Transcription of “Missing the Forest for the Trees: Rethinking What Influences Student Success,” a lecture by Patrick T. Terenzini (Penn State University) delivered as part of the MIT Division of Student Life Lecture Series. March 30, 2016. Cambridge, MA

Good afternoon, everyone, and thank you for making time to hang out here today. It's an honor to be invited to speak in this series, knowing some of the people who have spoken earlier, and it's a real pleasure to be back in Boston and to be on the MIT campus.

I want to thank Bob Ferrara for his invitation to speak today, and also Dean Chris Colombo for his support. My thanks, too, to Graham Haskin for looking after me and making sure my visit goes smoothly. I know a little bit about MIT from two earlier studies I did of engineering education on this campus, as well as on a half-dozen other campuses around the country. So it is nice to come back. It’s a great place to visit and, I’m sure, a great place to work.

Here’s a preview of what I'd like to do this afternoon. **[Slide 2]** First, I’ll give you essentially the *CliffsNotes* version of what Ernie Pascarella and I concluded from our first two reviews, and there's a third volume of “How College Affects Students” about to come out. I'll speak about that in a moment. My second goal is to suggest that there are at least six characteristics that underlie what the research indicates are effective educational experiences (there may be more, but I can defend at least six). Finally, I’ll talk about the implications of those findings and conclusions for campus-level practice and policy making in both academic and student affairs.

OK, this is the “Shameless Commerce” portion of my presentation this afternoon. **[Slide 3]** These are the first two volumes that Ernie Pascarella and I wrote. The first one reviews research published roughly between 1970 and 1990. The second picks up where the first one left off and reviews the research published in the next 10 years or so. The third volume picks up where Ernie and I left off.

As I suggested earlier, Ernie and read over 5,000 books, journal articles, monographs, conference papers, anything that we could get our hands on that related to change during the college years.

[Slide 4] This is the third volume (clever title, eh?). Five brave, young colleagues produced this book, which will be published later this spring. I want to stress that it's not a third “edition” or a “revised edition.” All three of these volumes are original; all were written from scratch, and each covers a different time period in which research on the impacts of college on students appeared.

Now, if you take these three books and toss in another that came out in 1969 by Ken Feldman and Ted Newcomb, *The Impact of College on Students*, these four books, together, are essentially a review of all the research that we know of published on college effects over the past century. It's a comprehensive collection. The greatest value of all of these books together, may be the references. There's nearly 7,000 of them, maybe more.

Each of the three books addressed these six questions, and you can skim these **[Slide 5],** but I'm going to focus on Question #4 – how different experiences on the same campus shape what students learn in the way of educational outcomes. Sometimes we refer to these influences as the "within-college" effects.

I want to focus on Question 4 for two reasons. The first is that the research makes pretty clear that these are the experiences that matter the most. These are the ones that have the largest effects on various educational outcomes. And I want to add that what happens to students *after* they enroll is much more influential than the characteristics and dispositions that students bring with them. Those precollege traits are important, of course, but they are not determinant. What happens while students are on any particular campus are the primary drivers in student learning and development.

The second reason for focusing on within-college effects is that these are things over which faculty members, administrators, trustees, and policy-makers have some degree of programmatic, pedagogical, or policy control. *These are things we can do something about*, if we make up our minds to do that.

Now, success in college has a number of definitions **[Slide 6]**. You can read this list as well as I can, but I will focus for a couple of reasons on the second outcome, on increasing knowledge acquisition and higher-order thinking skills. First, that is arguably the defining outcome for a college or university. If an institution does not develop these kinds of outcomes, then I think one can reasonably argue that it does not deserve to be called a "college" or a "university."

But I also want to emphasize that, because this category of outcomes is so central to colleges and to faculty members' perceptions of what their programs are about, it's important to identify and understand which student experiences promote these academic and cognitive outcomes. They are our core business.

The contributions that student affairs professionals and students' out-of-class experiences make to students' psychosocial development, attitudinal formation, and moral reasoning are also very important college outcomes, but it is the academic, intellectual, and cognitive outcomes on which faculty members justly pride themselves and consider to be the most important learning outcomes of a college education.

