



Using *kaizen* to improve graduate business school degree programs

Business school degree programs

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Abstract

Purpose – To illustrate the applicability of *kaizen* in higher education.

Design/methodology/approach – *Kaizen* process was used for ten courses contained in a part-time executive MS degree program in management.

Findings – *Kaizen* was found to be an effective process for improving graduate business school courses and the value proposition for students.

Research limitations/implications – Further opportunity to quantitatively correlate *kaizen* results with student satisfaction.

Practical implications – *Kaizen* can help higher education institutions compete more effectively against both traditional non-profit and newer for-profit sources of higher education.

Originality/value – Presents insights, lessons learned, and critical reflections from the first known application of *kaizen* in higher education for this purpose.

Keywords Business schools, Continuous improvement

Paper type Research paper

Introduction

Competitive marketplaces require people at all levels in an organization to think of ways to continuously improve the products or services that they deliver to customers. Organizations that succeed in improving the value proposition for customers usually become the supplier of choice, in preference to other suppliers that, for whatever reasons, are not able to improve. While most managers and employees support the general notion of continuous improvement, the specific approaches to continuous improvement tend to be *ad hoc* or complex. While these approaches to continuous improvement may be successful on occasion, they are not usually responsive to ongoing changes in customer's wants and needs.

Continuous improvement in traditional classroom-style business school education is of increasing importance given the many recent calls to improve graduate business school education (Zimmerman, 1991; Karapetrovic *et al.*, 1999; AACSB, 2002; Donaldson, 2002; Etzioni, 2002; Mintzberg *et al.*, 2002; Pfeffer and Fong, 2002; The Aspen Institute, 2003; Doria *et al.*, 2003; Ghoshal, 2003; Handy, 2002; Emiliani, 2004a; Grey, 2004), and the advent of alternative sources such as online degree programs. The rapid rise of online degree programs (Fortune, 2003; Symonds, 2003a) indicates a shift in customer perception of the value of traditional classroom-style higher education – especially among part-time working professionals. In addition, students that work full-time for a living face pressure in the workplace to deliver greater value to customers in the products and services that they supply. Not surprisingly, these students come to the classroom with similar expectations of the university. For example, should students have to wait in line in the school bookstore to purchase



course materials in a separate transaction, or should the university include these materials in the price of the course and deliver them directly to the classroom?

Accreditation of degree programs in business or management by AACSB International (The Association to Advance Collegiate Schools of Business; see the Appendix for a glossary of acronyms) is intended to: "... assure quality and promote excellence and continuous improvement undergraduate and graduate education ..." (AACSB, 2004a), and "... challenge educators to pursue continuous improvement ..." (AACSB 2004b). Importantly, AACSB's principal focus is the school's mission, curriculum, and faculty qualifications, and less upon other activities that are also important contributors to students' perception of value (Merritt, 2003; Hazelwood, 2003). While many policies are examined, AACSB does not evaluate processes such as course registration, adding or dropping courses, plan of study, waiver and transfer credit, change of status, issuing final grades, dispute resolution, student feedback, etc. (AACSB, 2004b), to understand which activities create value (Zimmerman, 1991; Womack and Jones, 1996; Rother and Shook, 1999). This could be an improvement opportunity for AACSB's accreditation and re-accreditation processes.

Importantly, AACSB International does not define exactly what it means by "continuous improvement," nor does the National Consortium for Continuous Improvement whose focus is "advancing administrative and academic excellence in higher education" (Ruben and Sandmeyer, 2001; National Consortium for Continuous Improvement, 2004). Thus, the methods used to achieve continuous improvement may be *ad hoc*, or subject to interpretation by the school or by members of the peer review team. In other words, "continuous improvement" can embody any means that leads to improvement as judged by one or more stakeholders: AACSB International, administrators, faculty and staff, students, and the organizations that hire graduates. However, given the open-ended nature of how the words "continuous improvement" can be interpreted and applied (Zimmerman, 1991; Roffe, 1998; Drennan, 1999; Marshall, 1998; Rice and Taylor, 2003), it is likely that some things that appear to be improvements may not actually be improvements – especially as viewed by customers (Zimmerman, 1991; Falk *et al.*, 1993).

