One Woman’s Journey
By Marilyn Taft Thomas, Professor of Music, Interim Head, School of Music

The bus stopped at Forbes and Morewood. The doors opened onto the first day of my college education. I was scared. I knew nobody. I just knew it was the best place in the city to study music.

I was the only girl majoring in composition. But this oddity was far surpassed by a young woman from New York majoring in trombone. Women in those days (1960) didn’t play brass or percussion, and they certainly didn’t aspire to become composers. We were clearly different. Different isn’t easy when you’re 17.

The inscription over the entrance to Margaret Morrison said it all: “These are woman’s high prerogatives; To make and inspire the home; To lessen suffering and increase happiness; To aid mankind in its upward struggles; To ennoble and adorn life’s work however humble.”

Fast forward to 1981. It was my first year on the faculty of the school that had shaped my professional career. The phone rang; it was the Dean of Fine Arts, my boss’s boss. Would I agree to serve on a newly formed committee called The University Research Council? This was a high-level group, consisting of a key representative from each of the colleges; I would represent the College of Fine Arts. “Of course,” I responded. (You just didn’t say “No” to the Dean.)

I didn’t know a lot of people outside of the Music Department. When the memo came, announcing the initial meeting of the newly formed University Research Council, I pulled out the faculty directory and began looking up the names listed on the memo. Who were the other members of this committee?

One, I didn’t need to find; I recognized the name of a senior professor who had recently won a Nobel Prize. He was a

What is the role of the humanities at a university and, in particular, at this university? The question seems to presuppose a definition of the humanities, and that very issue was the focus for a panel discussion in which I participated on April 7, 2005. The panel opened a conference that celebrated the founding of the Center for the Humanities at Carnegie Mellon. This event was the concrete outcome of a broad Humanities Initiative that had been undertaken to highlight and further strengthen the significant role of the humanities on campus.

Concurrent with work on the Humanities Initiative was a discussion of how we might reshape college specific General Education Programs into a university wide Integrative Liberal Studies Program. The idea was to build on the relatively uniform structure of the underlying curricula and to articulate more sharply the intellectual backbone for the education of all Carnegie Mellon undergraduates, taking into account

Review of Vaclav Havel’s The Memorandum
By Chris Hallstein, Teaching Professor of German, Modern Languages Department

Can you imagine the American playwright Arthur Miller becoming president of the United States? That’s the sort of thing that happened in Czechoslovakia when Vaclav Havel made his move from playwright to politician in 1980. Except, of course, that Havel had gained notoriety for his political dissent under a repressive regime and not for his marriage to the world’s most sensational celebrity.

A writer becoming president is not as strange a thing in Europe as it is on this side of the Atlantic. We Americans rarely entrust our intellectuals with political power. We’d rather give that responsibility to our movie stars. Lest
Each year Carnegie Mellon’s Staff Council sponsors the annual “Take our Daughters and Sons to Work” event. This year’s event will be held on Thursday, April 26, 2007. The program allows employees to bring their school age daughters and sons to work, where they can participate in a variety of events and activities throughout the University and learn about many different job and career paths.

Staff Council along with many staff and faculty volunteers devote their time and energy into making sure the event is a successful and positive experience for all involved.

A few questions were presented to Leslie Rhodes, Staff Council member, and Chair, of the TODASTW committee, about the program. Leslie, along with Co-Chair Denise Murrin-Macey, committee members, a host of non-council staff and student volunteers help participants navigate the day’s programs.

1. What is the goal of Take Our Daughters and Sons to Work program?

Carnegie Mellon University shares a common goal with the Ms. Foundation for Women. The goal is to create an opportunity for boys and girls to share and communicate their expectations for the future.

2. What should our daughters and sons know about our jobs at the end of the day?

When the kids leave the program, they will also experience the unlimited amount of possibilities that exist in the world. They will also experience the contributions to Carnegie Mellon and to their parent's day.

3. How does Carnegie Mellon meet the national goals? Carnegie Mellon provides several tracks within the program that allow the opportunity for our daughters and sons to get involved for the day and to realize how valuable their contributions will impact their future. This program also encourages our daughters and sons to critically think about life balances, personal responsibilities and decision making and how it will affect their community.

4. How is Staff Council involved in Take our Daughter and Sons to Work?

Staff Council receives the funding for this event through the President’s office each year, but it is the TODASTW committee, along with Staff Council representatives, faculty, staff and student volunteers, who devote their time and talents that make this event a success.

5. What programs do you have for the children this year?

We have a variety of programs offered by many faculty and staff here at Carnegie Mellon and outside the university. Some of which include, What an Architect Does, Career Choices, Intelligent Workplace, Materials at Extreme Temperatures, Musical Theater, Designing A CD Cover, Cyber Space Security, an our ever famous trip to the Entertainment Technology Center. We also provide activities at the University Center, which include swimming, tennis and football.

6. Is there a charge to participate in the programs?

We charge a nominal fee to offset the cost of the lunches that we provide for the kids who attend the program.

