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*Outdated classrooms are common in higher education. This chapter unveils the story of what resulted when a college's new focus on teaching led to tackling outmoded classrooms.*

"Put your money where your mouth is": A Case Study

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The phrase, "Put your money where your mouth is" took on new meaning when ten years ago our college identified a focus on teaching as its top priority.

The College of Professional Studies (CPS) is one of four Colleges at the University of Wisconsin-Stevens Point, an 8000-student campus in the snowy center of Wisconsin. CPS contains various professional schools such as education; communicative disorders; health, exercise science, and athletics, health promotion and human development; medical technology; interior architecture. We are a typical Carnegie Classification I university with the historic mantle of a teacher's college. Over the years, like so many of our type, we had aspired to greatness, which often meant establishing a reputation for research and grants. And we had done well, but faculty in my college began to point out the many ways that the University in general and I were putting less emphasis on teaching and learning. I discovered much to my chagrin that they were right, so in 1992 we in created a "Focus on Teaching" priority that has remained a cornerstone of our culture.

With our eyes now focused on teaching, it was not long before someone cynically commented on the contrast between our two carpeted *conference* rooms, with wood tables and chairs, and our *classrooms*, which had vintage linoleum floors, plastic tablet chairs of

many hues all in rows, and original paint. There was no escape from the impression that our meetings were more important than our classes. So in 1994 the CPS department heads made an historic decision to forego receiving additional budget allocations from year-end funds for their individual departments. Instead, they decided to direct some or all of the college discretionary funds toward improving the learning environments of the college classrooms. They made that decision seven years in a row.

Thus began our excursion into the world of classroom design. Now, after seven years, all classrooms in the College have been renovated with an eye toward making them more learning-focused, more conducive to classroom discussion, small groups, and frequent interactions—and inexpensively. Additions included carpeting, tables, upholstered chairs, paint, thin-coat plaster viewing surfaces, and multiple white boards. Many classrooms have also been equipped with ceiling projectors, video presentation displays (“elmos”), and computers. Our web site displays a detailed listing of equipment and room layout at [www.uwsp.edu/cps/facilities/](http://www.uwsp.edu/cps/facilities/). About \$200,000 (or 7% of our yearly budget) in College funds (and additional help from state grants) has been used over the past seven years for these renovations. Since we have created such a comprehensive classroom makeover in a relatively few years, without significant outside funds, our story might be useful to others.

### **Who Owns the Classrooms?**

Nothing at all had been done in the classrooms since they were first created some thirty years earlier so our first struggle was to unearth whoever was responsible for classrooms. Did we have to ask permission to renovate and if so, from whom? Were there guidelines? No one seemed to know. Classrooms seemed to get born and live forever without need for any centralized campus life support. Faculty thought some one “upstairs” was responsible, but facilities offices on campus said, “not us.” No wonder our 1960’s look lingered so long. So, we set off on our own.

Multiple departments in the college use most of the classrooms in the college's two buildings, so we placed coordination for the upgrades in my lap. Going from no one being responsible for classrooms to the Dean's office being responsible began the transformation. There seem to be several advantages to *college* level coordination. Since none of us were renovation experts, it made sense for one person to study, experiment and learn about classroom design rather than each department going its own way. We aimed for different designs based on pedagogical differences, economies of scale, and a compatible look for classrooms fronting the same hallway. The college "cabinet," department heads and dean, determined the priority sequence of renovations and went money-in-hand to get request a place on the building repair schedule. Handling the renovations within the college increased the sense of ownership and allowed us to design the rooms according to the teaching situations most characteristic of our college.

### **Changes We Made**

Working with groups of interior design students (conveniently located in the college), we surveyed both students and faculty, asking them what changes in their classrooms might better facilitate student learning. In the beginning our student researchers interviewed students and faculty as they left classes and later moved to more formal surveys. In general, the faculty and students wanted classrooms that a) helped students participate actively in classes, b) provided better access to technology, c) provided a more comfortable learning setting.