This afternoon, I'm going to make the argument that when student affairs professionals claim to be “educators,” I don't think they fully understand just how much education they are involved in. And I'm quite confident that faculty members also underestimate the importance of students’ out-of-class experiences. The bottom line argument throughout will be that, if both students’ in- and out-of-class experiences can be fused, integrated in effective ways, the students we educate will get a far deeper, broader, and better education than if we continue to think and operate as if the classroom is largely the only place where students develop their intellectual and cognitive skills. By integrating the full range of students’ experiences, our students will become more skilled people in lots of different ways than they already are.

In my comments this afternoon, I'm not going to pay detailed attention to which experiences influence which outcomes. I will do that in very broad brush strokes, but I'll be doing it quickly. So don't try to write everything down. In fact, if you want a copy of these slides, you can download them from [*Insert link to MIT website*].

What I would like to do is provide a sense of the variety and range, first of the experiences that students have and, secondly, the range of outcomes those experiences help shape. Moreover, many college outcomes are shaped by many of the same experiences.

So, how does college affect students? **[Slide 7]** This figure is a gross over simplification of a very complex process, but it also represents a widely held view of college and its effects. This view is common on campuses, among parents, in the public media, and in our state and national legislative bodies. I want to repeat that this figure is a terribly oversimplified representation of an amazingly complex set of processes.

First, I want to clarify what I have in mind when I refer to “academic and cognitive” outcomes. **[Slide 8]** These outcomes are often overlooked by many student affairs programs. Broadly speaking, there are three general categories of what I mean by “academic and cognitive” outcomes: knowledge acquisition; developing academic skills (like reading, writing, and arithmetic); and most important, perhaps, is various forms of higher order thinking, for example critical thinking, evaluating evidence, synthesizing information and material, problem-solving, and so on.

By analogical thinking, I mean identifying similarities between different situations or conditions and recognizing when and where some of those similarities can be adapted from one domain and applied to solving a problem in another domain. I once watched a fascinating video about engineering design (or problem-solving). People in the video were studying the insect world, watching how insects traverse rough terrain, and developing ways that what they were seeing in that biological world could be adapted and applied to the design of a robot that could navigate rough terrains on extra-terrestrial bodies such as the moon or a planet. There's increased emphasis

among engineers in studying the natural world in order to identify those analogies and to apply what they learn there to designing solutions to engineering problems.

So, you might well ask, what kinds of experiences influence these learning outcomes? Well, I'm glad you asked. (I was going to tell you anyway, but this makes for a nice transition.) At least three categories of "academic" influences, or experiences, are identifiable.

[Slide 9] The first general category includes a range of relatively recent innovations in instructional approaches. Note the word "Selected" in the slide title. This is not a complete list. Notice also that each category includes several different approaches. Sometimes they have slightly different definitions, but they differ in important ways. This list includes most of the "newer" instructional approaches, but it is far from exhaustive. Research on these innovative approaches generally entails comparing the effectiveness of a "new" approach to that of the widely used (and well-worn) lecture-and-discussion approach. The parentheses contain estimates of the average magnitude of the difference in outcomes between each of these pedagogies and similar courses (with similar students) taught using the lecture/discussion approach. The average magnitude (across studies) of the difference in student performance between classes taught using traditional versus new approaches – the size of the impact – is shown in percentile points. Think about it as if a student or a group of students were to start a course performing at the 50th percentile in a particular knowledge or skill area. The effect size is the percentile level at which students taught using the "new" approach perform at the end of the course compared to the end-of-course performance of similar students who were taught using the traditional lecture method. Note that each of these magnitudes, or "effect sizes," is positive and statistically significant.

A word about "Supplemental Instruction" (SI) for those who may not be familiar that approach. SI is used in historically "high-risk" courses. Usually they're first- or second-year courses, often in mathematics, or psychology, or chemistry, that have very high withdrawal and/or failure rates. This approach to teaching targets an entire class, not individual students who may be having difficulty in the course. Supplemental Instruction includes peer tutoring and learning in modules; students don't move to the next module until they have mastered the material in the previous module. The peer tutors are students who have previously completed the course successfully.

