set of outcomes a student might expect with an MBA degree. (diversity management: Avery & Thomas, 2004; cultural intelligence: Earley & Peterson, 2004; strategic thinking: Greiner, Bhambri & Cummings, 2003).
- ii. *Learning environments*. 21 articles (10.9%) focused on learning environments, representing 75% of all content matches. No articles focused on the linkages between environments and outcomes, or on systems to assess and design such linkages.
- iii. *Learning system*. No articles focused on a learning system.

3. Leading Business Program Websites

a. Procedure

We selected five business schools to include in our review: University of California, Berkeley, Carnegie Mellon, MIT, University of Michigan, and University of Pennsylvania. We selected these schools because they had both undergraduate and graduate business programs, and because they are well respected institutions in business education. We printed website materials for each school on August 15, 2006. We then assessed whether any of the three learning contract dimensions were described in these materials, counting the number of times each school's materials mentioned each dimension.

b. Results

- i. *Learning outcomes*. Three of 10 program websites communicated specific learning outcomes, though with varying degrees of specificity. For example, MIT's undergraduate program identified nine specific "core skills" (e.g., mathematical analysis and modeling, teamwork and leadership, computer programming). Michigan's undergraduate program's mention of "core business principles, while emphasizing personal and professional development, community responsibility and social interaction," was not sufficiently specific to be counted as learning outcome content.
- ii. *Learning environment*. Two undergraduate and graduate programs each described learning environments that prospective students could expect to encounter. Only the Michigan MBA website included content on both learning outcomes and environment, though outcomes were described within the context of only one learning environment—the school's "Multidisciplinary Action Project" (MAP), not within the context of the overall MBA program.
- iii. *Learning system*. None of the school websites had content describing elements of a learning system.