AACSB, like most organizations, subscribes to quality, excellence, and continuous improvement. However, doing so in the absence of well-defined improvement processes usually leads to confusion over meanings and thus yields uneven results (Zimmerman, 1991; Banta, 1993; Woehle *et al.*, 1997; Marshall, 1998; Roffe, 1998; Drennan, 1999). The question is: Are there processes than can be used to achieve this on a consistent basis, day-to-day? The leaders of some businesses understand continuous improvement more formally as (Womack and Jones, 1996; Toyota, 2001; Emiliani *et al.*, 2003) "Continuous, incremental improvement of an activity to eliminate waste, unevenness, and unreasonableness (called *muda*, *mura*, and *muri* in Japanese) and create more value", where waste is defined as (Ohno, 1988; Womack and Jones, 1996) "Any activity that adds cost but does not add value as perceived by customers – typically end-use customers."

Importantly, the leaders of institutions of higher education, like most leaders, do not operate with this understanding of waste in mind, and thus are not effective at cost reduction, for example – particularly when compared to some non-educational organizations (Bowen and Youngdahl, 1998; Womack and Jones, 1996; Toyota, 2001; Emiliani *et al.*, 2003; Lean Enterprise Institute, 2003; Panchak, 2003; Swank, 2003).

Simply put, they have a poor understanding of business processes and the specific activities contained therein that consume resources but do not create value. Thus, the common solution to cost problems is to increase tuition and fees, or cut programs, reduce academic or support resources, and sometimes lay people off (Rensselaer at Hartford, 2001, 2004a; Hebel, 2002; Arnone *et al.*, 2003; Hebel, 2003; Fogg, 2003; Farrell, 2003) – actions that few would characterize as improvements. It is common to hear senior managers say “we looked at the numbers” to justify the cuts (or the need to raise funds) (June, 2002), but almost never do they say “we looked at the process” to understand and eliminate costs that customers do not value.

So how do you eliminate waste? The principal process used is called *kaizen* (Imai, 1986), a Japanese word that means: “change for the better,” and is typically interpreted as “continuous improvement.” *Kaizen* is often incorrectly associated solely with quality improvement, such as fewer defects or conformance to requirements, and is often poorly defined (Zimmerman, 1991). The phrase “change for the better” implies any change that results in improvement, which could be related to quality or other factors that customers judge to be of value, such as innovation, ease of use, on-time delivery, durability, low cost, etc. (Zimmerman, 1991). Negative actions such as increasing tuition and fees, cutting programs, reducing academic or support resources, or layoff are inconsistent with *kaizen*’s meaning: “change for the better.”

The *kaizen* process utilizes various tools and methods to make the problem visible, and then uses formal root cause analysis and other means to identify and correct the problem at the source (Zimmerman, 1991; Imai, 1997; Roffe, 1998). The result is rapid improvement: lower costs, higher quality, and better products or service – attributes that customer recognize. While *kaizen* has historically been applied in manufacturing settings (Imai, 1986; Womack *et al.*, 1990; Womack and Jones, 1996; Imai, 1997; Fujimoto, 1999; Emiliani *et al.*, 2003), it is increasingly common to find *kaizen* applied to service business processes (Bowen and Youngdahl, 1998; Goland *et al.*, 1998; Ledgard, 2002; Carney, 2003; Lean Enterprise Institute, 2003; Panchak, 2003; Swank, 2003; Emiliani, 2004b; Wsocki, 2004), due to the recognition that waste also exists in service businesses.

Various other general and systematic approaches to improvement have been proposed or employed by educators (Banta, 1993; Marshall, 1998; Karapetrovic *et al.*, 1999; Alp, 2001; Grey, 2004), including *kaizen* (Zimmerman, 1991), total quality management (TQM) (Woehle *et al.*, 1997; Koch, 2003); quality function deployment (Akao, 1990; Pitman *et al.*, 1995; Lam and Zhao, 1998; Wiklund and Wiklund, 1999; Hwang and Teo, 2001) and policy deployment (i.e. “policy management,” called “hoshin kanri” in Japanese) (Akao, 1991; Roberts and Tennant, 2003) to determine what courses should be offered. It should be noted that TQM is a philosophical approach to management of an organization, and *kaizen* is a process that is not typically used by managers who subscribe to TQM (Falk *et al.*, 1993; Drennan, 1999).