"Instructional technology-enhanced" instruction may be purely on-line or "blended," when on-line and face-to-face instruction are mixed. The research is extensive and highly varied. On-line instruction can take a variety of forms, in many different disciplines, for varying periods of time, and so on. The variations are enough to drive a researcher batty. By and large, students who study a subject strictly on-line develop their verbal, quantitative, and subject-matter learning and skills to about the same level as students in residential-based instruction. However, blending the two approaches, having some on-line IT activities combined with more traditional residential

(face-to-face) instruction, or any of the instructional approaches listed in Slide 9, turns out to be the most effective, better perhaps on the order of 10 to 15 percentile points.

"Service learning" is not the same as voluntary community service, like 10 hours per week in a soup kitchen. Service learning is a fairly narrowly defined pedagogical approach in which students – as part of their coursework and for which they earn credit – participate in some form of community service where they have an opportunity to apply what they're learning in the classroom. Similarly, students will bring their service experiences back to the classroom and discuss them with other students. Students also spend time in reflection, thinking about what they saw, what they did, what it may mean for themselves and others, what they are learning. And interestingly enough, at the bottom of the slide (#9), you will see that students learn from doing their homework. Imagine that! Who knew?!?

A second category of academic activities make a difference is the classroom behaviors of the instructor **[Slide 10]**. These are some of the instructor behaviors that pretty clearly make a difference in student learning. These are the things that effective teachers do. And the evidence is pretty clear – these are tried, true, and empirically grounded instructional behaviors that are effective.

I want to be clear that lecturing has its place in our classrooms. It's served us very well for over 800 years. I'm not advocating that we abandon lecture and discussion methods as an approach to teaching. Much depends on what an instructor's goals are, who the students are. Selecting among various pedagogies also depends on the course material that you're trying to teach. So, lecturing has a place. But the evidence suggests that these other instructional approaches, by and large, are consistently more effective in producing student learning.

Effective curricula also play a role **[Slide 11]**. I use the word "curriculum" very broadly. It's not just a collection of courses some campuses provide – the traditional cafeteria style set of degree requirements, where you take so many credits from the arts and humanities, so many credits from the sciences, and so many credits from the social sciences. An effective curriculum includes the coursework students take, of course, but also the nature and interconnections in the coursework, the organization of ideas and materials, its sequencing, the instructional approaches, and also the assessment procedures that faculty members use. Overall, however, the most effective curricula are interdisciplinary, integrated, and make connections ideas in other courses.

Curricula with these characteristics are frequently found (but not always) in liberal arts curricular structures; living-learning communities; honors programs; undergraduate research programs that involve student in working with faculty members on the faculty member's research program, being an active contributor; study abroad programs, and other kinds of academically integrated programs. These are carefully planned, largely experiential activities, and are designed and offered by faculty

members or instructors committed to helping students learn.

One of the ironies is that the research indicates that the kinds of curricula I've listed are more effective with students who may be first-generation, low SES, underprepared, a member of a racial or ethnic minority group, and others. These students benefit more than "traditional" students from most from these activities and pedagogies. But these students – who benefit the most and who are most "in need" – are also the least likely to encounter these kinds of curricula, pedagogies, and instructor behaviors in their courses and programs.

Now there's a second dimension to how most people think about an "effective education." **[Slide Number 12]** This second dimension is typically seen as a parallel area, a second track that faculty members often think [along]. Student affairs professionals may also think along these lines. There's a separation between academic and student affairs, here, a parallelism. The two major organizational divisions of an institution are thought to run on parallel tracks, and anybody who's had a basic course in geometry can tell you that parallel lines never meet, despite the optical suggestion that they do if you go along far enough. In this line of organizational thinking, however, the parallel divisions and sets of activities frequently don't meet, don't converge.

My basic argument, here, is that students have a number of experiences outside the classroom that lead to learning important things. They grow in a variety of psychosocial areas; they refine current attitudes and values, or develop entirely new ones; and they refine their moral reasoning. These are all important educational outcomes. I want to say again, however, that these areas of learning and growth are still not the primary outcome in a college or university. I'm not saying they're unimportant. They're absolutely vital to developing the "whole student" and to a democratic, healthy society. But they are still seen by many faculty members as being secondary to students' intellectual and cognitive development.

[Slide 13] The term "Psychosocial" has multiple dimensions, note again the range. The term includes components relating to students' internal or personal development, including their identities, self-concepts, sense of autonomy, and so on. But "psychosocial" also has "social" or relational dimensions that refer to the ways in which we are influenced by other people. Peer influences are a clear example. "Attitudes and values" refers broadly to the what we think and believe about someone or some idea or condition. Attitudes and values can be cultural, aesthetic, intellectual, educational, occupational, social, religious, and so on.