7. How can a department or division offer a program?

If they are interested
To Any child who
We charge a nominal fee to offset the cost of the lunches that we provide for the kids who attend the program.

8. Does someone have to have children in order to participate? Volunteers do not have to have children to participate. In fact, we have many students who volunteer to be Track Guides.

9. How does someone become a volunteer? If someone is interested in volunteering, all they need to do is contact Leslie Rhodes at lrhodes@andrew.cmu.edu, Dennis Murrin-Macey at dmm@central.cit.cmu.edu or Sophie Park at sophie.park@cs.cmu.edu.

10. How many children from one family can participate? Any child who is age 9-15 can and is encouraged to participate.

11. Is this an excused absence from school? The program is a public education project of the Ms. Foundation for Women, which started in 1993. It is designed as an intervention working with businesses, parents and schools to celebrate girls’ and boys’ worth to educate them about their wide range of life options. We provide a “School Information Form” in the registration packet for the kids to take to their school to have their teacher/principal sign, prior to the event.

12. How can I get more information about the day at Carnegie Mellon? To get more information about this event, please visit the following websites:

- http://www.andrew.cmu.edu/org/todtw
- http://www.cmu.edu/staff-council/bodw

This website contains the program, registration, all the information and forms needed for the program.

This event will be hosted on April 26, 2007 and Registration will open on April 2nd and will close on April 13th.
Endowment Breakthrough: One Billion in the Bank
A Report from Faculty Senate
By David Dzombak, Professor, Civil and Environmental Engineering, 2006-2007 Chair, Faculty Organization

When the fireworks were going off on New Year’s Eve, it was not just the arrival of 2007 that was being heralded; Carnegie Mellon passed $1 billion in our endowment at about the same time. It was a long time coming, but we are there, as reported by President Cohon in his address to Faculty Senate on February 20. Our endowment value on December 31, 2006 was $1,006,723. Of course, following the long-established tradition of Carnegie Mellon, we have been aiming higher than this now-achieved goal for a number of years. It is nevertheless useful to pause and mark the occasion, and consider the path that has brought us to the $1 billion mark.

In a letter to Pittsburgh Mayor William DeChil on November 15, 1900, Andrew Carnegie indicated his desire to establish a technical school if the city would “furnish a site, which I hope will be of ample size for future extensions,” and he also promised to endow the school “with $1,000,000 five percent gold bonds, yielding a revenue of $50,000 per year.” If these funds had been left untouched for the past 107 years, yielding 5%, our endowment today would have a value of $185 million. In this context, the original Carnegie endowment indeed seems modest, as many of us have reported to friends and family in relating the history of our institution. Consider, however, that if the managers of the endowment had been able to boost the yield to 7%, our endowment today would be worth $1.39 billion, or $3.77 billion if the average yield could have been raised by just one more point to 8%. It’s fun to play with compound interest calculations!

Accounts of the history of our institution clearly indicate the results of various efforts to increase the endowment. In 1950, for example, the endowment of Carnegie Tech had a market value of $31.5 million2, considerably higher than the $11.5 million that would have been achieved with simple 5% compounding over 50 years. In 1964, the endowment value was $74.7 million3, again much higher than the $22.7 million expected from 5% annual compounding of the original investment. By 1988 the endowment reached $265 million at the close of 1999 it was $804 million4. The history of the endowment is, of course, much more complex than indicated by these snapshots in time. Milestones of endowment additions from capital campaigns, increases and decreases with market fluctuations, as well as withdrawals for special projects and financial difficulties are documented in our most recent institutional history by Professor Emeritus Edwin Fenton.

In discussing the endowment on February 20, President Cohon presented comparisons to some of our peer institutions with endowments greater than ours by factors of 10 to 20 or more. These institutions obtain significant portions of their operating budget from endowment. Princeton, for example, reports about 40% of its operating budget from endowment which exceeds $13 billion. By contrast, at Carnegie Mellon we rely on endowment draw for only 5% of our operating budget. President Cohon also discussed the objectives and progress of the current capital campaign which has increase of endowment as a primary objective. As of January 31, approximately $254 million has been raised toward a “quiet phase” goal of $500 million. The final goal for the campaign will be determined in 2008 when the quiet phase is scheduled to conclude, and the public phase to begin. A final goal of $1 billion is under consideration by the Administration and the Board of Trustees.

The plan is for half of the campaign funds raised to be directed to increasing our endowment.

To meet the significant goals of the current capital campaign, and to move annual giving to a higher steady-state level going forward, President Cohon reports that the Administration, with the urging and support of the Board of Trustees, has been increasing the size of the Carnegie Mellon Advancement operation. The number of full time equivalent gift officers has been increased from 16 to 26 in the past four years, with an ultimate goal of 32. President Cohon reported that there is a great deal of national competition for experienced gift officers, so recruiting these officers takes time. For each gift officer added, additional support staff members are needed for research and other support activities. Thus, expansion of Advancement has significant budget implications for the university. The planned expansion of Advancement over the past several years is responsible for the operating budget deficits for fiscal years 2006 and 2007. The projected deficit for fiscal year 2007 is $7.7 million in a total budget of about $770 million.