This paper describes the systematic approach taken by the faculty, staff, and administration of Rensselaer at Hartford (Connecticut)[1], a unit of Rensselaer Polytechnic Institute (Troy, NY) to improve a part-time, 30-credit, graduate master’s of science in management program for executives, called the Executive Master’s Program (EMP). The *kaizen* process, similar to that used in industrial settings, was used to improve the courses and their content. It is the first known application of *kaizen* for this

purpose, and thus contributes to the literature and practice of continuous improvement in higher education.

The EMP

The EMP is a part-time, 12-month, program leading to a master of science degree in management (Rensselaer at Hartford, 2004b). Students are high potential full-time employees and represent a broad spectrum of manufacturing and service industries, as well as state or local government within a fifty-mile radius of the Hartford campus. Students typically have 10-20 years of business experience, often in two or more functions, and must have at least six years of management experience as well as company sponsorship to gain admission to the program. Class size ranges from 20-30 students for each cohort group.

The program is designed to prepare experienced managers for more senior leadership positions in their organizations, while the curriculum concentrates on new product and service development, management decision-making, and implementation. The curriculum is made up of the following ten courses (Rensselaer at Hartford, 2004b):

- (1) organizational behavior, design, and change;
- (2) finance for decision analysis;
- (3) quantitative methods for managerial decision making;
- (4) marketing and product management;
- (5) investment analysis;
- (6) strategic information systems management;
- (7) global strategic management of technological innovation;
- (8) ethical, political, and legal context of business;
- (9) leadership and organizational improvement; and
- (10) technological change and international competitiveness.

Classes meet on alternating Fridays and Saturdays from late August through June, beginning with a four-day residence week. The program also includes an international trip, with visits to global *Fortune* 500 businesses.

The author became familiar with *kaizen* while working in industry in the mid-1990s, and has participated in many *kaizens* to improve both manufacturing and service business processes. In September of 2002, he proposed to Rensselaer senior management that *kaizen* be used to improve each of the courses in the EMP. TQM, re-engineering, or other large-scale approaches to improvement were not considered for the following reasons (Woehrle *et al.*, 1997; Roffe, 1998; Drennan, 1999):

- they generally take a long time to implement;
- implementation can be complex, *ad hoc*, and confusing;
- they often create resistance or organizational discord;
- lack of senior management interest; and
- they were beyond the scope of the immediate need.

In other words, the primary objective was rapid improvement of a specific degree program, and not protracted improvement of the entire organization's value-creating

activities. The latter, of course, is ultimately more desirable, but only if senior management recognizes it and is willing to lead the organization, top-down, in large-scale improvement processes. The *kaizen* proposal was a bottom-up opportunity. As is often the case, the plan was to start small, achieve some successes, and expand to other improvement opportunities if senior management's approval could be obtained.

The EMP program was selected because the students and their employers were especially demanding customers, and past implementation of improvement suggestions was both irregular and inconsistent – principally due to the lack of a structured process for achieving improvement. Based upon student feedback from formal and informal student surveys, four major categories were identified for improvement. Table I shows these items, as well as the reasons for their selection and possible pathways for improvement.

The proposal to initiate *kaizen* also defined management's roles and responsibilities, which included:

- senior management commitment and participation in *kaizen* and *kaizen* close-out meetings;
- communicating to every employee the benefits of participating in *kaizen* (talking points were provided);
- *kaizen* would be independent of the formal administrative performance evaluation process for professors;
- the need to obtain other data to further improve the value proposition for students and their employers, in recognition of that fact that the classroom experience is just one of many shapers of student satisfaction; and
- a small amount of funding is needed to pay for team member lunches, *kaizen* team shirts, etc.

Senior management, upon review of the proposal, enthusiastically agreed to this approach.

***Kaizen* process**

In industry, *kaizen* is normally four to five days in duration, though it can be as short as a few hours. During this time, a cross-functional team of eight to 12 people, with the aid of a skilled *kaizen* facilitator, identify, measure, and correct the problems associated with a process. *Kaizens* are not business meetings in the usual sense, which rarely focus on eliminating waste and thus creating more value for end-use customers. Rather, *kaizen* is a specific form of action or on-the-job learning where people examine and critically question all activities that are performed in order to meet the needs of internal or external customers. Observation, data gathering, analysis, and critical thinking required components of the *kaizen* process.