By "moral reasoning" I mean not what beliefs students hold about what is or isn't moral, but rather <u>how</u> they came to hold those beliefs, the process of thinking (or not thinking) that has led us to a particular belief about something as moral or immoral. We believe some things because people in authority (parents, teachers, members of the clergy, laws) tell us we should believe something, and we accept that. We believe other

things, however, because we have examined the various arguments for believing or not believing something; we have examined and weighed the evidence; and we arrive at a belief because it is aligned with a set of "principles" we have developed and to which we now subscribe. Note again, however, the range of outcomes just within the "psychosocial, attitudes, and values" areas. This list of outcomes, by the way, is neither comprehensive nor all-inclusive.

Moreover, as shown here **[Slide 14]**, the research literature indicates pretty clearly that a large number of "out-of-class" experiences shape one or more of the psychosocial, attitudinal, and moral reasoning outcomes listed on the previous slide. I won't get into these influences, but take a moment to read down the list. My point, again, is to emphasize the number and range of out-of-class influences shaping "non-academic" learning outcomes.

Now, that's a lot of stuff. A lot of outcomes, a lot of influences. And as I suggested, many faculty members and student affairs professionals view the education of students as essentially these two sets of parallel, almost independent activities and outcomes. But in fact, *that view is inaccurate, not supported by the research*. **[Slide 15]** Among the most interesting, and I think one of the most important, findings Ernie and I found is that it's pretty clear and consistent over more than 45 years of research that student's out-of-class experiences ALSO contribute to the students' development of their academic, intellectual, and cognitive skills.

[Slide 16] These are some of students' out-of-class experiences that have been empirically linked – with considerable consistency – to academic and cognitive development. Now, that's a huge range of experiences! Just take a minute and look at that. As with some earlier lists, this one is not exhaustive.

So, there are four important points, here. First, I want to underscore that these are out-of-class experiences; they are not, generally speaking, part of the formal academic curriculum or experience. But they have consistent, measurable effects on students' intellectual and cognitive development.

Second, these are net effects on outcomes. By that I mean that these influences shape student learning even after controlling for, or taking into account, a wide variety of students' precollege characteristics (e.g., gender, race/ethnicity, admissions test scores, family SES). Put another way, the effects or influences of these experiences cannot be attributed to the characteristics of the students having (or not having) these experiences. These effects are probably real ones.

Now we haven't perfectly isolated the effect of these experiences from other experiences. That requires a level of precision that's rarely seen in the social sciences. But the consistency of the evidence over a number of studies done with different designs, samples, kinds of institutions, and over four or more decades, is pretty

compelling.

Third, note here that many of these experiences are interpersonal. They involve other people. And I'll come back to that in a moment.

The fourth point to keep in mind is that the “quality” of these experiences is more important than their frequency. Take, for example, contact with faculty members. It's the nature or character of the contacts, the substance of the interactions with faculty members or the topics of discussion rather than the simple frequency of contact that makes the difference. And again, the evidence suggests the irony that the students who can benefit the most from these experiences are also the kinds of students who are the least likely to have them.

Now, this evidence, I think, points to a critically important process. And it's going to be a long-term process of changing the way we think about the educational outcomes that result from students' out-of-class and in-class experiences. The effects of those experiences are likely to be maximized when they are part of an integrated, interdependent, mutually supporting kind of education. It's a kind of education that is found on far fewer campuses than one might hope as a parent, a faculty member, an administrator, legislator, or member of Congress. But it's something that I think is both do-able and well worth the energy required to make it happen. In addition, I think it's critical for student affairs professionals and faculty to understand these findings. They are critically important to understanding fully the dynamics of the college experience in all its complexity, to appreciating the interlaced dynamics of how students learn and what influences students’ learning.

The recognition and appreciation of these interconnections is particularly important for student affairs professionals, as well as faculty members. This research provides the empirical foundations the argument that student affairs professionals are educators. This evidence is vital to establishing the legitimacy of student affairs as a contributing, educational factor in the college community.

