Adverse Implications for University Teaching Concealed in Economically Driven Policies

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Modern universities represent large economic operations fueled by funds that are increasingly derived from student tuition as government subsidies shrink. Student recruitment and retention are now mainly driven by the need for the dollars that students pay into the system. Policy that is responsive to these pressing economic realities, promulgated at all institutional levels, promotes professional behavior that encourages student retention while allowing this to occur through subtle sacrifice of the traditional essence of the university. A multiphase analysis relates the institution's economically driven policies on retention to their classroom implications and to other effects on the behavior of the teaching faculty.

Key words: academic standards, attrition, instruction, policy, recruitment, retention

Modern universities are large economic operations that are fueled by student tuition as government subsidies shrink. Efforts to recruit and retain students are now driven heavily by the dollars that students pay into the system. Policy that is responsive to these pressing economic realities, promulgated at all institutional levels, promotes professional behavior meant to attract and retain tuition-paying students. However, that proliferative policy can outdistance analyses of its implications for both the quality of teaching and the evaluation of instruction.

Ideally, the qualitative criteria for evaluating university teaching should include factors like these: (a) the importance and relevance of the subject matter selected to be taught, (b) the changes in learner behavior as a result of contacts with the instructional arrangements (including the rate at which those changes occur), (c) the relation between changes in learner behavior and the principles of teaching respected in the course operations, and

(d) the maintenance of appropriate academic standards. The promulgation of new policy pertaining directly or indirectly to instruction will introduce additional and often detrimental criteria for the evaluation of teaching, especially when those superimposed criteria are accidentally implicit in new policy as unanticipated inherencies.

When university administrators imply to the faculty that students are to be retained, the publicly proclaimed method is through improved teaching that, in theory, will be so effective that students will not transfer to other institutions, and those otherwise destined to fail will succeed. In both cases, tuition dollars stay at that university.

The theory is flawed. True, any individual's teaching can always be improved. Also, many new innovative teaching systems for higher education classrooms have been developed and promulgated over the years, for example, the personalized system of instruction (Keller, 1968), minicourses (Postlethwait, 1972), precision teaching (Lindsley, 1993), and guided design (Wales, Stager, & Long, 1981). Direct instruction, an approach widely applied in grade schools, especially in programs for disadvantaged youth, has also been adapted for instruction in higher education (Becker, 1977; Engelmann, 1988; Engelmann & Carnine, 1991). Nevertheless, faculty members

A version of this paper was presented as an invited address at the convention of the Association for Behavior Analysis, Chicago, May 1997.

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in higher education typically lack formal training to teach and may lack funds to support innovations. They also face organizational constraints that limit their capacity to control many important variables. Instructors are seldom aware of *feasible* ways to stem the exodus of unprepared or disaffected students merely through improvements in their teaching effectiveness, especially within the short periods that teachers often feel pressed to show results.

The failure of the nation's schools to teach efficiently and effectively at all levels is not for lack of funds, or machines, or space, or sufficient numbers of educators. From time to time waves of each have been lavished on education. Nor is the ineffective preparation of teachers attributable merely to a stagnated curriculum in the field of education. The curricular mix has often been restirred, and new cycles of that solution are always in progress. Nor is the problem a lack of determination. If trying hard could produce successful teaching, the problems would have disappeared long ago.

Not surprisingly, each expert has his or her own view of what *is* wrong, and lest I be remiss, here is mine: Teaching is ineffective because no adequate basic science informs the effort. The nature of the task has always been misconstrued, and it follows, therefore, that efforts to accomplish it miss the mark. The culture languishes in a comfortable cloud of mystical lore about the nature of human behavior, and an attempt has been made to base education on a scientized version of those ancient and unreliable concepts, especially the notion that behavior executes the will of an implicitly mystical inner agent. Teaching, like all other kinds of important human endeavors, will remain relatively ineffective until a philosophy of natural science replaces superstition both in the interpretation of subject matter to be taught and as the foundation for developing practical teaching technologies.

Students are largely untrained in the

natural science of human behavior and in the behavioral technologies of teaching supported by such a science. They can fail to appreciate the importance, and even the effectiveness, of a particular instructional practice. Given their inappropriate prior conditioning, students may even find some important teaching practices aversive.

But every faculty member has available a quick, easy, and low-cost alternative, namely, lowering the standards in easily disguised ways, while asserting to the students, and others, that instructional quality is better than ever. That assertion can be pretense or self-deception. Although such insidious shifts always result from the prevailing contingencies, the contingencies that evoke such a pattern of behavior do not necessarily have to evoke a concomitant analysis of why it occurs, as any good behaviorology textbook will explain. Nor would people who, upon noticing themselves behaving in that way, describe their own behavior to themselves in ways that are aversive to hear. In any case, such disguised reductions in standards, occurring in a general way across an entire institution, are difficult to detect. One way to measure the extent to which such a drift has occurred is to resist it.

Future educators will be responsible for insuring that multitudes of students who come to them unable to behave effectively will leave with the capacity to do so. I teach these future teachers about the nature of human behavior—what it is, what it is not, and how it works. I teach them how to change behavior, whether motor, verbal, or emotional, in a variety of ways as appropriate in various practical situations. Such skills are essential for professional educators who, throughout their careers, will be paid to do little else than produce new behavioral repertoires to be exhibited by their students.

A science that demystifies behavior, thereby allowing one to become effective in dealing with it, is new to students. The adherence to a somewhat strict mystical view of human beings

implicit throughout the present grade-school curriculum emphasizes a characteristic of personal responsibility originating internally and deemphasizes a curricular track in self-managing the contingencies that actually control one's own behavior—so that one may learn how to arrange for one's own behavior to change in prescribed ways. Before students can learn, at the behavior engineering level, how to learn (as opposed to simplistic rule following), the prevailing mystical view of human beings will have to be replaced by the natural science perspective.