Kaizen may address one problem, or a cluster of related problems that consume resources but do not add value. *Kaizen* is valuable because it is a method for quickly achieving improvement. Thus, most improvements are made during the *kaizen* activity. In addition, the facilitator challenges the team to identify solutions that are both low cost and highly effective at eliminating waste, unevenness, and unreasonableness. Finally, it engages people at all levels of an organization and promotes teamwork[2].

Table I.
Categories of
improvement
opportunities

Improvement opportunity	Why	How
1. Purpose and learning objectives	Eliminate the questions: "Why are we doing this?" or "What's the point?"	Written description of purpose and learning objective for each class and every assignment
2a. Content – current course materials and discussion	Students demand greater insight into today's problems and solutions	Current text, cases, etc., plus current articles from business press
2b. Content – root cause analysis	Increase technical rigor and show students how to avoid repeat errors in business	Use five whys and fishbone diagrams to better understand the source of management problems and identify corrective actions
2c. Content – increased comparative analysis	Students want to know what managers in other companies and countries are doing	Compare ideas and methods: US to EU, Asia, Latin America, Africa, etc.
2d. Content – utility	Improve students' perception of the value of material used	Demonstrate applicability of ideas and methods to the students' workplace
2e. Content – technology	Students want to understand when and where technological solutions are appropriate	Make linkages between technology and subject-matter, where appropriate
3. Organization and sequence	Eliminate the criticisms: "Course content is not focused" or "Course seems disconnected."	Organize course material to achieve more logical flow
4. Classroom experience	Eliminate the criticisms: "Too many lectures" or "Too many slides."	Incorporate other adult learning methods such as simulations and break-out activities

The application of *kaizen* to improve each of the EMP courses was modified to suit the circumstances. For example, the initial *kaizens* were two days in duration because it was thought that the objectives could be achieved in this timeframe. However, objectives were achieved sooner, so subsequent *kaizens* were reduced to one day, with a second day held in reserve if needed. The same data forms used for *kaizen* in industrial settings were used in this activity, but with minor modifications. These forms included (Emiliani *et al.*, 2003):

- *pre-kaizen self-assessments*, to define the current state;
- *kaizen activity sheet*, to define the future state;
- *kaizen target sheet*, to measure improvement;
- *daily record*, to summarize accomplishments; and
- *kaizen 30-day follow-up chart*, to document follow-up activities.

Kaizen teams were smaller than that normally found in industrial settings, typically five to six people from the following areas:

- faculty member whose course was the subject of *kaizen*;
- other faculty members, both subject matter and non-subject matter experts from the school of management, engineering or computer science;
- senior manager or staff member;
- alumni of the EMP (i.e. voice of the customer); and
- facilitator.

Team members were solicited through presentations and via e-mail, with follow-up visits if necessary to further explain the *kaizen* process, the role of team members, etc. The solicitations were received favorably, and volunteers were assigned to upcoming *kaizens*.

The facilitators consisted of one faculty member with *kaizen* experience (Emiliani), and three volunteers – two management and one computer science faculty – who had expressed a strong interest in learning the *kaizen* process. A 25-page “*Kaizen* facilitators guideline” was prepared and distributed to both facilitators and team members. The document summarized, in two pages, the scope of the project, its purpose, duration, desired outcomes, and expectations of team members, as well as the responsibilities of the facilitator, team members, and the professor whose course was the subject of *kaizen*. The remaining pages contained examples of how the various forms are used in the *kaizen* process.

One *kaizen* was conducted for each of the ten EMP courses between late October 2002 and March 2003. Team members received a package of information about the course, including syllabus and key instructional materials, several days before the *kaizen*. They were asked to review these materials in preparation for their upcoming *kaizen*, and formulate questions or identify improvement opportunities. Giving a copy of the “*Kaizen* facilitators guideline” to all team members proved to be beneficial, as it helped them understand the purpose of *kaizen*, expectations, roles, responsibilities, and the schedule of activities.

The first *kaizen* was the authors’ course, “Leadership and organizational improvement” (Emiliani, 2004b). Part of the reason for starting with this course was

to identify problems related the process and data forms used, and make corrections for upcoming *kaizens*. At the end of each *kaizen*, improvement suggestions were solicited from team members and incorporated into future *kaizens*. Rensselaer at Hartford senior managers, faculty, and staff were invited to attend a 20-30 minute meeting at the conclusion of each *kaizen* to learn about the results and also suggest additional improvement opportunities.