These conclusions, moreover, are critical for developing collaborations with faculty members, for gaining the respect of faculty members, for demonstrating that these relationships, these potentially collaborative relationships, really matter. These research-based conclusions are the basis for making the argument that student affairs professionals are, indeed, “educators” and that institutional impacts on student learning will be maximized more by academic and student affairs working together than by their working separately.

[Slides 17, 18] Now, this figure suggests something that's not often realized: students’ curricular and classroom activities also contribute (whether faculty members intend it or not) to students' psychosocial, attitudinal, and moral reasoning development. Are you beginning to see the pattern here? The argument can be made

empirically that, in the college environment, a substantial proportion of the experiences students have is related to one or more (more likely "more") of the learning outcomes colleges are trying to promote. "Academic" experiences not only shape intellectual or cognitive outcomes, but they are also related to students' psychosocial development, the formation or changes in their attitudes and values, and in their moral reasoning development.

Here **[Slide 19]** are some of the categories of students' academic experiences, that influence changes in some of the "non-academic" dimensions of students' lives. The critical take-away here is that the current organizational and practical bifurcation of academic and student affairs has absolutely no foundation in the research literature. Some faculty members may believe it deeply, but it's still not true. The evidence is just not there. This is NOT how students learn during their college years. It's a deeply flawed conception of how college affects students. We can come back and discuss that later if you'd like to.

The moral of the story **[Slide 20]** is that college affects all kinds of important forms of learning in complex ways. Students' experiences provide multiple influences that operate in multiple settings and affect multiple outcomes. It's just that simple, and just that complex.

Now, this is the point of desperation I reached at the end of my work with Ernie on the second volume of *How College Affects Students*. I have been an administrator and/or faculty member long enough that, when I read a research article, report, or book, one of my ever-present questions is: "What can I do with this that will make me a better administrator? How can I use this to become a better teacher?" And the more I thought about these questions, the more desperate I got because of the number, range, and variety not only of the outcomes, but also of the experiences that shape them. I decided there was just waaaay too much material here to process cognitively or operationally. I wanted to find some manageable way of making sense of these effective practices, some way to turn this mountain of evidence into "actionable" guidance for administrators and teachers.

I concluded that the answer lay in the dynamics of these experiences, not in the specifics of the individual experiences themselves. I began asking what these "effective experiences" had in common. What made them "effective"? I've identified at least six of these "underlying dynamics," these "characteristics of educationally effective experiences." There may well be more, but I'm confident there are at least these six.

[Slide 21] The first is that these effective experiences all involve students' "Encounters with Difference." All of these experiences provided an opportunity for students to confront something that – for them, at least – is different from what they are accustomed to. It might be an idea, maybe a belief, a way of thinking about something that's different from what the student currently thinks or believes. These

"encounters with The Different" (Marcia Baxter Magolda calls such a challenge "the provocative moment.") might involve politics, religion, social issues, cultural values, whatever, but it involves an idea that challenges a student's current belief(s). Or, "The Different" might be people, individuals who are unlike the student in one way or another. The difference may be in one or more demographic characteristics. It may be their cultural background. It may be their family upbringing. Maybe it's their socioeconomic status. Whatever. The key is that a student encounters other students, other individuals, who are different in some way from themselves. And it is important to note, here, not only the number and variety of these experiences, but that experiences that "challenge" students are found in both students' "academic" experiences and in their out-of-class lives.

Second **[Slide 22]**, effective educational experiences require a response from the student. The student has to engage with the "challenge." It's not enough to be challenged; the student has to deal with the challenge constructively. What makes a response "constructive" is too complicated to get into in detail here, but basically the challenge must be sufficient to produce a manageable response, but not be so threatening that it overwhelms the individual, who in turn rejects it and refuses to deal with it. The "constructive" response is similar to the "Goldilocks Solution:" Not too little; not too much, but just right. Education is not a spectator sport. Without engagement, learning is unlikely. Students must both experience the provocative moment and then respond intellectually to it. The research I've summarized suggests these "moments" may occur at any time, with anyone, on any topic, and in any setting.