In attempting to look at behavioral phenomena in the new natural science way in my university course, students get little help from the traditional lore and assumptions prevalent in the culture at large, assumptions about behavior that have always been accepted implicitly in various university training programs. Nearly half a century ago, Keller and Schoenfeld referred to acceptance of the natural perspective on behavior as “perhaps the most difficult reorientation of all for beginning students in psychology” (Keller & Schoenfeld, 1995, p. 391). Even though various efforts are under way to organize the natural science of behavior apart from disciplines traditionally focused on “psyches” and related mystical constructs (e.g., Heward & Malott, 1995; Ledoux, 1997; Vargas, 1994), the teaching and learning tasks to which Keller and Schoenfeld referred have not gotten easier—not for the students and not for their teachers.

ATTRITION IN AN UNDERGRADUATE COURSE

For 20 years I have taught one or two of the several sections in a large undergraduate education course devoted to the basic science of human behavior and its relevance to the needs of future teachers. I have not changed the standards. In recent years, student attrition in the course has become relatively high, and the problem has been getting worse.

Consider, for example, a recent semester, which began with 61 students attending the first class session. After an introductory explanation of how this applied science course would operate, approximately one in five students opted not to take the course.

Those who proceeded with the course earned credit in various ways at nearly every class session. They had to prepare for class, attend class, and “keep up.” This characteristic alone resulted in numerous withdrawals along the way. Occasionally, the activities in a class session did not lead to recorded credit, and a special subset of students soon identified themselves by routinely cutting any class at which no course credit was recorded regardless of its instructional importance.

As the course progressed, each student, with help from the course instructor, was required to organize and conduct a substantial behavior-change project. To insure sufficient mastery of the basic science featured in the course, students were brought into contact with a wide variety of potentially effective learning activities, but those activities were not magic. The students had to engage them. Those who squandered those early opportunities to master the foundation principles of the science suffered more than just loss of the attached credit. They soon discovered that they were incapable of proceeding effectively on the course project and, therefore, on the course itself, because that project was worth much of the course grade. That resulted in more withdrawals. Eventually, a subset of students emerged who were exhibiting sufficient facility with the science to proceed through the course and who had successfully initiated a course project that they could see to completion. But in recent semesters, that group has seldom exceeded a third of those who attend the first class session.

Reviewed in isolation, these attrition data may seem to imply some kind of instructional flaw localized in that classroom, and as usually interpreted, attributable to some failing of the in-

structor. To some extent that is always the case, but much more than that general truism underlies what is occurring in such classrooms everywhere.

*Analysis of Attrition:
The Preliminary Diagnostic Test*

At the first class meeting, in my sections, a short diagnostic test on prerequisite academic skills is always administered to all present. It contains several parts, including a short diagnostic reading section featuring a three-paragraph passage drawn from one of the textbook chapters (to insure validity) and followed by five multiple-choice questions testing reading comprehension. Thirty-six percent of the students scored in the 0% to 60% range, and, among that group of implicitly poor readers, 86% did not complete the course. To the extent that the 22 scores in that low range were valid, questions are raised about how that 36% of my students could have succeeded in their preceding college course work, and why, with such low reading skills, they remained eligible to advance.

A federal assessment, called the National Assessment of Educational Progress, released on April 27, 1995, found that two thirds of American high school seniors do not read well enough to handle challenging text proficiently. Only 2% to 5% of students, depending on grade level, were reading at advanced levels. An important if somewhat latent implication is that when these grade-school students matriculate into institutions of higher education, their normative performance in reading, if treated as an acceptable standard, will depress the level of scholarship maintained at their institutions.

This preliminary diagnostic test also presented a sentence into which the nine missing punctuation marks had to be inserted. If we adopt the common undergraduate grading standard of 70% (or more) correct as passing, then 46% of the students entering my undergraduate sections failed to pass this elementary punctuation test, and 28%

were unable to insert correctly more than four of the necessary nine punctuation marks, thus scoring in the 0% to 44% range.

Students were also given this sentence: "Large cows jump clumsily over fences." They were then asked to identify all nouns, adjectives, adverbs, verbs, and prepositions within it. More than one out of four students could not identify the adjective (*large*). A quarter of the students could not identify the adverb (*clumsily*). And 23% failed to identify the preposition (*over*). In my course I teach a new scientific language, and I expect students to be familiar with simple language elements, a skill supposedly mastered in the primary and middle schools. However, except for *noun* and *verb*, about a quarter of the students entering my university classes, all of whom were beyond their college English requirement, would not understand references to these simple parts of speech.

The frequency of errors became much higher with respect to language elements beyond these elementary features. For example, in a written homework assignment later in the course, the students were instructed in writing to list their one-word behavior-identification answers in the gerund form, which is a verbal noun ending in *-ing*, such as running, speaking, or lifting. However, few of the majority of students who did not know the meaning of the term *gerund* bothered to consult a dictionary so that they could complete the assignment according to the directions. When I later inquired about this, the students confessed that it had not even *occurred* to them to consult a dictionary for the meaning of that word, which few had known. Not only have many college students learned too little, worse still, they have not learned how to learn, or to bother.