For those interested in the details of campaign fundraising, President Cohon reports that the average load for each gift officer is 250 to 300 prospects. The total number of prospects identified has been increased from about 2,700 to 2002 in 2007. The goal for the current campaign is to identify and pursue at least 9,500 prospects. After the campaign concludes, the plan is to keep the expanded Advancement operation in place to build stronger alumni relations and to keep annual giving at much higher levels than in the past.

So, our endowment is at $1 billion and aggressive efforts are underway to move us toward a $2 billion endowment. These developments are strengthening us. Yet, one can’t help but wonder if we will ever move away from being “under-endowed.” As our endowment, human resources, and infrastructure grow, so do our achievements and ambitions. At Carnegie Mellon, it seems that the ambitions grow faster than the resources and probably always will. That’s a downer in one respect, but also clearly the sign of a vibrant organization with a culture of striving. These characteristics define Carnegie Mellon and contribute to the environment that brought us here and keeps us here.

President Cohon talked about much more than the endowment and Advancement in his February 20 address to the Faculty Senate. His slides with supporting information are available at the Faculty Senate web site:
http://www.andrew.cmu.edu/org/fac-senate/06-07TopicsIndex.html


Endowment Breakthrough: One Billion in the Bank
A Report from Faculty Senate

By David Dzombak, Professor, Civil and Environmental Engineering, 2006-2007 Chair, Faculty Organization

Teaching From a Student-Centered Perspective
By Marie Norman, Teaching Consultant and Research Associate, Eberly Center, Adjunct Professor of Anthropology, History Department and Marsha Lovett, Associate Director, Eberly Center & Associate Research Professor, Psychology Department

In the last “Teaching Tips and Tricks,” Professor Bobby Klatsky shared some savvy advice for learners, based on her recent experience as a student – yes, as an official student in a real Carnegie Mellon undergraduate course. Among the many points Klatsky made, a basic fact underlying appropriately: In short, many of the ways and strategies students differ from us affect what and how we learn.

Klatsky and her fellow students bonded over shared circumstances (concerns about upcoming exams, for instance), but she also discovered a number of generational differences that set them apart. This is probably not surprising to most CMU faculty; nevertheless, we may underestimate how the gap between students’ experiences and our own can influence learning. Klatsky’s reaction to contemporary German-language textbooks provides a useful example. Not

• Reality shows have always been on television.
• The Soviet Union has never existed.
• They have known only two presidents

Seated (left to right): Michele DiPietro, Marie Norman, Michael Bridges. Standing (left to right): Anne Fay, Susan Ambrose, Marsha Lovett.

Why do such differences matter? Because students’ prior knowledge, life experiences, and motivations influence what they pay attention to, how they interpret and organize new information, and how that to which they can retrieve it and apply it appropriately. In short, many of the ways
traditional and emerging characteristics of the institution (its focus on problem solving, interdisciplinary work, diversity and internationalization).

This was the concrete context in which I formulated a version of the following remarks. However, before discussing what crucial contributions the humanities can make to such a deeply collaborative effort, I want to sketch the background that informs my views on the topical question.

Background, professional

My perspective on the humanities is, of course, shaped by my own intellectual and academic experience. I am a philosopher, who has been working in mathematical logic, history and philosophy of mathematics, and at the intersection of logic, computer science and cognitive psychology. Those interests, however, I acquired a B.S. in mathematics and physics at the Free University in Berlin and went on to Münster to study logic. Logic was a natural extension of my continuing mathematical studies, as I had become fascinated with the foundations of the subject. The classicist approach to the study of philosophy, I attended Stanford University as a Ph.D. student in the late 1960s, and moved on to a place properly between philosophy and mathematics, and I completed a thesis under the supervision of Solomon Feferman, a member of both the philosophy and mathematics departments. My dissertation solved problems in proof theory; the mathematician David Hilbert had founded the subject in the early 1920s with a programmatic philosophical direction.

As to the broad areas of my work, their connections with the philosophical tradition are evident. Whereas logic was invented by Aristotle and the Stoics, mathematics has been a touchstone and a source of inspiration for philosophers from the Pre-Socratics and Plato through Leibniz and Cantor to contemporary analytic philosophers. Those of you who read with great pleasure the later Wittgenstein can hardly be read without a thorough understanding of the new logic. That new logic evolved from mathematics at the turn of the 19th to the 20th century, in the work of Frege, Peano, Peirce, Russell and many others. The connections to computer science and cognitive psychology are not difficult to see, as they are so profoundly affected in its self-understanding by Herbert A. Simon. It should be noted that Simon, a mathematical economist of the tradition, there was the unfortunate attempt of dividing Wissenschaften into Geisteswissenschaften and Naturwissenschaften. In the Anglo-American context, Snow’s description of the two cultures is a pragmatist and ideological division, but not a principled one. Indeed, I cannot see that particular methodological or particular objects of study characterize the humanities; try in Seneca’s De Ira: “...while we live, while we are among human beings, let us cultivate our humanity.

