CHAPTER 3

Strengthening Colleges and Universities

The Harvard Assessment Seminars

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The Harvard Assessment Seminars project aims to help students make the most of their few undergraduate years. Its work centers on how faculty members can most effectively help students learn, and on encouraging and assessing innovations in the classroom. My goal, as the project's director, is to translate our key findings into policies and action.

The Harvard Assessment Seminars project was conceived in 1986 by Harvard's president, Derek Bok, who first posed the fundamental questions to address: What are we at Harvard doing well for our undergraduates, and what are we not doing so well? And, once we learn the answers to these questions, how can we tweak or change what we do now to strengthen the undergraduate college experience?

Following initial conversations with Bok, a broad group of faculty colleagues was formed and met once each month for several years. Additionally, several administrators, including the dean of the faculty of arts and sciences, the dean of fresh-

men, the dean of students, and the director of residence hall life, joined the group, as well as a dozen undergraduates. We quickly agreed on several broad areas to examine with regard to the quality of student life at Harvard.

Our working format was one that any campus could implement easily. Our monthly meetings were driven by a free market of ideas and supported by good staff. Anyone could suggest a project, and if anyone wanted to work on it, the idea moved forward; if not, it was dropped. All projects were pursued by small, self-selected working groups. Working groups were formed to focus on the sciences, writing, advising, classroom teaching, and gender differences in learning. Each group carried out a precisely defined project using top-notch science and research design, with constructive help from all our other colleagues involved in the broader effort.

This model eventually was extended to 24 other colleges and universities and has involved more than 70 faculty members from all the institutions and 120 student interviewers at Harvard alone. All told, more than 2,000 Harvard students have participated in in-depth, one-on-one interviews for two to three hours.

Key Findings

Students have thought a lot about what works well for them. We can learn much from their insights, which are often more helpful than the vague "common wisdom" about how faculty

can help students make good decisions at college. Our biggest challenge was to figure out what the myriad details added up to. Did these many long conversations with undergraduates drive toward any broad, overarching principle? The answer is an emphatic "yes," as described in finding number 1 below.

1. ***Interactive relationships organized around academic work are vital.*** The common wisdom at many colleges is that the best advice for students, in addition to just attending classes and doing homework, is to "get involved." Get involved in campus activities of all sorts: writing, singing, drama, music, politics, athletics, community service, and so on. This is excellent advice, but there is a different kind of involvement, a more subtle kind, and the undergraduates who are both happiest and academically most successful stress its importance. Almost without exception, these students have at least one (and often more) intense relationship built around academic work with other people. Some have it with a professor, some with an adviser, and others build it around a group of fellow students outside the classroom.

The critical point is that the relationships are not merely social. They are organized to accomplish some work—a substantive exploration that students describe as "stretching" themselves. And almost without exception, students who feel they have not yet found themselves, or fully hit their stride, report that they have not developed such relationships.

Students in the sciences found collaborative work and discussion of material between classes especially rewarding. As a

result, many science courses at Harvard now use study groups created by the instructor. Rarely today does a professor tell students that they must do their homework alone (the key, of course, is that exams are indeed taken alone). Any college or university can implement this straightforward policy, which simply requires a shift in what instructors encourage and discourage. This shift has another benefit that was brought to light by the interview process. That is, Harvard freshmen who entered with a strong background and plans to emphasize the sciences in their coursework but who switched to other fields rarely had joined a study group—in contrast to those who stuck with and chose to major in the sciences.

2. ***Students value strong writing skills and many benefit enormously from a few specific suggestions.*** Of all the skills students say they want to strengthen, writing is mentioned three times more than any other. In light of this finding, Harvard's entire expository writing faculty met and agreed upon systematic ways to help students revise their papers more effectively, and incorporated these methods into their teaching. The key is that rather than simply telling students to "revise" their papers, they are being instructed as to how best to do so—skills that are all the more important and likely to be used now that technology makes revisions easily possible. As a result of these efforts, writing is now taught differently to Harvard freshmen than in the past.

Echoing the first finding above, when asked how they in fact work on their writing, students who improved the most over

the course of their undergraduate years (based on a multiyear study) describe an intense process: they worked with a professor, a writing teacher, or a small study group of fellow students who met regularly to critique one another's writing. The longer this work engagement lasted, the greater the improvement in writing. Further, throughout the course of our interviews, when asked what they considered "the most effective, important course they had taken in their four years at college," student after student spoke of classes structured such that writing for fellow students was an integral part of the course, which turns out to be an extraordinarily new and profound experience for some students.