The admission to universities of large numbers of unprepared but tuition-paying students has implications reaching down to the prep schools. Grade schools have traditionally set standards according to what is required

for the academic advancement of their graduates, and grade-school teachers now find themselves under less stringent contingencies to persevere in what they have often been taught is the less important work of conditioning students to exhibit basic skills. That frees more teacher time to concentrate on directly bolstering students' self-images—an endeavor that the implications of our science reveal to be a fallacy, because the emotional state called a positive self-image is an automatically elicited reaction of students seeing themselves exerting effective control over their environments (which usually requires the forgone basic skills). No valid shortcut to a positive self-image is available, and the massive distraction of contemporary educators with such a fallacious pursuit is just one of the many unfortunate drifts allowed by the fundamentally mystical foundations that substitute in teacher training programs for a valid natural science of that business.

Another part of the preliminary diagnostic test administered to my incoming students presents six simple sentences, each offering a critical word choice. I am not sure where in today's school curriculum one should learn that the singular and plural verb forms reverse (e.g., *were* for *was*) in the subjunctive mood for the third person singular (as in "if only George Washington *were* here now," which deals with a presumably false or impossible proposition), but in the public schools that I attended in the 1940s and 1950s, that was well taught by Grades 10 or 11. Nearly half of these university students could not do it here, and this remained a common kind of error in the written work submitted throughout the course.

Fifty-nine percent of the students could not discriminate a term of count (*fewer*) from a term of general relativity (*less*). More than one in 10 failed to choose correctly a term that qualifies (*which*) instead of a term that specifies (*that*). Given the tendency of many students to rely almost excessively on *which*, the error rate would have been

much higher had this question been constructed to require a choice of *that* instead of *which*. And, finally, 13% of these university students could not even select the form of *to* that means *also*.

A substantial fraction of these university undergraduate students lack sufficient language skills, including reading, to succeed in courses taught at what should be the university undergraduate level. All had previously completed a substantial number of university courses: 3% to 4% were seniors, 14% were juniors, 48% were sophomores, and about one third were second semester 1st year students.

To insure the success of the substantial unqualified segment of the students in my course, the requirements would have had to have been substantially reduced. The fact that these students arrived at this course only after having taken many previous university courses suggests that standards in their previous courses had already undergone such reductions.

Analysis of Attrition: Student Expectations

Upon entering my undergraduate classes, students found their course-related skills being measured frequently. The frequent monitoring of student progress, followed by corrective instructor reactions, is not just good behavior engineering practice; it generally connotes a "sensitive" teacher who is concerned about the effects that the teaching has on students. But many students were unaccustomed to that professionally appropriate instructional practice, and some professed dismay about it. They were forced to attend class, to "keep up," and to master skills on a day-to-day basis, which some found aversive and most deemed unusual.

One facet of student resentment derives from how such a course interferes with what many undergraduates construe to be the collegiate lifestyle to which they are entitled (a more strong-

ly held view at so-called “party schools”). Over the years I have interviewed many students, obviously intelligent, who fall behind in their course work. Although a few are distracted by events pertaining to family, personal economics, or health, most are distracted by the seductions of adult play. As one failing student openly explained during a recent in-class discussion, “the academic program gets *my* attention from Monday through mid-day on Friday, but the weekends, beginning with Friday afternoon, are all *mine*. And during *my* time, I party! No book gets cracked.” Although the efficiency of student study from Monday through Friday is a valid if separate issue, students who believe that the university should afford them a continual vacation, interrupted with periodic intervals of academic involvement, have difficulty completing any course that operates in disregard of that concept.

Many such students also cut a few days of classes on both sides of the week-long mid-semester vacations scheduled by the university, and thus clear their personal schedules for what amounts to a more generous 2-week vacation. Because class attendance is typically low before and after the scheduled vacations, instructors, who have been made to feel accountable for maintaining enrollments, are under contingencies to subtly reduce the importance of those class meetings so that the missing students will not get into academic difficulty as a direct result of those absences.

Most of the students in my teacher training classes have also been unfamiliar with education-related courses that build from first principles in a way that requires mastery at each step—courses that cumulatively cycle through progressively complex reiterations of the subject matter. These teachers-in-training have always been more accustomed to education courses that build laterally instead of vertically; that is, with courses in which subject matter, although it accumulates, does not have its elements progressively

linked in a functionally dependent manner. Many such students have limited experience with rigorous mathematics, science, and language courses that build from basics to greater levels of complexity.

In the kind of courses most known to these students, the coast-and-cram mode, in response to a traditional flat curricular course structure, does afford students a certain kind of security: They have only to examine the requirements of such a course at the outset to predict, somewhat reliably, the grade with which they can emerge from the course after engaging in measured amounts of their usual kind of study. Their final grades will be proportional to their efforts (exerted according to their familiar personal styles). Students can functionally shrink the course with which they interact simply by neglecting parts of the subject matter when cramming for tests. If, for example, 20% of the subject matter gets omitted on such an occasion, no matter which 20% goes neglected, a grade approaching 80% will still be anticipated, because the accumulating subject matter is not interrelated in a functionally dependent way.

However, a natural science course does not work that way. A natural science of behavior is not merely a collection of facts and findings cobbled thematically together, which enlarges in the manner of an expanding pool of fluid on a flat surface. In a functionally cumulative natural science discipline, one begins with first principles and builds to progressively higher levels of complexity and sophistication. The curriculum is more analogous to an upward spiral in which one keeps returning to the same basic principles, but with variations and novel combinations leading to new and progressively more complex applications.

Those who began relating to my natural science course in the familiar coast-and-cram mode soon found themselves falling behind. Furthermore, the frequent measurements of their progress (with feedback to the

students) enabled them to assess their own progress early in the course. Unfortunately, many had developed academic skills matched only to the coast-and-cram approach, and, unable to adjust, withdrew from the course.