Given this background, I come to the question “What are the humanities?” with a particular perspective. From that perspective, I propose the following answer to the form “What is X?” are notoriously difficult. I challenge you to give a concise answer to “What is mathematics?” or “What is computer science?” In the case of mathematics you might point at first to its particular methodological feature (“mathematics establishes theorems”) or to its content (“computer science deals with computing”). But you remember that you found diagrams in geometric arguments more illuminating and convincing than two-column proofs, and you recall that until the mid-1950s human beings who performed calculations were referred to as computers.

From a more historical perspective, it is also clear that the longstanding discussion, which tries to distinguish the humanities from sciences in a sharp and principled way, has not led very far. In the German tradition, there was the unfortunate attempt of dividing Wissenschaften into Geisteswissenschaften and Naturwissenschaften. In the Anglo-American context, Snow’s description of the two cultures is a pragmatist and ideological division, but not a principled one. Indeed, I cannot see that particular methodological or particular objects of study characterize the humanities; try in Seneca’s De Ira: “...while we live, while we are among human beings, let us cultivate our humanity.

It is my deep conviction that they are needed in contemporary society and in the academy, and that they are absolutely needed for a sound liberal education. One may argue that I have replaced a different, interdisciplinary one, as we are forced to confront different views in an open way. Furthermore, there is the detailed substance of a comprehensive liberal education instead of arguing in the abstract, about broadly defining characteristics of the humanities.

In her book, Cultivating Humanity: A classical defense of reform in liberal education (Harvard University Press, 1997), Martha Nussbaum also forges defining the humanities. Instead, she proposes that our universities educate citizens and that we consequently have to ask “...what a good citizen of the present day should be and should know.” Her concern is that out of an enlightened Weltbürger in a democratic society that is embedded in an inescapably international world. She points to three abilities such a global citizen should attain: the ability to raise probing questions, in order to critically examine oneself, one’s tradition or institution, and the ability to give oneself up as a human being bound to all other human beings by aspirations, hopes and, increasingly, global problems, and (iii) the ability to understand the world from the point of view of the other.

Cultivating these abilities is in fact crucial for a student’s development toward becoming a global citizen. Nussbaum thinks that this is accomplished best by being “intradisciplinary,” the separation of the humanities and the social sciences. She gives a comprehensive list that mentions explicitly philosophy, political science, history, art, anthropology, sociology, literature, art, music, and studies of language and culture. In all, in that the three abilities listed, and she insists, “Scientific understanding is also of the first importance.”

Liberal studies, integrative

While Nussbaum finds a crucial component missing in her characterization of liberal education, she excuses herself “by overlooking the importance of the humanities” as “others are far better placed to describe it than I.” This is most surprising in her conclusion to the essay, where the role of the humanities; on the other hand, science has led frequently and dramatically to the examination of narrow conceptions and to the overthrow of dogmatic views. Scientific insights have for “not dwelling on this aspect of a liberal education. Nussbaum admits that this is accomplished best by being “intradisciplinary,” the separation of the humanities and people outside the humanities to get together and come up with collaborative projects that have a humanities focus.

Harvard has been discussing significant changes to its system of general education. Two primary features of its curricular review emerged, namely, to “enhance significantly the opportunities for interdisciplinary work in the arts and in the sciences” and to replace its Core Program, “which has emphasized approaches to knowledge of different academic disciplines,” by “a new system of general education.” The distinctive character of the new system was described in the Report on the Harvard College Curriculum Review as follows:

In a series of new, integrative Harvard Core Courses, one should take on the responsibility of defining what we believe our students will need to know and – equally critically – how they may be led into the broad fields that changing fields may continue well after graduation. Such courses should expand the horizons of both faculty and students; introduce bodies of knowledge, concepts, and major texts; develop and reinforce critical skills in reasoning and writing and oral expression. To this extent, the Core Program’s core courses for use in, and possibly beyond, Harvard College.

Fascinating ideas and concrete suggestions can be found in reports from committees, e.g., from the Committee on the Future of Liberal Education and America’s Universities and the reports are available at http://www.fas.harvard.edu/crsreview/. Last month (February, 2007), the Report of the continued on page 7

What are the humanities? continued from page 4
real big-hitter on the campus. The others appeared to be well-established deans, department chairs, and presidents of major centers, etc. I was the only junior professor. I was also the only woman. But, this was OK. I was beginning to become accustomed to being “the only woman.”

The day of the meeting, I was careful to dress in a business suit. I made a conscious decision to leave my purse locked up in my office and not carry it with me across the campus. I carried a small black clipboard with the preparatory materials for this meeting and a pen inside.

The meeting was on the top floor of the administration building. That, too, was a symbol of the importance of this new project. There were several hierarchies of committees at the university - a complex culture of status symbols set by who was attending, where they might sit, and who chaired. This one, by the way, was chaired by the Provost. It didn’t get any better than that!