As a result, Harvard professors are increasingly asking students to distribute their papers to their classmates. The key idea is that when students know their classmates will be reading their papers, they approach the project with an entirely different level of seriousness and commitment. Students work harder on developing their thoughts and on writing good papers. They don't want to be embarrassed. They want to be proud of their work in front of their classmates, and they want their ideas to become an integral part of class discussions. In turn, each student benefits from the insights that his or her fellow students bring to class. We hear much talk about the value of diversity on campus. This simple idea of sharing papers presents a low-cost way for students to be exposed to the way other students—perhaps from quite different religious, economic, and political backgrounds—approach problems and write about them. It certainly makes for stimulating class discussions.

3. ***Foreign languages and literature are the most widely appreciated courses.*** We unexpectedly found that students enjoy courses in foreign languages and literature enormously. They rate the workload as equally enormous. Undergraduates give these classes higher praise than any other subject or course categories except for small tutorials. Their ratings transcend any one particular language or group of languages—all are singled out by juniors and seniors as classes in which they felt they grew significantly. The students' reasons have to do with the way language courses are structured and taught; that is, the classes are structured to maximize personal engagement and collegial interaction. Usually classes are small to medium-sized, and instructors insist that each student contribute regularly. Students are encouraged to work in small groups outside of class, and the classes demand regular written assignments. Frequent quizzes give students constant feedback, so they can make repeated midcourse corrections. In sum, these classes have already put into practice the exact features that students describe as most valuable for enhancing their engagement with their coursework and, likewise, their learning.

Alumni are even more fervent. When asked to give advice to undergraduates, nearly all urge more intense study of both foreign languages and literatures. Many suggest programs to incorporate such classes into each student's study plan.

4. ***Faculty can make midcourse adjustments to improve their teaching by implementing the "one-minute paper" idea.*** The one-minute paper idea simply involves each faculty

member wrapping up his or her class one minute early, at which point each student is invited to take out a blank sheet of paper and anonymously answer two short questions with very brief answers. Question one is, "What was the big idea you learned in class today?" Question two is, "What is the unclear point in class today?" As he or she leaves the room after class, each student drops the paper into a large cardboard box. The professor can read all the responses in about five minutes and gain immediate feedback about how the class "went." Then the professor can choose to begin his or her next class based upon the responses from the most recent one-minute papers, including, of course, clarifying any unclear points from the last class.

More than 200 courses throughout Harvard University are using this simple idea; at the Kennedy School, nearly all faculty members routinely use it. The questions needn't always be the same. One colleague of mine, for example, changed the questions to, "How much time did you spend preparing for today's class?" And, "Is the pace that I am teaching this class too fast, too slow, or about right?"

Clearly, the one-minute paper presents an easy, low-tech, no-cost way for any professor to improve his or her class during the semester. The idea could be readily implemented on nearly every campus across America.

5. ***Advisors can help students make a few key decisions that will shape their entire college experience.*** Young men and women arriving at college immediately confront a set of decisions. Which courses to choose. What subject to specialize in.

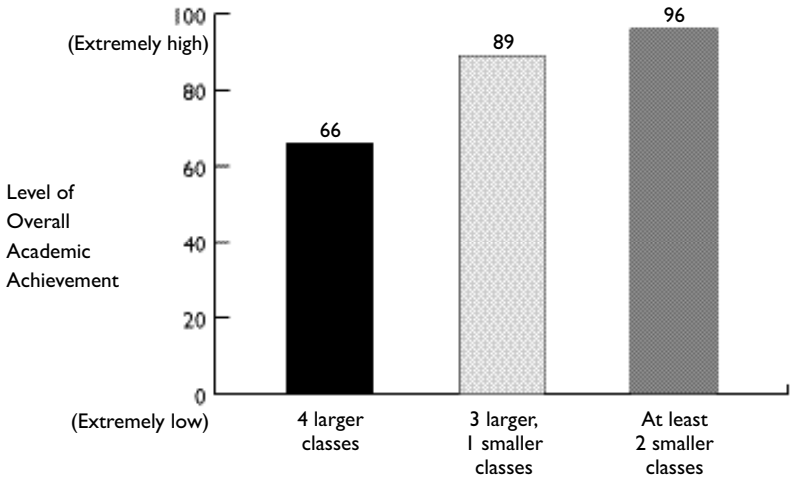
What activities to join. How much to study. How to study. Such decisions are intensely personal, and often they are made with little information. Yet their consequences are enormous: A subject that is bypassed, or study habits that are mismatched for certain classes, for example, can result in limited options, reduced opportunities, or closed doors. Advisers can play a critical role in helping students in their decision making. They can ask a few questions and make a few suggestions that will affect students in a profound and continuing way.