The third characteristic of effective educational experiences **[Slide 23]** is that they occur in a supportive environment. Some of you may recognize Nevitt Sanford's concepts of "challenge" and "support." Although offered in the late 1960s, these concepts are as valid today as they ever were. An educationally effective "challenge" occurs in an environment that provides where collaboration and cooperation are encouraged, where experimentation is encouraged, and where failure is OK, provided learning occurs. In addition, it's important to recognize that providing a supportive environment is not hand-holding, and it's not lowering or relaxing standards. Students are still required to meet the standard, but they are supported in their efforts and given the assistance they need to get there, to learn. Providing a supportive environment is good education; it's a solid, research- based practice; it's good teaching. It's remembering that our students wouldn't be in our colleges and universities if we didn't think they could succeed, and we want to help them do that.

A word more on this point. As I said earlier, in educationally effective environments risk-taking and failure are OK. In fact, we try to encourage them. Engineers know this process well. In many ways, the engineering profession has advanced from the study of failure. If an airplane crashes, engineers wants to know why and how they can re-engineer that aircraft so that there won't be another crash. They follow the basic engineering practice: Design, build, test. We can think about our

curricula in a similar way: If students are failing, why is that happening? What can we do to promote success for more students? Exploration and experimentation are part of the learning process. An early mentor in my teaching career used to encourage his own prep-school English students to “Remember the turtle. For the turtle to advance, it must first stick its neck out.”

The fourth characteristic of “educationally effective experiences” **[Slide 24]** is that they often involve meaningful, real-world activities. It's not sandbox student government. It's not static laboratory exercises, where everyone knows from the outset what the “right” answer or solution is. Real-world experiences often require us to wrestle with so-called “unstructured problems.” These are problems where the data may be incomplete. There may be multiple solutions, not all of which are equally attractive or feasible. Solving these problems requires a greater reliance on creativity and imagination than on logic. They require analyzing and balancing competing, maybe mutually exclusive, alternatives. They often require making compromises, making decisions to sacrifice one desirable “good” in order to get a “better good.” And no clear guides exist for achieving the best solution.

For real-world experiences, I often think of the “work colleges.” There’s about a dozen of them, the best known of which is probably Berea College in Kentucky. Berea students (and their peers at other work colleges) are expected to work, to contribute to the college community. The work may be on the college’s farm, helping clean out stalls, taking care of animals, milking cows. It might mean working in the gardens where the college grows its own vegetables for the dining hall. It might mean waiting tables in the dining hall, or handling maintenance chores in the residence halls, and so on. The student has a contributory role in that community. So not only do they learn about their work tasks, they also learn about their responsibilities to contribute actively to the community to which they belong.

Fifth **[Slide 25]**, effective educational experiences are frequently “interpersonal.” As often as not, they involve other people. They're relational. They involve the student with faculty members, peers, anyone who may challenge what they think or believe, anyone who might spark a “provocative moment.” Students both “teach” (think “peer group influences” and peer tutoring) and “learn” from one another. They can both “challenge” and “support.”

Finally **[Slide 26]**, educationally effective experiences invite and promote students to reflect on and analyze their experience. And again (as with all these characteristics), note that a range of activities or experiences is found in both formal and informal academic settings as well as outside of class.

Time’s running out, here. OK, a quick example of what I have in mind here. In the video I’m going to show, students are actively involved in learning. See how many of the “six characteristics of effective educational experiences” you can spot.

[The video is available at the URL in **Slide 27**]:
http://www.youtube.com/watch?v=Tm0X2lIu1Ns&feature=player_embedded

Think about what the students in the video were doing. **[Slide 28]** Think about these six characteristics of effective educational experiences, and I think you can find just about all of these characteristics in those activities. These students are doing what they are preparing to be – young engineers, young professionals. And there's a fusion of curricular and co-curricular activities. The challenge is finding ways to scale-up such opportunities for all students. Now, I know that MIT offers your students these same kinds of opportunities in many settings. The challenge is not to offer any specific opportunity to everybody (for example, contributing to the design and construction of a solar home), but rather to find or create multiple programs and activities that have one or (preferably) more of the six characteristics. That will challenge our own imagination and creativity. We need to create opportunities for all students to be challenged, to engage those challenges, to be supported, to learn in real-world settings and activities, to learn with other people (students and faculty members), and to reflect on, analyze, and learn from their experiences.

[Slide 29] The moral of the story is that what an institution, division, or unit does is probably less important to student learning and development than that whatever it does has one or more of those six characteristics. And the more of them, the better. Those characteristics can be used as touchstones in a variety of ways for program or course design and development, for formative and summative evaluation, and for resource allocation. And if you find that you're offering and funding some program or activity that doesn't have any of those six characteristics, then you may want to give some serious thought to possibly ending that activity or closing that program.