I was the first to arrive. We musicians are trained to get there early to allow time for tuning. Such habits are hard to shake. This professor, clearly afraid he would be late, had looked right at me and proclaimed he had looked right at me, heaved a sigh of relief, and blurted out, “Oh, thank God, I’m first!”

A week or two later: the University Faculty Club was newly formed. As with anything at the university, it required a committee to run it. And you guessed it: I was asked to serve on the Faculty Club Management Committee as a representative of the College of Fine Arts. Once again, I was the only woman.

By now, I had developed my own personal code of operation: as long as I had something meaningful to contribute, I would work on whatever committee I was asked to join. But the minute I perceived my role to be merely the “token woman,” I was out of there! After all these years of hard work, I knew I had earned my faculty post at CMU, I was determined not to let this position be trivialized – by anyone.

So it developed, and before long, one evening, we sat around a conference table, discussing the need for university funding to maintain the new Faculty Club. We had already covered some of the routine questions of membership dues, identification cards, and the like. But it was clear that the next most amount of financial support would be needed to open the dining facility, and no one believed the University’s Chief Financial Officer would be supportive of additional funding for the facility.

Bob was the one who said it: “I have an idea. We should add lunch and coffee, ‘sweet talk’ him into giving us the money!”

I resigned from the Faculty Club Management Committee the next morning.

And then there was another committee: the University Education Council was one of those committees you just feel you should serve on when asked. But the first meeting I attended was really annoying. The Chair kept interrupting one of the members, a woman administrator, every time she started to speak. I noticed this early in the meeting, and watched with growing concern as the pattern continued.

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One Woman’s Journey continued from page 1

Student-Centered Perspective continued from page 3

A second realization is that experts and novices process information differently. As we have seen, novices acquire extensive knowledge that guides what we notice and how we organize, represent, and remember information – even when the information is coming at us. When novices read an assigned text, view slides for a lecture, participate in a discussion, etc., they organize the information so that they may be encoding information that we would as experts, and they may be encoding the information in different – and potentially inappropriate ways. To teach well, then, we need to understand the skills that we employ automatically, we can provide structure, or “scaffolding”, to support learning; to set up tasks, link ideas, and patterns. For example, it can be useful early in an introductory-level class to give students a set of questions to keep them on track as they read an assignment (e.g., "What is this author’s argument?" What evidence does she use to support it? What are the implications of her argument?), a procedural template to use when they tackle a new task (for example, a research project), or a skeletal outline to use as they listen to a presentation.

To some faculty members, this doubtless seems like “hand-holding”. Why should we waste a process we learned with less support? As we are reminded by Klatzky’s article: We are not our students, and our motivations (e.g., to be “real big-hitter on the campus” for example, was taking German to prepare for a sabbatical at the Max Planck Institute, not to fulfill a requirement. She wanted to learn about primate behavior, and we want to develop the appropriate analytical skills and habits, we can withdraw the external supports.

We have discussed here some of the key differences between our students and us (i.e., ourselves). As we have seen, our knowledge, personal interests, and motivations can affect learning, and we have sketched a few (of many) strategies to move students away from their initial biases. Perhaps equally important to recognize, however, is that the same principles and strategies that work for experts may not work for novices. While most of us do not literally put ourselves in our students’ seats, it is worth noting that when we do step outside of our own domains and become novices (perhaps the university needs to hire a new faculty member, for example), we typically find that when we do step outside of our own domains and become novices (perhaps the university needs to hire a new faculty member, for example), our students develop the appropriate analytical skills and habits, and we can withdraw the external supports.

Sure, why not?

As the conversation progressed, a time and a date were selected for the shoot; then came a startling, “Oh, by the way...” They wanted to photograph me conducting an ensemble. I laughingly confessed that I was anything but a conductor; I was a composer, a teacher. Any of those activities would be just fine for their action shots; I would be happy to arrange for some students to interact with me in the photos.

Two realizations relevant to teaching emerge from this example. One is that to teach effectively we have to find out what our students know. Over time, we may come to know well, or “know” incorrectly. Such information can be uncovered in a number of ways. There are the simple mechanical means of asking students “Do you understand?” tends to be ineffective, since students may think they understand even when they or ‘t’ don’t always do want to admit that they don’t. A well designed test can help determine what our students know and are starting. It is also helpful to talk with colleagues who teach courses that are sequenced before your own to find out what students do and do not know. All these methods can help determine what our students know and are starting. And it is also helpful to talk with colleagues who teach courses that are sequenced before your own to find out what students do and do not know. All these methods can help determine what our students know and are starting. And it is also helpful to talk with colleagues to see the significance of what they are learning for their questions and concerns. When students connect personally to material, they are more motivated to work hard, to persist in the face of difficulty, and to remember what they have learned.

Prior knowledge also influences the acquisition and retention of new knowledge. Klatzky explicitly points this out and provides a powerful example. Here’s a quote from her: Klatzky had a conceptual vocabulary and skill set upon which to build. Thus her prior knowledge and competence in this area provided the “hook” for acquiring new knowledge. It also probably helped her retain the new information better: Research on expertise shows that it is easier to store and retrieve information when it is “chunked” into meaningful categories for later retrieval. Experts do this automatically and unconsciously. Novices, on the other hand, do not yet know how to organize the information they receive, which makes it both more difficult to retrieve and to apply.