Instructors of courses that feature aggregated but inarticulate content have a safe way of making the course easier, namely, by eliminating part of the subject matter from the course, because whatever is withheld is not missed. Natural science courses, building from first principles to multiple levels of complexity, do not lend themselves to such easy attenuation of rigor nor to easy student predictions of projected outcomes, especially among students largely unfamiliar with such vertical-build courses. Many students find this uncertainty disconcerting and are unwilling to incur the risk if they have alternatives. At the university, students discover that they seldom need remain in any class generating uncertainty about one's grade. In the climate created by current retention policies, a less challenging and more reliable alternative can be found for most undergraduate course offerings. Usually, students can transfer to another section of the same course, defer the course until a later term, or take a substitute course; all of these strategies are aimed at finding a different instructor who teaches "their way."

As one student, who did not withdraw, commented in a note to me at the end of the course:

For the first few weeks . . . I hated this class. I found it extremely complex and frustrating. As time went by, I began to comprehend more and more. Then finally, it all clicked. . . . I enjoyed the different point of view that behaviorology offered. I think Dr. Fraley is an excellent professor and I would refer this class to many of my peers, namely, because of how challenging it really is. Classes that are challenging are very rare here at WVU. That's why I am glad I stuck through it.

That student's early suffering resulted from inappropriate prior conditioning, and it was unnecessary. Many otherwise qualified students not only arrive without having been conditioned to

persevere, they are counterconditioned to withdraw quickly if ultimate success is not immediately anticipated.

Student expectations appear to be depressed early in their university careers. Until recently, I regularly taught a 10-week orientation class for 1st year students (one of many sections) on a volunteer overload basis. Class size was small, usually about 10 students. The course was intended to help new students relate more effectively to the challenges of the university. However, my efforts to provide better academic self-management skills were seldom taken seriously by those new undergraduates who, after only a few weeks at the university, already "knew better" than to bother mastering unneeded skills.

Consider, for example, one of my course activities that failed. Beginning undergraduates have traditionally faced difficulty getting their course assignments completed, especially in view of the many distractions that confront new students at the university. Each student in the class was assigned to plot a simple line graph showing the completed percentage of each assignment in one of their other courses chosen for its difficulty. I specified the type of graph, taught the class how to plot data on it, and then worked individually with each student to quantify the kind of assignments that the student was being asked to complete in the selected course.

The graphs would make obvious how effectively the students were dealing with those course workloads and would reveal any trends. Each student was to keep the graph up to date, and, occasionally, share it with the class. The class members were to discuss briefly the progress in that person's chosen course, provide encouragement, and share ideas for improvement. However, most of the 1st year students in my class did not take this assignment seriously. They treated it like busy work that afforded little or no help. Some did not bother to do it, and

others did a perfunctory and careless job.

Toward the end of the 10-week course, during private interviews with each class member to discuss their respective adjustments to the university, I also took that opportunity to inquire about the attitude with which the students had greeted this little academic self-management project. The first two interviewees explained that, although they were both carrying full academic course loads, none of their courses were presenting any academic challenges. They explained that they were being given few assignments that they were required to complete, and even class attendance seldom mattered. One mentioned that her English teacher had been absent at least as often as she herself had cut class. Two other students explained that their first semester courses were repeating high school material, and that, when their assignment-completion graphs had shown no improvement, it was because they did not have to complete those assignments to make good grades. Their examinations in 1st year courses were requiring only skills that had been conditioned during earlier schooling.

Analysis of Attrition: Institutional Economic Contingencies

The pressure to retain students at the university is heavily focused on those who instruct 1st year students, because traditionally the drop-out rate among beginners has been high. Professors of the typically large 1st year classes are also putatively charged with maintaining academic standards. Presumably, that is to be done both by teaching effectively while culling out the unprepared and the unfocused. However, most professors teaching 1st year courses will, in fact, not wield that kind of scythe in the absence of potential administrative support for their exercise of that function. Professors remain sensitive to the tacit erosion of that potential administrative support and rationally tend to adjust standards

in their classes accordingly. First year courses with large enrollments, especially in financially strapped institutions that rely heavily on tuition income, now often present so little academic challenge that few if any students encounter difficulty comprehending the subject matter after minimal study, and the pretense of standards depends on those students who self-destruct for other kinds of reasons. Consequently, the university continues to collect tuition dollars from a larger fraction of each new class of undergraduates.

This trend is bolstered through economic incentives arranged by university administrations: Those academic departments that continue to generate the high credit-hour totals are allocated proportionally fat budgets with which to subsidize what their faculties construe to be their more important operations. Professors who want to teach their specialties to small numbers of graduate students can earn the right to do so by generating a large number of credit-hours in a high-enrollment undergraduate class in which they may have little professional interest beyond those economic implications.

As both an education professor and a citizen of the state, with children of my own who attended its public schools, I long ago adopted a simple criterion in my classroom. I set performance standards that permit the advance of only students whom I could tolerate as teachers for my own children. Given the condition of many of the undergraduate education students that have been advanced into my classes, it is difficult to believe that they would have met such a criterion if imposed by their former professors.

Even the students are sensitive to this issue: During an in-class discussion of professional ethics in one of my undergraduate sections, one of the six students in that class who would go on to earn a course grade of A expressed her concern to the class about the poor quality of scholarship and preparation exhibited by many of her fellow education majors. She told the class that

she was apprehensive about a career in a profession staffed by persons so unready to assume an appropriate level of technical and professional responsibility.