While there is no single "best" advising plan for all freshmen, some suggestions can be put forward. Our data have led us to formulate four specific points that we encourage each adviser to share with freshmen advisees. Students can then make their own choices, but each will benefit from knowing the experiences of others.

Suggestion no. 1: ***Choose a portfolio of classes wisely—consider class size.*** Many freshmen are good at choosing specific courses they are eager to take. Their choices are facilitated by the opportunity to "shop" at Harvard, where a student can visit many classes for the first week before making a final selection. But choosing individual classes is different from putting together a *group of four* classes that are productive. We call this choosing a portfolio.

In a review of portfolios for many freshmen, the striking importance of class size quickly emerges. Some students take class sizes into account when putting together their portfolio, but a significant minority do not. This could be a mistake. Stu-

Figure 1. Relationship Between Portfolio of Class Sizes and Students' Overall Engagement with Academic Work



dents who choose at least one small course each semester have, on the average, a significantly better overall experience than those who do not. Figure 1 shows how freshmen describe their level of academic engagement at the end of each semester in relation to their course portfolio. Students who choose at least one small class (in addition to the required Expository Writing class) are noticeably more engaged, by their own rating, than students who take only larger classes.

Engagement is not all that small classes help. Figure 2 presents the amount of time that students report they spend on coursework for classes of different sizes. Either small classes demand more time or students choose to invest more. Perhaps

Figure 2. Relationship Between Class Size and Amount of Time Students Spend on Coursework

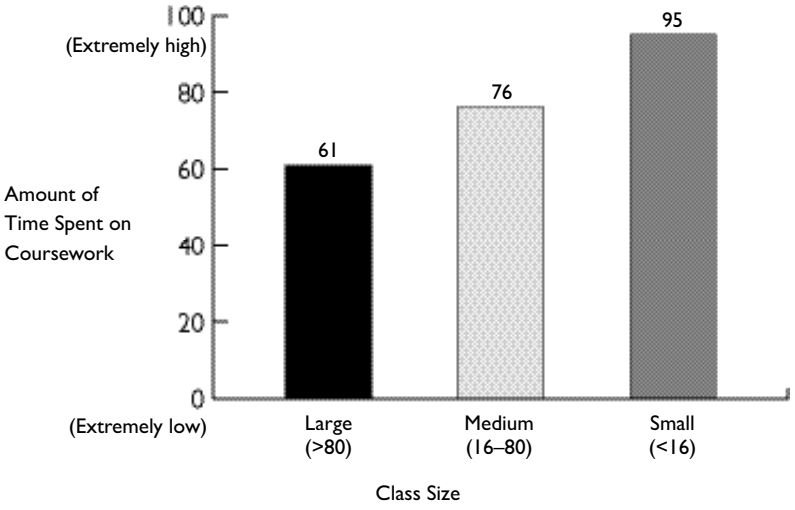
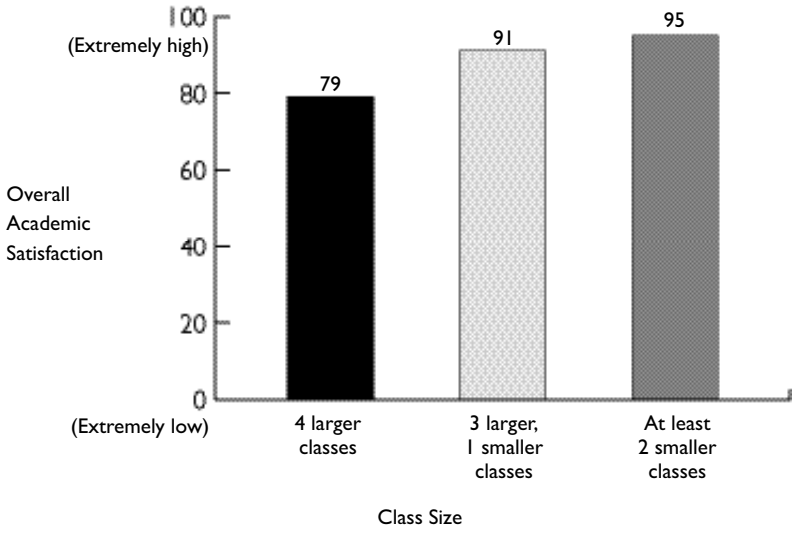