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The National Survey of Student Engagement Arrives at Carnegie Mellon

By Indira Nair, Vice Provost for Education and Marika Paul, Research Analyst, Institutional Research & Analysis

For the first time this spring, Carnegie Mellon freshmen and seniors are being asked to participate in the National Survey of Student Engagement. The NSSE (pronounced ‘nessie’) is specifically designed to assess the extent to which students are engaged in empirically derived good educational practices and to determine what students gain from their college experience. This instrument gathers a variety of information that is used to student participation in both academic and nonacademic programs and activities. NSSE encourages institutions to use their data to identify aspects of the undergraduate experience inside and outside the classroom that can be improved through changes in policies and practices more consistent with good practices in undergraduate education. Carnegie Mellon’s participation in the NSSE will provide Carnegie Mellon with invaluable assessment information which will be shared with and used by the entire campus community.

The development of the NSSE began when The Pew Charitable Trusts convened a working group of higher education leaders in February 1998 to discuss established methods for assuring quality in higher education and the kinds of college ranking systems employed by publications like U.S. News and World Report. The group concluded that “there are few external incentives for individual colleges and universities to improve their own performance in meaningful quality improvement.” Third-party judgments of quality focus on student selectivity and faculty credentials, and they fail to assess investments to foster proven instructional practices and the kinds of activities, experiences, and outcomes that their students receive as a result. Drawing a conclusion that “characteristics of student engagement can serve as a proxy for quality,” the group theorized that results of a survey of undergraduate engagement, if available, could provide colleges and universities with a more comprehensive view about institutional quality than established measures of reputation.

To begin the process of developing the survey, The Pew Trusts engaged the National Center for Higher Education Management Systems (NCHEMS) to coordinate the development of a survey instrument, to convene a series of meetings designed to test its utility and feasibility, to select a strategy for pilot administration, and to determine who should pilot the survey. The design of the survey included uniform sets of items that are known to be related to important college outcomes. It was designed to be administered to freshmen and senior-level students at both public and private four-year colleges and universities. Sixty-eight institutions participated in the pilot administration during the spring and fall of 1999. Following years showed unanticipated increases in participation. For the current Spring 2007 administration, approximately 8,100 undergraduate students at 609 colleges and universities in the United States and Canada will be participating in the NSSE.

The survey asks students to report the frequency with which they engage in dozens of activities that represent good educational practices, such as using the institution’s human resources, curricular programs, and other opportunities for learning and development that the college provides. Additional items assess the amount of reading and writing students do during the current school year, the number of hours per week they devote to schoolwork, extracurricular activities, employment, and family matters, and the nature of their examinations and coursework.

Students record their perceptions of features of the college environment, such as the extent to which the institution offers the support students need to succeed academically and the quality of relations between various groups on campus such as faculty and students. Students also estimate their personal growth since starting college in the areas of general knowledge, intellectual skills, written and oral communication skills, personal, social and ethical development, and vocational preparation. The validity of the NSSE has been examined extensively and shown to be internally valid (with Cronbach alpha levels ranging between .85 and .90 for individual sections). In addition, it was found to meet all criteria required for valid self-reporting.

Institutions have the option of participating using a web-based, paper-based, or the media administration of the survey. Carnegie Mellon elected to utilize the web-based survey, meaning all correspondence for the NSSE is being sent to students at their Andrew email accounts. The invitations to participate include a web link to the survey, as well as the option to be excluded from further survey communications. Purdue University-Bloomington IRB guidelines, students may only be contacted five times during the administration of the survey. These consist of the initial invitation, a follow-up, and three reminder emails. Generally, a random sample of freshmen and seniors are selected for participation. However, because of Carnegie Mellon’s relatively small student body, we included all first-year and senior undergraduate students in the sample.

Past results from the NSSE have been used to produce a set of national benchmarks of good educational practice that participating schools are using to estimate the efficacy of their improvement efforts. For example, administrators and faculty members at dozens of schools are using their NSSE results to discover patterns of student-faculty interactions and the frequency of student participation in other educational practices that they can influence directly and indirectly to improve student learning. In addition, some states are using the NSSE data in their performance indicator systems and for other public accountability functions.

One of the most direct uses of the results of Carnegie Mellon’s participation in the NSSE concerns the Middle States’ Accreditation process. The NSSE is one of the few measures deemed acceptable for inclusion. With our upcoming accreditation in 2008, the NSSE results may prove to be a valuable resource for the campus community as preparation for the upcoming accreditation continues.

In addition, the Integrated Post-secondary Educational Data System (IPEDS) recently stated their intentions to add an Accountability Part in their Institutional Characteristics portion of the Fall Data Collection. Our participation in the NSSE will be recognized as an organized assessment activity in the IPEDS survey. We may choose to provide a web link which will be added to the IPEDS College Opportunities On-Line, an online source for prospective students and parents to examine general statistics of colleges and universities nationwide.