Results

To the extent possible, improvements were made during the *kaizen*. Inevitably, some action items had to be completed at a later date, typically within 30 days, because they involved gathering additional information, finding different cases or journal articles to use in the course, or making changes to lecture notes or assignments. Facilitators were given responsibility for following up on action items. Table II summarizes the results of the *kaizens* with respect to the improvement opportunities identified.

In addition to that shown in Table II, other improvement were made including:

- eliminated ambiguity in syllabi related to grading criteria (i.e. class participation) and assignments;
- eliminated variation in the syllabi such as format, course description, course objectives, or the “academic integrity” statement;
- eliminated duplicate teaching materials, such as case studies or journal articles used in two courses;

Improvement opportunity	Improvement made
1. Purpose and learning objectives	For each class or each assignment, state in writing the purpose or learning objectives, and also review this orally in class
2a. Content – current course materials and discussion	Course materials were updated. Current articles from the business press and other sources incorporated into classroom for discussion
2b. Content – root cause analysis	Simple, formal root cause analysis methods (i.e. five whys and fishbone diagram) incorporated into courses where appropriate
2c. Content – increased comparative analysis	Use some cases that feature non-US businesses. Incorporate current articles from the business press and other sources that feature non-US businesses
2d. Content – utility	Show students, orally and in diagrams or narrative, how the concept is applied in real business settings. Or, have students determine how the concept is applied in real business settings through research, etc.
2e. Content – technology	Describe how technology is being used in relation to the subject-matter, either orally or through actual business examples
3. Organization and sequence	Re-order class sequence or topics to improve flow and timing. Ensure that logic path is sensible to students unfamiliar with subject-matter
4. Classroom experience	Increase diversity of adult learning methods to expand learning opportunities and student participation

Table II.
Kaizen results

- ensured students had enough opportunities to earn grades for the work performed (for example, change from final exam only, or mid-term and final exam, to 4-12 graded assignments); and
- identified connections between courses to deliver a more thematically consistent EMP program focused on strategic thinking and leadership.

Upon conclusion of the ten *kaizens*, the participants were invited to a debriefing where they were asked to share their thoughts on the process and outcomes. The benefits of *kaizen* that were cited include:

- having the professor review their self-assessment, syllabus, and key course materials with team members conveyed much more information than if a faculty or staff member independently reviewed the syllabus alone;
- professors gain a better understanding of what they are trying to accomplish in their course;
- the changes made were better aligned with student expectations;
- team members gained a much better understanding of professors' course, content, instructional methods, etc.;
- it gave faculty, staff, and alumni and opportunity to interact together in ways that that they had not done before;
- *kaizen* generated a tremendous number of new ideas for current and future use;
- professors who participated in the *kaizens* as team members were energized to incorporate improvements in their course, even if it was not the subject of a future *kaizen*; and
- faculty and staff viewed *kaizen* as a very positive experience.

Most *kaizens* went smoothly, but there were some difficulties. These, of course, represent improvement opportunities for future *kaizens*. For example, the different data forms used in the *kaizens* were not quite right at the start. They underwent multiple rounds of improvement based upon suggestions from team members and the facilitators.

Measures of improvement in industrial settings are usually tangible: e.g. change-over time, part travel distance, units per day, inventory, etc. However, The pre-*kaizen* self-assessments were subjective. As might be expected, some professors rated themselves much higher or much lower than they should have for certain items. However, the *kaizen* process generally corrected this deficiency.

Likewise, the *kaizen* target sheet used to measure improvement was also subjective. While teams were able to assign a number to indicate the level of improvement achieved in the *kaizen* using 1-5 scale[3], there was some discomfort in doing so because people did not know if the score was truly the right one. However, rather than dwell on the specific score, team members invariably agreed that improvement was indeed achieved. In the end, the subjective nature of scoring was not a major problem.

In a couple of *kaizens*, the professor whose course was under study for improvement appeared to have felt threatened, particularly in cases where senior managers were present as team members. This is not unusual, though feeling threatened is not the intent of *kaizen*, nor how facilitators want people to feel. This outcome can be improved by: better communicating to faculty, in writing and one-on-one, the objectives of *kaizen*;

and communicating to senior managers that their presence could be intimidating, and that they may need to make adjustments in how they interact in order to be viewed as a team member, and not as the boss.