Now, having said all of that, I think there are a couple of traps that we fall into all too readily in student affairs and, I suspect, academic affairs, too. **[Slide 30]** The pitfalls are part of a sort of organizational myopia. And that myopia has two prominent manifestations.

The first is a focus on "my unit" and what my unit does. The presumption is that, if I do my job well, and others in my unit also do their jobs well, then our unit will be successful. And if the same is true across other units in the institution, then we'll have an effective institution. In theory, there's probably some truth to that. But to some extent, it's also likely that that institution, division, or unit will be less effective than it could otherwise be if the units and divisions within an institution worked together in a planned, coordinated way. We need to think about how our programs and activities connect with each other and with those in other units and divisions. Where and how does what we do support and contribute to the functioning of the larger system?

The second aspect of organizational myopia is the search for "best practices." I

would argue that “best practices” are “best” because they have several of these six characteristics of effective education. Recall the moral of the story in **Slide 29**: What an institution, division, or unit does is less important to student learning than that whatever a unit or program does has one or more of those six characteristics (and the more the better). The search for best practices, I think, is potentially misleading, possibly even counter-productive. It tends to narrow our thinking and programmatic vision. We tend to think that if we take that best practice and apply it on our own campus, it will take care of everything, or at least make us better. We assume that what worked on another campus will work as well on our campus. In fact, that's probably an unreasonable expectation.

For institutions, as with human beings, transplantation is often a highly complex process. Organizations, like our bodies, also have immune systems. With “best practice” transplantation, organizational antibodies are at work. Those antibodies may take the form of differences in the kinds of students on the two campuses; differences in the organizational cultures; differences in the readiness of the organization to change; differences in the available resources; differences in the relevant personnel’s commitment to the new practice; or differences in institutional or unit priorities. The antibodies can take other forms, of course, but you get the idea. When one of more of these differences are present, the odds for a successful transplant drop sharply.

So, how do we avoid this organizational myopia? **[Slide 31]** The right-hand portion of this figure summarizes the way we typically think about how colleges and universities shape student learning and development. We have a set of educational outcomes we want to maximize (for example, any or all of the forms of “student success” in Slide 6). As we saw, the research indicates that these outcomes are shaped by individual students’ and a variety of their experiences, some in the classroom, some out-of-class, some from the curriculum. I want to suggest – and I hope my presentation to this point has persuaded you – that how college affects students is far more complex than that. Other features of a college or university in addition to students’ experiences are at work.

The peer environment, the peer culture, the campus’s “ethos” is an important dimension. What students value and encourage as a group, what they don't value or encourage, what kinds of attitudes and behaviors the peer culture expects from its members are subtle, but powerful influences on students learning and development. And when the peer culture and values conflict with institutional or administrative goals and values, the resulting conflict will be problematic, to say the least, and a worst, dysfunctional. One of the many challenges confronting faculty members and academic and student affairs administrators is how to promote a peer environment and student culture that supports the institution’s goals and values. How to develop a consensus among students, faculty members, and administrators on what it “means” to be an MIT student, on why students are there.

Other important aspects of our institutions are also involved, and these are suggested in the three bubbles in the left portion of this figure that make up the "organizational context." These organizational features also shape the kinds of experiences students have and – in turn – what they learn and what they become. The effects of these features on students are subtle and indirect, but they are no less influential. There's more to this than I have time to discuss right now because I know time's running out. But in thinking about how to shape the student experience, think not just in terms of programs, think systemically. Think in terms of the role and the utility of the peer culture, the kinds of organizational structures and policies we have, and the vitally important faculty culture. What do faculty members value? What do they see as their primary roles? What kinds of skills and values do we seek in the faculty members and administrators we recruit and appoint? What kinds of skills and values do we reward? If you want faculty members who like to teach and who are good at it, it's a whole lot easier to recruit a good teacher than it is to retrain a poor one. As with the student peer culture, the faculty culture can be an asset or a liability.