This year’s freshmen will be invited to participate in the NSSE again during their senior year, allowing for a longitudinal study of the Carnegie Mellon experience. The demographic information which is collected will enable reports to be generated for each of the colleges as well as by gender, class level, and race. In addition, students’ data will be linked to other information we have available at Carnegie Mellon, allowing for further analysis.

As with any survey, a strong response rate is crucial in establishing the validity of the results. Currently our participation rate is approximately thirty percent. However, with two reminders scheduled to be sent on March 22 and April 12, there is still ample time to generate an even greater response rate. We request all faculty, advisors and staff members to encourage first-year and senior students to respond to the email invitations they receive from NSSE.


Check out the Carnegie Mellon Qatar A4 biweekly newsletter

By Andy Zrimsek, Writer/editor, Public Relations Department, Qatar

Similar to the 8½ by 11, the Carnegie Mellon Qatar A4 biweekly newsletter gives a full overview of what is happening on the burgeoning Middle Eastern campus.

The one-page A4, which is the standard paper size in Qatar, lists upcoming events, campus news as well as new appointments. Thrice per week the A4 has been packed with information on Qatar’s first Meeting of the Minds symposium, CS4Qatar professional development workshop and Internal Case Competition.

Recent featured stories have included Chair Thorpe’s and two other runners running across the desert as well as information on students taking part in the first international LeaderShape retreat.

The A4, which is distributed by the Marketing and Public Relations office in Doha, is the official internal newsletter of Carnegie Mellon Qatar. It is currently sent via e-mail but is planned to be a digital format available by the end of the Spring 2007 term.

In addition to the A4 internal newsletter, Carnegie Mellon Qatar also publishes a magazine called Akhbar. An Arabic word for news, Akhbar offers a more comprehensive view of the entire campus.

To view past issues of the A4 or the Akhbar, visit the Carnegie Mellon Qatar Web site, http://www.qatar.cmu.edu and click on the faculty/staff or newsroom account.

To be added to the A4 biweekly distribution list, please receive interested to Akhbar, send an email to Andrea Zrimsek at azrimsek@qatar.cmu.edu.

Left to Right: John Barr faculty; Chuck Thorpe, dean, and Ilano Cervesato, faculty, ran 36 miles across the entire desert peninsula of Qatar in the Qatar Run 2007 in March.
The Memorandum
closed off another page from 1

to teach the firm’s employees, and it soon becomes clear that getting on board with Pryde will become the ultimate means of wielding power in this company. But whose idea was this anyhow? The Managing Director himself finds out about Pryde only when he asks his Deputy Director about a totally unauthorized translation of the Prydepe memo he received at the beginning of the play. He is delighted to learn from this memo that he has been completely bypassed by the decision-making process. But because Maria breeched company policy by providing this translation before she was certified in Prydepe, she was fired. When she asks the Managing Director to reinstate her, he refuses because he cannot jeopardize the newly established relationship between himself and the Deputy Director when the firm is in such a precarious state. This former advocate of humane values has the opportunity to put those values to practice, but they seem to have been co-opted by the system.

But Kiselov actually brings Havel’s play to a somewhat ambiguous ending. As the Managing Director refuses Maria’s request, he surreptitiously shoots her away, as if to tell her she should escape while she can. She takes the hint, removes her shoes and exuberantly escapes, with the same result. So, I resigned. But you know which is the real reason. I really regret that now. Here was an opportunity to raise one man’s awareness, and I didn’t do it.

In those days, it was tough to distinguish between minor annoyances and significant incidents, when it came to sexism in the workplace. For example, Susan had long blonde straight hair, glasses, a small mouth, and well, I was pretty much the opposite of all of that. In short, we looked nothing at all alike.

Yet, time after time, people called me Susan, and likewise, she related many occasions when someone had called her Marilyn. So, why did this happen? Well, we were both Department Heads at Carnegie Mellon University. And we were the only women in those positions. It was 1988. Amazing, huh?

Which brings me to the conclusion of this journey through the history of our campus, from one woman’s perspective. Recently, the campus installed a new art work, Walking to the Sky. There was certainly an avalanche of opinions about the appropriateness of this artwork on our campus, but I have to tell you my reaction. The first thing I noticed, as my eye traveled up the diagonal beam, there was, in the lead, marching off to limitless opportunities, was a woman in a business suit carrying a brief case. Finally, after all of these years, I was truly at home.

A lot has changed. Today’s young women step onto our campus at Forbes and Morewood with a strikingly different view of Carnegie Mellon’s expectations of them. And the words encircling the Margaret Morrison rotunda are still there to remind us all of just how far we have come.
Promoting Good Teaching

The comments and advice of G.A. Forehand and H.A. Simon are greatly appreciated.

By James H. Korn, Psychology

Editor's Note:

From time to time it seems as if topics of concern to this campus are like seasons, they come round with regularity. So it seemed that it might be useful to scan at least one issue of FOCUS for contributions that might still have some currency.