There is always a tension between maintaining academic standards and meeting financial burdens. Unfortunately, the easiest and least expensive way to retain tuition-paying students is through the subtle relaxation of academic standards. Nevertheless, the magnitude of the economic problem for universities can be staggering. Currently, at my university, 48% of the full-time undergraduate students do not complete their 4-year programs. If today my university loses 100 state resident students, the university loses \$330,000 per year in cash income. If my university loses 100 out-of-state students, it loses \$690,000 per year, which alone is equivalent to the annual faculty travel allocation (in my department) for 1,725 faculty members.

*Analysis of Attrition:
Modes and Implications of Faculty
Acquiescence*

With professors under strong pressure to retain students, inappropriate ways of yielding to that pressure may emerge behind a facade of fake standards. Faculty acquiescence can be subtle. For example, selected features of quality instruction can actually be maintained: Sequential mastery can be required of students. Increasing complexity can be featured in the subject matter. High standards of student performance can be required. An observer, checking occasionally on the activity in such a course, would always find operations in progress to which a rating of excellent could be attached.

However, although everything that was occurring would represent excellence in teaching, too little would finally be accomplished. That is, to keep pace with the diminishing skills of the incoming students, an excellently taught and managed course can be adjusted to provide a progressively small-

er sample of the potential curricular skills by limiting the scope of the course (if not the glowing language used to describe it). Thus, although whatever is done in the course is done well, what should be accomplished in much less time may be accomplished only after a full semester is completed—although, as standards continue to sink, it all appears more “normal.”

Appearances of respect for standards are seldom that subtle or sophisticated. In some cases what remains of academic standards merely depends on the failures of those few students who can always be relied upon for some kind of blatant academic self-destruction that casts no blame on the instructor. Another approach is simply to avoid looking too closely at the skill levels of the students. Typically, that is done by eliminating most progressive performance measurements and giving only an occasional examination on which the standard (whether norm referenced or criterion referenced) is adjusted on each occasion to keep the passing rate acceptably high.

Retention is increased if students are awarded the higher grades previously associated only with a highly accomplished minority of students. To justify such grading, professors note that it is the implicit outcome of a mastery-required system of teaching in which students are required to attain the specified performance objectives before being permitted to advance. Once students meet those objectives, they are then awarded the high grades that they deserve. However, because few if any university courses are endowed with the teaching power to bring all students up to traditional A-level performance standards, especially the typically large fraction of ill-prepared enrollees, the instructor must subtly attenuate the rigor of those standards. Through such grade inflation, a large fraction of those who once got the C grade are now receiving grades of A and B. The burden of maintaining standards is thereby passed to the consumer, an abdication of responsibility exercised at the ex-

pense of the naive graduates who assume that they have been adequately trained and are expecting success in the job market.

Few of the faculty members who engage in these kinds of professorial malfeasance see themselves succumbing to the prevailing contingencies of economy in ways as unflattering as these descriptions of their behaviors. Most simply comport in a natural way while describing their teaching practices, especially to themselves, in ways that are reinforcing to hear, exemplifying, respectively, (a) an adjustment to their teaching that occurs under natural contingencies of negative reinforcement and (b) verbal behavior, misdescribing that adjustment, that occurs under contingencies of positive reinforcement.

The university administrators may be expected, by some idealists, to ferret out such instances of latent degradation in standards. However, the administrators too often find themselves instead under contingencies to approve of whatever approaches to instruction yield the necessary combination, namely, the appearance of standards plus the retention of students. This fulfills a prediction by Harold Wechsler, who, in his 1977 book on the history of selective admission policies in higher education, anticipated greater success across the next 20 years for those institutions that manage to maintain a selective image yet find ways to admit significant numbers of only modestly skilled students.

Teaching that resists reductions in standards may attract defensive criticism from those faculty colleagues who have acquiesced. They may point critically to withdrawal rates higher than those in their own classes and imply that a professor who does not move students through the system at about the same rate as others must be teaching poorly—a potentially fallacious implication that is often accepted by critical audiences.

Faculty members who have found ways to lower standards often compensate with an enriched schedule of so-

cial reinforcers in the classroom, which to students generally suggests professorial approval of their activity. As any experienced professor can demonstrate, subjective student opinions can be adjusted in a favorable direction by lowering the demands on students while insuring that they are having fun in a scholarly context. The resulting high ratings that those students accord their professors are adduced as evidence of good teaching and are also generally interpreted to imply happy students who will be more likely to maintain their university enrollments.

In a more sophisticated expression of that approach by skilled faculty members, a pretense is maintained that students are being taken seriously regardless of their inadequate grasp of the subject matter. A favored device is to suspend enough of the course curriculum to free large blocks of time for formal classroom “discussions” and similar group activities, putatively to probe important issues related to topics being studied. With the chairs usually arranged in a circle, some commentary is teased out of each student, and ways are found to react as if each student’s remarks are worthwhile and important.

Regardless of how shallow or uninformed by the subject matter the discussion may be, the instructor’s pretense that the students are being taken seriously as young scholars usually insures favorable course ratings that typically include high praise for the professionalism of the professor. This subterfuge also has the advantage of being almost undetectable except to the most discerning observers, in part because the skills of thoughtful discussion are important, and professors are actually expected to produce those kinds of skills in students. At first blush, that appears to be the point of what is taking place. However, the proper groundwork for that potentially useful teaching practice includes deferring analytical classroom discussion among the students until they have acquired a sufficient subject-related repertoire to support worthwhile participation.