Well, what are the implications of all this for practice and policy? **[Slide 32]** I apologize for taking so long to get to this point. So much for my time-management skills. Very quickly, one implication is to align what we do with what we know. The research is out there, and it's pretty clear on some important things (not so clear on others). I've tried to summarize and synthesize a lot of it. Use the six characteristics I've suggested as touchstones. Use them to promote a learning-oriented – not student-oriented – foundation for decision-making, for choosing among alternative courses of action. How much or how well will students' learning be enhanced if we decide to adopt "Alternative A" instead of "Alternative B or C"?

Second, capitalize on the research evidence and effective programs that are already available. Students' academic and out-of-class experiences, in their own ways and to their own degrees, are both major contributors to what students learn and how they change. Blur the boundaries between academic and student affairs!

Third, think systemically. Forget silver bullets. There aren't any. There are very few things that one can do that – by themselves – will be catalysts for dramatic change in an institution. We've all learned that organizational change is better measured in geologic time than in "miracle" time. "Catalytic" is not a word typically used in describing change in colleges and universities.

Fourth, overcome the separations between and among units. Think and act collaboratively; organize, structure, and operate systemically.

Finally, understand the system and how it works. Colleges and universities, despite claims to the contrary, are not rational organizations. They have many bureaucratic features: – responsibility, power, and status presumably flows logically in vertical and horizontal directions (think "organizational charts"). These bureaucratic

features suggest order, consistency, predictably, and reliability. And we all know that works out.

It's also important, however, to remember our historical origins and recognize and respect the values that have characterized higher education institutions since the Middle Ages. Despite our institutions' modernity, today's colleges and universities still have many of the characteristics of those early colleges. We still value the "collegium," a form of organization that functions like a council or committee of equally empowered members, especially one that oversees and controls some important activity – like teaching students. The Colonial Period colleges operated with a president and a faculty who viewed themselves as equals, as colleagues, with the president as "*primus inter pares*," or "first among equals." We owe our institutions' compulsion to form committees to these historical roots. And if we forget about the "collegiality" principle, the faculty will remind us in a hurry, particularly if an issue or decision involves the curriculum or what happens in the classroom. Although faculty members hate and complain about all the committees and meetings, they will raise the roof if they are excluded from a decision that affects them or their educational programs.

But our institutions are run by human beings and, thus, also have powerful political dimensions. If the bureaucratic organizational chart maps the formal areas of responsibility and the flow of power, informal power and influence also play significant roles in the institution's decision-making processes. Informal power and status flows from the role(s) individuals play, particularly with respect to faculty members. As collectivities, they may appear in the organization chart in the person of a school or college dean, but administrators ignore at their peril the faculty's informal power. Every faculty has its "opinion makers," individuals distinguished by the respect accorded to them by their academic rank and credentials, as well as the power of their oratory. These are the people who, when they rise to speak, people pay attention. And it behooves the smart administrator to know who the informal leaders are and how to work with them.

In thinking over the years about colleges and universities as organizations and about organizational change, I keep coming back to Kenny Rogers, the country and western singer. Some of you are old enough to remember "The Gambler." And I know the young here don't have a clue about what I'm talking about. Quickly, the ballad is set in the mid- or late 19th century American west. A professional gambler is seated on a train next to a young stranger. The young man, who is the singer-narrator of the song, is down on his luck. After a while, the gambler says to the young man, "Son, I've made a lifetime out of reading people's faces, knowing what the cards were by the way they held their eyes. And if you don't mind my saying, I can see you're out of aces. For a taste of your whiskey, I'll give you some advice." The young man gives the gambler his bottle and the gambler drinks what little is left, bums a cigarette, and then delivers his advice: "You got to know when to hold 'em, know when to fold 'em, know when to walk away, know when to run."

Well, I suppose that's pretty good advice, but the best advice for me is the line in the song just before the refrain begins. The gambler says to the young man: “If you're going to play the game, boy, you gotta learn to play it right.”

And that advice is as important for administrators working with faculty members as it is for gamblers. It means understanding the institution’s traditions, the college’s and faculty cultures and values, knowing what the “deal breakers” are likely to be in negotiating with individuals or groups with whom you’re trying to work to initiate some program or idea. It’s understanding when bureaucratic, collegial, and political forces are at work and how to manage them to your advantage. “If you're going to play the game, . . . , you gotta to learn to play it right.”

Thanks for the opportunity to speak this afternoon, and thanks for your attention and your patience. I'll be happy to answer any questions you might have.