Another opportunity for improvement pertains to the *kaizen* close-out meetings. The basic intent of the close-out meeting is to brief people – any employee in the building – on the improvements that were made. But it is more than that. It is a way to broaden participation, obtain additional suggestions for improvement, and demonstrate management commitment to the process. In some cases, participation in *kaizen* close-out meetings was low, which was perceived by *kaizen* team members as a lack of interest. The normal human reaction is: If people are not interested in what we did, then why do again it in the future? As noted previously, continuous improvement in traditional, classroom-style business school education is of increasing importance. Done correctly, improvement using the *kaizen* process is a lot of fun, and people feel like they are making valuable contributions to the school and the services it delivers.

While many improvements were made to the EMP courses during the *kaizens*, some had to be made afterwards. Facilitator follow-up on items contained in the *kaizen* 30-day follow-up chart can be improved. While responsibility for this was among the facilitators, senior managers should also take an interest in ensuring that action items are completed.

The strength of people's desire to continuously improve affects the results achieved. Professors must be willing to improve, and the facilitator and team members – faculty, staff, management, and alumni – must willing to challenge each other in non-threatening ways towards the goal of improvement. To that end, it would also be useful to compare courses to those offered by other institutions, and engage the participation of subject matter experts from industry.

Confronting barriers

Academic organizations are like any other organization in that it can be difficult to obtain broad-based participation in formal process improvement activities – especially when the tools or methods are unfamiliar, and faculty are not certain if administrators truly support the activity. Indeed, faculty generally have low regard for administrators, so their ideas are routinely viewed with skepticism. Faculty also tend to have low regard for improvement tools and methods imported from industry, which some view as corrupt, and may believe that their use will conflict with the mission of the institute or the traditions of academia (Zimmerman, 1991; Falk *et al.*, 1993; Roffe, 1998; Drennan, 1999; Emiliani, 2004b). This initial negative reaction is very common, and most people will quickly say or think, “It won't work here because we're different.” Predictably, maintaining the status-quo is often viewed by faculty as more desirable, and thus the consequences of not meeting customers' changing needs are insignificant.

In addition, administrators often explain the need for improvement and benefits of participation poorly (Falk *et al.*, 1993; Drennan, 1999), and data revealing shortcomings in the services offered may not be collected, could be incomplete, or have not been widely disseminated among those who are in a position to make the improvements. In other words, the need to improve may not be apparent to others, and could even be contradicted by what faculty simultaneously witness first-hand, e.g. “Enrollments are up, we're constructing new buildings, and we're hiring faculty. What's the problem?” As a result, the method identified for improvement will not garner much attention.

This, however, view reveals an inconsistency: faculty are supposed to be experts at applying structured qualitative, quantitative, or mixed methods of inquiry when confronted with a problem. But they often dismiss improvement approaches proposed by administrators, for example, without thoroughly understanding its purpose, the process, their roles and responsibilities, or its potential benefits. It is likely well worth investigating the problem and improvement tool or method because it could yield superior results compared to alternative approaches that faculty unquestionably dislike such as budget cuts, program cuts, pay freezes, layoffs, etc.

Acceptance of *kaizen* among the EMP program faculty was due to several factors:

- they were a collegial group (perhaps somewhat unusual in academics), and not bounded by functional departments in the school;
- most faculty had industry experience, and thus were not ideologically opposed to industry practices;
- the improvement proposal came from a colleague, not administrators;
- faculty uniformly saw the need for improvement, as various data indicated the need for improvement;
- most faculty wanted to improve their courses; and
- they were willing to try new things, even though the personal benefits or rewards were uncertain at the start.

So while *kaizen* was not previously a part of day-to-day activities, and there was no formal mandate to participate, the EMP faculty were willing to give it a try – and with a positive attitude. While these circumstances might seem unusual to some, the fact is that most people do not come to work to purposefully make matters worse. Instead, people want to improve if they can be shown a way to do it that does not place excessive demands on them or their time, and is also consistent with their personal and department or school goals. A criticism of TQM when applied in academia has been the large amount of time taken away from teaching and research (Roffe, 1998; Drennan, 1999) – activities for which there are clear rewards. In general, faculty do not yet consider participation in structured process improvement activities to constitute meaningful service contributions to the university. This is partly driven by long-established organizational routines, including the tenure process, which typically emphasize research accomplishments over teaching and service.