A somewhat similar and increasingly popular approach is to provide the students with long lists of questions about aspects of the subject matter. Students are assigned to study their textbooks, and other sources, to seek the answers. Class time is largely devoted to student group discussions about their respective answers to those questions. The instructor can pretend that the students are preparing well and that they are learning to learn from one another. What the students quickly learn are some principles of economy: No one need study for every item as long as someone has studied for each item. If one occasionally fails to study, others can be relied upon to provide the answers. The subject matter suffers loss of integrity as it is rent into co-operatively manipulated fragments, which the students can then memorize (not a serious problem if the subject matter is already but a cobbled aggregate of somewhat disconnected elements). The examinations often consist of a random sampling of those same questions, to which short stock answers are typically sufficient. The classroom chat groups are handled as enjoyable social occasions by the students. Grades are elevated, and the students reward the professor with high ratings.

Faculty members who exhibit these deviant versions of otherwise legitimate and potentially useful modes of teaching may then represent those practices to colleagues as exemplary teaching, perhaps in support of requests for favorable peer reviews and collegial merit pay recommendations. Such rewards can be bestowed under either of two main classes of contingencies: (a) in appreciation of the subtle and clever yet effective play of these professorial games, or (b) as a mistaken award, presumably for good teaching practices, granted by a panel unable to distinguish good practice from a sham of their own business.

Contingencies of reinforcement that produce a class of behavior do not have to be recognized by the persons whose behavior they condition. The

antecedent events that produce a class of behavior may or may not also evoke private concurrent behaviors of relevant awareness (the separate and additional behavior of privately knowing, or explaining to oneself, what is evoking the initial class of behavior). In universities characterized by stringent economic contingencies, faculty members who respond to economically driven policies by engaging in the kinds of practices described here need not be explaining to themselves the kinds of contingencies under which their teaching practices have drifted. Furthermore, the contingencies that shape their teaching practices, and the contingencies under which they would analyze the controls on their own behavior, are different sets of contingencies. One's teaching practices, and how one interprets those practices, are different behavioral products of two different conditioning histories. Because bad reviews are aversive and hence tend to be suppressed, few academics can be expected to levy bad reviews upon themselves. Instead, an introspective occasion will more typically give rise to the kind of reinforcing interpretations that others view as one's sincere confidence in the propriety and efficacy of what one is doing.

Analysis of Attrition:

Student Evaluations of a Professor's Teaching

We are left with the question of what constitutes proper and improper uses of student course evaluations. The assumption that bad teachers will start acting like good ones if only they are threatened with public revelation of student opinions leads more often to instruction-degrading evasions than to improvements. True, student opinion may imply something about a faculty member's teaching, though what that may be is widely misinterpreted. The extensive traditional literature on student evaluation of teaching has focused heavily on correlations between student ratings of teachers and such fac-

tors as workload assigned, grades given, and class size (with mixed results), often with data from courses featuring standard, noncontroversial subject matters (e.g., d'Apollonia & Abrami, 1997; Greenwald, 1997; Greenwald & Gillmore, 1997; Marsh & Roche, 1997; McKeachie, 1997).

General student attitudes substantially affect student responses on course evaluation instruments. Student evaluations of teaching, often hastily collected on the last day of class, can be distorted even on items pertaining to objectively measurable events—a well-understood if often ignored principle (for an example, see Stanfel, 1995). I have occasionally tested it by asking objective questions on student course evaluations for which I already had accurate answers. It has been easy to see that students who answer those items incorrectly (either favorably or unfavorably) also tend to answer other items with a similar bias.

Knowing what students are saying about one's teaching can be important. However, administrators and peer review committees, acting outside the classroom, typically extract student reactions from the instructional context in which they arise, and in which they may be subject, through sophisticated analyses, to valid and useful interpretations. The administrators, using those dissociated student reactions on a *prima facie* basis, determine the faculty member's salary levels, merit pay, job status, duty assignments, and even retention. Thus, the faculty member's academic freedom to set the curriculum and maintain academic standards is proportionally diminished. The faculty member is placed under strong contingencies to let the students dictate the curriculum and to adjust academic standards in accordance with student satisfaction tied to the students' traditional perceptions. Under flawed policy, control of the curriculum and instruction passes subtly from the expert instructor to the naive students.

Some insight into the reliability of student course evaluations is afforded

by an example taken from student evaluation data on my undergraduate course in the spring of 1995. Two items, separated on the form by a couple of pages, asked essentially the same question in two different ways. The first item asked the extent to which the way of thinking taught in this course would help future teachers produce learning by the students whom *they* will later have to teach. It received the lowest rating of any item on the four-page form (3.6 on a 5-point scale), because a small subset of students, who elsewhere on the form made clear that they were offended by the natural science perspective featured in the course, answered this item with low ratings of 1 or 2.

A couple of pages further along in the form, another item then repeated this question in a different way. It first reminded students of several of the valuable behavior engineering procedures studied in the course that require the practitioner to think about behavior in the way taught in this course. The behavior engineering skills to produce those kinds of outcomes make sense only when informed by the conceptual foundations that suggest attempting to perform them in the first place. With the question recast in this way, 100% of the students reported that such conceptually based skills for producing those kinds of outcomes were worthwhile additions to their teaching capacities.

Thus, a single substantive question, first constructed in a way that elicits an aversive emotional arousal from a small subset of students, produced the worst reaction to the course of any item on the form. When reconstructed to avoid eliciting an aversive emotional reaction and focused instead on practical implications, that version of the item evoked a unanimous endorsement by the students.

Many students want to cling to the old comfortable superstitious mysticism and may punish an instructor who presses them to move beyond that immature intellectual level, yet they want

the practical effective power of behavior engineering practices that only a strict natural science perspective will support. It is an intellectual dilemma with which few people deal effectively and even fewer deal logically. Many behavior-analytic teachers, especially those who teach in applied areas, have quit asking students to adopt or even understand their philosophy, and they teach only practices that yield useful outcomes to which they can point. As a teacher of conceptual foundations in a department devoted largely to a science foundation curriculum, I have not had the luxury of entertaining that particular abdication. Besides, doing so results in the training of behavioral technicians, which is inappropriate in training programs that purport to train behavioral engineers, scientists, or technologists, all of whom need the functional quality control that philosophy imparts to practice.