Figure 2 reflects the same idea as Figure 1—smaller classes demand, on average, more substantive engagement.

One more bit of evidence on the importance of designing a good portfolio of classes appears in Figure 3. Even at a college where overall academic satisfaction is very high, it is still possible to make distinctions. Figure 3 show that freshmen who take just one small class each semester (in addition to the required Expository Writing class) report higher overall academic satisfaction than those who choose four larger classes. The gain in going from one to two small classes is far smaller—going from zero to one small class each term is a great first step.

Figure 3. Relationship Between Each Student's Portfolio of Class Sizes and Overall Academic Satisfaction with College



Suggestion no. 2: ***Avoid a "get the requirements out of the way" strategy.*** Not many Harvard undergraduates are disappointed with their academic work, but there are a few. And nearly every one of these students reports having used a certain strategy for selecting courses. They describe it with regret. These students chose classes their freshmen year to "get the requirements out of the way." As a result, they elected to take only core courses or introductory courses in various topics. Nearly all such classes are large. Few invite the passion that comes with writing long, in-depth research papers. These students, who realize in retrospect that they did not choose wisely, accomplished their goal of completing their core, or distribu-

tion, requirements. But now what? The students are dismayed. They say their course portfolios have given them few insights about what advanced work in any one specific field is like. They had to do lots of guessing, and they didn't always guess wisely.

When talking with freshmen, I stress this point especially heavily. I urge them not to just choose a series of large, introductory courses during freshmen year. At Harvard, just about any freshman is able to handle advanced work in at least some fields, so I suggest that they capitalize on that. Finally, I remind them that this advice is not just a theoretical construct that sounds sensible—it is what their fellow students overwhelmingly report.

Suggestion no. 3: ***Join a small study group outside of classes.*** I have already described the value of work in small groups outside of classes. Each academic adviser should consider encouraging every student to create or join such a study group. Interviews of sophomores show that isolation is the biggest threat to students who are not as productive as they want to be in their coursework. Further, students who begin having trouble are likely to drift into even deeper trouble if they simply keep to themselves, working alone in their rooms hour after hour. Such students often have a difficult time putting their trouble in a context, seeing it from a perspective that will enable them to get help, or to help themselves. Not only do students who work in small study groups outside of class commit more time to their coursework, feel more challenged

by their work, and express a much higher level of personal interest in it—they are also much less likely to hesitate to seek help.

A note to advisers: While the advantages of study groups are widespread, there is one group of students for whom they seem especially important: young women concentrating in the physical sciences. In her undergraduate honors thesis, Andrea Shlipak[1] finds that women who concentrate in physics and engineering consider these small working groups a *crucial* part of their learning activities. Further, her interviews with women who enter college intending to specialize in the physical sciences reveal a sharp break between those women who join study groups and those who don't. Women who join a study group are far more likely to persist as science concentrators than those who always or nearly always study alone.

Suggestion no. 4: ***Work on time management.*** A fourth way advisers can help students is to encourage a serious analysis of their allocation of time. Many Harvard students have thought hard about time management, about how they allocate their energies, and about how they organize their academic work. But for a few, this is a new idea. For these few, lack of careful thought about time allocation is a predictor of academic trouble.

Time management is especially important in making a successful transition from high school to college. Students who manage their time well are often those who work very hard on it when they first arrive on campus. Some freshmen are

stunned when they must suddenly face the overwhelming amount of reading assigned in college courses. A few students' reactions to the transition tell the story:

First, a Harvard College National Scholar who was first in his class and earned A's in his freshman year:

> I've never had so much reading assigned to me in my life and I had no idea if you were supposed to read it all. And I was trying to read everything. I did, but I'm still working on how to do it efficiently.