The following is excerpted from an article originally published in FOCUS September 22, 1971. It begins with an argument for making teaching the criterion of promotion and tenure, and on the resulting outcomes the focus of teaching. Teachers should be evaluated on the quality of their planning and design of educational events, and ultimately on the effectiveness of these plans, and not on classroom performance, or popularity. The second part of the essay, below deals with implementation of Professor Korn's ideas, and is focused on how to evaluate designs and plans, and how to reward those who develop them.

The complete essay can be found on the FOCUS website: http://www.cmu.edu/focus

Current State of Evaluation

What we now use to evaluate teaching is a collection of devices to assess the dimensions of teaching performance; a rating of something like course organization is not the same as an objective measure of organization. Although student ratings and a faculty rating system might be most important to the extent that teaching is a factor in promotion. It is usually the department head and the dean who carry the most weight in decisions concerning promotion and tenure and who may collect evidence concerning teaching. The highly informal and indirect nature of the evidence used as a basis for ratings of teaching made by these supervisors has been documented in at least two extensive surveys.

However, it is still student ratings, not supervisor ratings, that receive the most emphasis. The most important areas of teaching ability. Most student evaluation forms are quite similar; they contain items dealing with student-teacher relationships, classroom presentation, course organization, teacher’s knowledge of subject matter, and personal characteristics of the teacher. Many of these rating scales appear to be highly reliable measures of whatever it is they are measuring. However, the validity of student ratings is very much in doubt, especially when learning is the criterion of performance. It is important to distinguish the role of perception from the role of achievement. This reciprocal relationship between action (feedback) and information could be made more effective by the emphasis on the design function of teaching. The promotion committee would have something specific to evaluate (compared with the non-specificity of most student ratings) and the faculty member could be provided with something specific as feedback in order to modify his plans and the kinds of information obtained. The faculty committee would then have an opportunity to suggest changes in this process. Hopefully, this would increase the validity of the information obtained the next time, since faculty would want to make sure that the best measures of their performance were being used.

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Incentives for Teaching

Department heads, deans, and other administrators frequently make the argument that although teaching is important, there are not good (valid) measures of it and promotions should not be based on the quality of teaching performance. This argument is common in our present day and age; it is the key to the success of this or any other scheme for improving teaching effectiveness. It is necessary to have valid indicators of teaching effectiveness available now: stated objectives, a plan for achieving those objectives, and measures of student learning. The argument presented here is that there are valid indicators of teaching effectiveness available now: stated objectives, a plan for achieving those objectives, and measures of student learning. The argument presented here is that there are valid indicators of teaching effectiveness available now.

The Role of Promotion Committees

The key to the success of this proposal is its acceptance by promotion committees at the departmental level. The actions of these committees constitute an operational definition of the objectives of the departments. Those actions include not only those that are required for information from faculty and feedback provided to faculty. A committee which asks for and gives feedback to faculty understands and can engage in the design function of teaching. The promotion committee provided information to the individuals involved and of their institution, but not to the planning function of teaching will be avoided. The committee’s recognition of the significance of this aspect of teaching would provide a very important incentive for faculty. Another argument frequently raised against assigning teaching greater weight in promotion decisions concerns the private nature of most teaching activity and its limited visibility. Teaching, especially in the sense of classroom performance, is rarely observed (much less judged) by colleagues, almost never observed by those beyond the local institution, and affects only those students with whom the teacher has direct contact. Teaching is almost never evaluated by those who should be most able to judge it because of their training and experience.

This situation need not continue, certainly not as far as the planning aspects of teaching are concerned. Outstanding designs for learning can be written down and made public so others can use them and all designs should be subject to public examination so they can be modified by useful feedback. The value or success of designs will depend on clear evidence of successes and failures. Close scrutiny by students if the development of such measures is encouraged. It is conceivable that a better criterion of value could be developed for teaching than now exists for research.

Some mechanisms do exist for making teaching plans public, but there is a need for new ways of doing this. A few suggestions:

1. A journal could be created specifically devoted to the topics of design for learning. The journal should be interdisciplinary, with high editorial standards, and sponsored by a high-status organization.

2. National awards for teaching in value equivalent to those for research should be established. Value refers not simply to money, but also to the publicity and recognition given to the recipient and to his contribution.

3. A program of grants, leaves, and visiting professorships should be established based on teaching ability. For example, the impressive recognition provided to researchers by the National Institutes of Health, where (full salary for five years) should also be provided for outstanding teachers who wish to devote full time to planning.

In general, what is needed to improve teaching effectiveness are incentives that are as highly valued as the incentives provided for research. There is, of course, the motivation inherent in the tasks of teaching and research: the discovery of truth, the creation of ideas. This intrinsic motivation is strong for most faculty. However, it is obvious that extrinsic incentives have a significant effect as well. The evaluation and rewarding of teaching by a promotion committee could prevent the dedicated researcher from ignoring his teaching and assure the dedicated teacher that his efforts will not cost him his job.

The comments and advice of G.A. Forehand and H.A. Simon are greatly appreciated.