Kaizen, explained and applied correctly, is appropriate for academic settings because it encourages thoughtful dialog, introduces faculty to new structured process for inquiry, promotes cross-functional teamwork, and identifies specific actions that faculty can take to quickly improve their courses. In other words, the *kaizen* process yields useful results without being a burden. Given that outcome, faculty might then be willing to participate in *kaizen* to improve other elements of the student experience, such as administrative processes, where they surely have some good ideas to share.

Other approaches to improvement in academic settings may also be appropriate, depending upon the specific circumstances. In all cases, the tool or method alone will not sustain itself. Continuous improvement requires resource inputs: sometimes money, but always labor (i.e. faculty and staff) and support from administrators (Falk *et al.*, 1993; Roffe, 1998; Drennan, 1999). Their support is best demonstrated through direct participation in improvement activities, and not by delegating improvement to

lower-level employees. Ultimately, people at all levels have to understand the need for continuous improvement in competitive environments, overcome barriers that inhibit cross-functional teamwork, and should seek simple processes that have a track record of yielding favorable results – with meaningful ties to the reward system. If they don't do this, then their customers may some day go elsewhere.

Summary

The challenges posed by part-time students demanding greater value in graduate business education, rising accreditation or re-accreditation standards, and competition between traditional non-profit and newer for-profit sources of graduate business education means that some of the traditional approaches taken to continuously improve must change. In particular, the processes used must evolve from *ad hoc* or confusing approaches, which frequently include lengthy delays or rework, to systematic approaches that are more responsive to ongoing changes in the marketplace.

While the traditional committee-based approach commonly used to review and approve changes in graduate program structure, curriculum, etc., may have served stakeholders well in the past, there is a growing need to replace this with processes that produce better results faster – consistent with the school's mission, AACSB accreditation standards, balancing the interests of key stakeholders, etc.

This paper described how *kaizen*, similar to found in industrial settings, was used to improve a part-time, 30-credit, graduate master's of science degree program in management. The *kaizen* process resulted in rapid improvement, without creating undesirable trade-offs that might negatively impact other stakeholders, such as academic freedom or students' perception of value. In addition, team members identified many benefits associated with *kaizen* that are not typically found in traditional approaches used to identify, implement, and evaluate improvement opportunities.

Because students' perception of value changes over time, the job of continuous improvement is never done. *Kaizen* must be repeated at regular intervals, using data from relevant sources to guide improvement activities. Doing so will ensure that the school and its programs remain competitive, and also reflect deeper individual and institutional commitment to quality, excellence, and continuous improvement.

Finally, given the financial and other significant challenges that most institutions of higher education face on an ongoing basis, it would be useful if senior managers learned about and participated in *kaizen* and related systematic approaches to process improvement.

Notes

1. Rensselaer at Hartford (formerly known as known as the "Hartford Graduate Center") is Rensselaer Polytechnic Institute's core enterprise for "Education for working professionals." It offers on-site and distance Master's degree programs in management, engineering, and computer science. Rensselaer at Hartford has been a leader in educating working professionals, granting more than 13,000 Master's degrees in Connecticut since 1955 (Weaver and Swift, 2003). The Hartford department of the Lally School of Management and Technology is AACSB accredited.
2. For *kaizen* to function effectively, senior management must establish a no-blame environment and make a commitment that there will be no loss of employment due to

process improvement. Without this commitment, people are usually unwilling to participate in *kaizen*, or participate half-heartedly (Zimmerman, 1991; Emiliani *et al.*, 2003).

3. The scale used was based on the frequency that the items listed in Table I appeared in the course: 1 = not at all; 3 = sometimes; 5 = always (in half-point increments). Not every line item shown in Table I was scored a "5," either in self-assessments made by professors or as judged by *kaizen* team members. The scoring for each line item should instead be appropriate in relation to the subject matter and the overall goals of the course and EMP program, as well as in recognition that other ideas for improvement may come at a later date. Thus, a combination of scores ranging from 3 to 5 can, for example, reflect significant improvement and the creation of a course judged by students to be excellent.

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Appendix. Acronym glossary

AACSB Formerly an abbreviation for The Association to Advance Collegiate Schools of Business, and now known as AACSB International.

EMP Executive Master's Program.

TQM Total quality management.