Freshmen are forced to think about how they spend their day. Most quickly accomplish this. But a few don't or they simply continue whatever patterns worked well for them in high school. This distinction in attitudes translates into a distinction between freshmen who prosper and those who struggle.

Quotes from freshmen who have thought hard about time management are revealing. From an articulate and highly successful student who has given time allocation some thought:

> It has been overwhelming. . . . Everything here is so fast paced. I forget sometimes, but what I do here in a day is what an exciting month would have been for me back home. It's really intense. And I think I don't realize it until I go home for vacations and sleep until one o'clock in the afternoon. I forget in high school I used to go to bed at 10:30 p.m. and wake up at 8:00 a.m. Here you're going to bed at 1:00 a.m. and waking up at 8:30 a.m.—I have a class at nine

> every morning. And you're going from class, to meals, to friends, to performance. It's been a big adjustment.

For some students, making the adjustment from high school to college time management comes easily. From a student who did especially well in freshman year:

> I definitely noticed halfway through the first semester that the way my life was organized was a complete shift of gears from the way it had been in high school. It was like a de facto occurrence. So much more of my time was committed to doing certain things here than in high school that I had to plan out what I was going to do during each day. I never really did that in high school . . . .

For other students, taking concrete action on time management at college is more difficult. But the rewards are great for those who work at it and persist. An example comes from a psychology concentrator who moved from C-minuses in freshman year to B-pluses in sophomore year. He is convinced that careful thought about time management explains the improvement. He speaks for many other students:

> Things that worked for me in high school, I discovered, don't work for me in college. I really had no scope on the amount of material that is presented here, and the speed at which it is presented. It was a bit of a shock. . . . Things I usually picked up in high school I couldn't pick up easily any more. I

> wasn't being forced every day. I tended to do one big subject for a big span of time and then neglect it for a week. Then I moved on to another subject, and forgot about that for a week. So there was no continuity within each course. That had a lot to do with it. This year, I'm spending a little bit of time every day on each subject.

A distinguished faculty colleague of mine, Frederick Mosteller, offers two wise suggestions that advisers may want to share with students. First, it helps to think of each day as being divided into three parts—morning, afternoon, and evening. By planning each part thoughtfully, it is often possible to put aside at least one of the three to accomplish some uninterrupted work. Second, time in-between obligations is crucial time. For example, a student with classes from 9:00 to 10:00 a.m. and then again from noon to 1:00 p.m. has two hours of in-between time. He or she may choose to chat with friends, go back to the dorm to study, or perhaps do something athletic. Regardless of what is chosen, the point is that the choice should be made with some thought.

Conclusion

Each of these findings stems from the results of a large number of one-on-one student interviews, and each has led to a change in how we advise, teach, and encourage students to make the most of their undergraduate experience. The Har-

vard Assessment Seminars project is data driven; we strongly believe that a little bit of data goes a long way. A group of middle-aged faculty members could speculate and wonder for a long time what teaching methods are especially effective for engaging undergraduates; instead, by conducting these remarkably straightforward interviews, we now have concrete data to undergird our faculty discussions about how to do our jobs well.

Any campus could conduct student interviews. What better way to honor students than to ask them in a thoughtful and carefully planned way what works well for them and what isn't working so well for them, and then to take what they say very seriously and work on steady improvements—both in teaching patterns and in the way classes are structured?

Throughout any effort such as this, it is important to be encouraged by slow but consistent improvements. Treasure small changes. They are like compound interest, and they grow and accumulate over time. If an instructor in any subject, whether biology or history or chemistry or a foreign language, can enhance students' learning by just 3 or 4 percent each year, over a period of years those improvements accumulate into dramatic increases in learning. We routinely adopt this mind-set in business and other realms of life. It would be wonderful to see more colleges and universities take this straightforward approach and apply these simple ideas to help their students succeed.

NOTE

1. Shlipak, A. M., "Engineering and Physics as Cultural Systems: Impressions of Science Students at Harvard-Radcliffe." Submitted to the Harvard University Department of Anthropology for the degree of Bachelor of Arts with Honors, 1988.

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