COLLEGIALLY IMPOSED ECONOMIC SANCTIONS

The lowering of academic standards under economic contingencies can gain supplementary impetus from seemingly unrelated policy. One example pertains to merit pay policy, which, where promulgated, may rely heavily on faculty peer reviews for the addition of merit pay increments to faculty base salaries. However, faculty peer review committees often rely heavily, and in some cases exclusively, on summaries of student course evaluations. Thus, one way to remain vulnerable to unsatisfactory peer ratings (and indirectly to loss of merit pay) is to incur low student ratings, which are often received by professors who resist pressure to relax standards and who refuse to remove elements of subject matter that fail to comport to student superstitions, especially where others having done so leaves such resistance more obvious to students and faculty.

Faculty review committees can therefore inflict, with impunity, financial penalties on colleagues who do not

share their weakness in the face of pressures that arguably should be resisted. Thus, through the merit salary adjustment process, lowering standards has, in some cases, been made to pay, indirectly, in real take-home dollars.

CONCLUSIONS

University policies on retention have now, inadvertently, put important aspects of the instructional programs largely under functional control of the least skilled segment of students. At my university the lowering of academic standards can be traced. For example, in about 1975 a proficiency test of English language skills, long used to screen incoming 1st year students, was eliminated amid complaints that too few applicants were able to pass it (including, it was rumored, the relatives of some influential state government officials) and after the university personnel who were burdened with conducting that testing program griped about the workload.

The Faculty Senate, when voting to eliminate that entrance test, explicitly shifted the burden onto the faculty by formally noting that the teaching of something as universally necessary as language skills should occur throughout the university curriculum. The Faculty Senate held that teaching appropriate language skills, and requiring that students demonstrate them, is the responsibility of *every* university faculty member. The burden of teaching grade-school English was subtly transferred to a university faculty both disinterested in that task and largely untrained for it. The advanced refinement of sophisticated language skills that the university has traditionally been expected to provide now had to give way to training in the rudiments, which many university students now lacked in the absence of the discontinued entrance test.

During the 20-some years since that occurred, the drift has been toward the increasing acceptance of less qualified students. Currently in vogue are special

admissions programs that bring marginally qualified students into the university and provide them with remedial help meant to bolster their chances for retention. Although scarce university funds are expended to compensate for the failures of these students' grade schools, a profit is realized if these otherwise excluded students, now recruited and retained, ultimately pay tuition that exceeds the cost of providing their total university service packages.

Some versions dispense with remedial instruction and instead concentrate merely on demonstrating how easily the academic challenges of the contemporary university can be met. At my university, students whose applications for undergraduate admission did not initially meet the traditional criteria, but whose grade averages and Scholastic Aptitude Test (SAT) scores were close to being minimally acceptable, are invited to attend the Summer Transition Entry Program, known as the STEP (Smith, 1997; E. Y. Doane, STEP Director, personal communication, August 21, 1997; K. A. Guynn, Chairperson, Freshman Admission Committee, personal communication, August 21, 1997). The students are required to spend the summer in a university dormitory and take three regular 1st year courses: beginning college English (3 semester hours), a beginner's course in communications (3 semester hours), and an orientation course for new students (1 semester hour). Those who succeed in that 7-semester-hour package of course work are then admitted unconditionally to the university. The program was begun in 1995 and is scheduled for continuation. During its first 2 years, only one or two students left the program during each summer, reportedly for personal reasons, and in 1997 all 106 students admitted to the STEP program successfully completed the prescribed courses and were subsequently admitted to the university. Of those admitted to the university through the STEP program in 1995, 78% remain at the university, while 88% of those admit-

ted in 1996 have maintained their enrollment. The majority of STEP students have been from out of state (83% in 1997).

Economic implications drive such programs. State-supported universities have traditionally been pressured by their state legislatures to favor state residents, and most state-supported universities have responded by imposing higher admissions criteria on applicants from other states and by requiring higher tuition payments from those whom they do admit. At the same time, internally, the administrators of state universities view out-of-state students as highly desirable, because those students pay substantially more for the same services that are rendered to in-state students. At my university the tuition difference is \$1,000 per semester. Economic analysts within universities, ever alert for lucrative unexploited markets, have not failed to notice that the higher admission standards imposed on out-of-state applicants have created a pool of rejected applicants, the top performers in which post records equal to the lower performing segment of the state resident students who are routinely accepted. A program like the STEP, which invites the best performing students from among the initially rejected pool of applicants, will naturally scoop up a disproportionate share of lucrative out-of-state students simply because their admission criteria were more stringent in the first place. Because the academic skills of STEP students match the lower performance levels of the admitted population of state resident students, their presence in the classrooms results in only a slight decrease in the average performance level of any given class, which often goes unnoticed.

Although such programs are touted to the public as humanitarian services that salvage otherwise largely wasted lives (Smith, 1997), the economic realities can be astounding. A substantial majority of these students remain at the university to pursue an undergraduate degree. They continue to rent dormi-

tory space. They also continue to spend regularly at university bookstores, to buy university event tickets, and to rent car parking spaces on university land. In addition, at my university, with the in-state students currently paying \$1,400 for the summer term and the out-of-state students paying \$2,400, the 1997 STEP earned the university \$211,200 from the nonresident participants and \$25,200 from the state resident members (for a total of \$236,400). Given the estimate that about 90% of the summer 1997 STEP participants will continue their university enrollments, a continuing block of tuition money, estimated roughly at a little more than \$200,000, will continue to be collected from those students in each subsequent semester. Even if a steady attrition rate depleted the 1997 STEP class until only 50% of its members eventually graduated after 4 years, the cumulative tuition income from that group would still have been in the range of 1.5 to 2.0 million dollars. Few if any additional faculty members are required to accommodate these students, because they are dispersed among a wide variety of existing classes.

Some university administrators have defended the removal of barriers such as entrance tests on the grounds that no citizen should be kept from a higher education opportunity by entrance requirements, which are implicitly made to seem irrelevant, arbitrary, "cold," and unnecessarily hurtful. Regardless of whether this represents a disguised abdication of the university administration's responsibility to maintain academic standards, as some may charge, the full burden is shifted to the faculty, whose most salient clue as to how the matter should be handled is the demonstration of how the administration is handling it.

Among entrance tests for admission to higher education institutions, the widely required SAT has generally survived. However, in recent years, as institutions progressively accepted less qualified students, the administrators in many institutions have been publicly

embarrassed by the low average scores posted by their incoming students on the SAT. As widely reported by a wire service bulletin ("Many colleges," 1996), many small colleges and universities have now simply dropped the requirement that applicants furnish SAT scores. Euphemistically described as diversifying the student body, broadening educational opportunities, and insuring fairness to demographic minorities, the result is that students whose high schools failed to teach effective academic skills are being permitted to purchase space in colleges and universities with tuition dollars. To retain those students, the institutions must adjust the rigor of their curricula downward to levels that such students can tolerate.

The general assumption is that marginally qualified students, should they fail to gain necessary skills to succeed in their chosen field, will eventually be eased out of whatever curricular program they have been pursuing. How that is to occur is seldom made explicit. However, many faculty members, for rational reasons, are unwilling to exercise that responsibility through standards imposed in their own classrooms. Another contingency also contributes: The emergence of economically driven university policies on minimum class size has resulted in classes below certain enrollment levels being canceled or going unscheduled in the future. Unless professors keep the seats filled in their classrooms (with paying customers), they can face various penalties such as losses of teaching opportunities in their primary fields, undesirable reassignments, or even termination. Also, most professors like to teach advanced courses in their somewhat narrow specializations for which qualified advanced students who share the professor's interest may not be available in sufficient numbers. To create the opportunity to teach such a course to the small set of qualified students who may be available to take it, a professor may need an additional group of seat fillers to meet the mini-

mal required enrollment. The professor's interests are served if a cadre of students has been carried along to serve this padding function. The professor's advanced course is then functionally taught to the qualified segment, while those who made the occasion possible are paid for their service with a respectable passing grade.

In recent years an increasing fraction of faculty positions have been made contingent on soft-money projects, and an increasing number of university-affiliated research centers have been established on campuses, in part because of their enhanced capacity to attract the grant money that pays the salaries of the involved faculty members. The many concurrent projects attracted by such research centers typically require a large cadre of student workers willing to accept the modest part-time salaries and often repetitive and unchallenging work characteristic of such soft-money projects. Foreign students from nations with depressed economies, who with English language deficits and cultural peculiarities may find themselves less competitive for more lucrative student jobs, are often attracted to the laboratory- and field-based employment opportunities with such projects. In some cases, master's level graduate programs appear to be operated by the project-related faculty members largely to insure the presence of such a work force. Those programs feature academic standards adjusted to insure that those students face relatively little academic threat to their continuing availability for employment on those projects, projects upon which their professors depend for continued university employment. This represents an exception to the general rule that universities prevent unqualified undergraduates from matriculating into their graduate programs.

When faculty members face threats to their professional well-being due to high attrition, norm-referenced standards subtly replace the criterion-referenced standards presumed to prevail when academic quality control is im-

portant; this change allows any sized block of students to be advanced regardless of how ineffective those students may be with respect to the demands of the subject matter. Unprepared students are thus allowed to enter a wide variety of major tracks and proceed upward—in some cases until, in their junior and senior years, they more or less ease themselves out after encountering advanced courses posing such difficulty that their deficiencies overwhelm them beyond the capacity of any instructor to overlook. In other cases the unprepared students quietly advance to an undistinguished graduation. In either case, the collection of tuition from these students is prolonged. But at the same time, they play a major role in establishing the standards maintained by the programs in which they are tolerated.

If we examine the population of academically marginal graduates, we find that in few if any fields do significant numbers of that segment finally become the professionals or specialists for which they begin training. Typically, those who do get a degree are competitively ineffective, and few graduates of that kind get whatever specialized jobs are available in their respective fields. Whether they finally graduate or not, most of these people simply return to the general population where, by a kind of default, they gravitate into a variety of middle-level positions such as technician, equipment operator, salesperson, assistant, secretary, driver, clerk, repair person, and retail manager. Because of their university experience, they are somewhat more competitive for those kinds of jobs than are the woefully undereducated high school graduates.

As state governments reduce subsidies for institutions of higher education, state legislators do not concern themselves with precisely how the institutions will adjust to those deficits. They rely on the technical expertise of the university administrators both to maintain institutional economic viability and to preserve the essence of the

university. The university administrators, in turn, while launching some initiatives at their own level of control, nevertheless rely heavily on the faculty, which in ill-defined ways is supposed to manage much of the task. Instead of a behavioral redesign of the university, its people at all levels are simply subjected to stringent contingencies of professional survival. Not surprisingly, what gets selected are practices that insure professional survival, and that does not necessarily involve preserving an institution that is capable of fulfilling its traditional cultural role.

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