**Oust the tablet chairs.** The strongest recommendation was to replace plastic tablet chairs with tables and chairs. Students had complained about discomfort and, in some cases, not being able to fit into the small space between the tablet and chair. Students associated tablet chairs with children's class space and suggested that they did not feel treated as adults while trapped in the "kiddie" chairs. Faculty members noted the structure

of the tablet chair psychologically isolated students from each other with the tablet providing distance from others. They argued that tables with several chairs automatically created a learning community, small group for discussion, or, at the very least, a place where students “belonged” with other students. Faculty also mentioned that they preferred their classroom space to be equipped with furniture that could be used flexibly, moved to a circle or several groups or whatever would best support the pedagogy, so the new tables and chairs should not be affixed to the floor. Lastly, tablet chairs had often ended up in mixed colors in rooms, providing an unsettling discordant feeling from the lack of aesthetics. The new chairs were one common color. Chairs and tables were often the most expensive items in a renovation, so we sought bulk discounts, (reminding sales staffs that we would be coming back for more orders for years to come). We stuck with one company and bought simple models with few or no moving parts. We also tried some pre-owned tables that were re-laminated by a company in town. At one point a furniture company discounted its merchandise price and took a charitable gift deduction.

**Carpeting.** The next most desired change was substituting carpeting for linoleum on the floors. In many cases, we chose the more expensive carpet tiles rather than the less expensive rolled carpet because rolled carpet required that we remove our linoleum tiles, an expensive process involving asbestos abatement. Carpet tiles are also easier to replace. In many cases, we had enough carpet tiles left over to carpet faculty offices, even if we had to create patterns on the floor from different carpet.

Both students and faculty noted how much easier it was to hear each other on carpeted floors. Carpeting made the rooms seem more inviting and casual, leading some staff to suggest that the carpeting had a positive impact on student attitude and willingness to talk. For teaching applications for which sitting on the floor might be warranted, carpeting certainly was more conducive.

**Whiteboards.** The jury is still out, but initially there was strong sentiment for replacing chalk blackboards with white boards because they provided more opportunity for

visual clues with color markers and easier reading from the white surface. Erasures from the blackboards created a dust that some people found irritating and the erasures themselves were never complete. We chose to keep the old blackboards, avoiding the extra cost for taking them down, and simply added whiteboards to the "back" wall and reversed the rooms. Now, between the new white boards and the old blackboards, there is ample space for multiple group reports on boards. Always scanning for economical renovation, we made the mistake of buying less expensive whiteboards which would not erase after several days' usage. Now there is dry eraser wall paper available.

**Technology.** By most standards our college was fairly sophisticated with vintage equipment. We had figured out how to permanently locate an overhead projector on a cart and a TV/VCR on a tall cart in every classroom. By emptying out all of the classroom equipment in each department's own storage room, we found enough equipment for every classroom, so instructors did not have to lug one or two carts to their classrooms. Still, many faculty members wanted to use the Internet in classes and we had only one computer/projection cart for the whole college.

The key to converting to a technology classroom was a ceiling projection system through which computer or other signals would be projected on a wall and a wired instructor station/desk from which the instructor could make technology happen. We connected the ceiling projector not only to computer wires, but also to a VCR and to a unit new to us, a video projection machine, that looked somewhat like an overhead projector and took its place. This video projection machine, nicknamed "elmo," provided a much greater range of projection possibilities by underlighting, overlighting and zooming. In addition to showing acetate pages, this device projects an open book, a textile sample, rock specimens, or even the class itself.

When we used our scarce college funds, we did not actually park a computer in the room, but instead installed the wiring so that a faculty lap top computer could easily be hooked up. When we had state funding for the room, we bought a desk top computer for

the room, postponing the haunting worry about how we would pay for its inevitable replacement.

We enlarged the picture from the ceiling projector by having our maintenance staff apply "thin-coat" plaster to a large wall area, making a permanent screen on the wall. This was not only inexpensive, but we avoided the usual problems with pull-down screens.

We designed a simple wired instructor station that our maintenance staff built for us at a fraction of the price for commercial furniture. For rooms with computers installed, we sunk the monitor below the table level so that the entire table surface was usable.

Adding technology to classes not only enabled classes to go live but also allowed us to remove the overhead projector and TV/VCR on the tall stands, thereby creating more space.

## **Impact**

Faculty and staff in the college have expanded their repertoire of classroom activities in our new rooms. One often observes small groups at work or student-led poster sessions at various boards or students using the technology to make presentations. Tables at which students sit provide natural groupings for discussion or other class work. Several tables put together provide a larger discussion group. While the old tablet chairs reinforced the individuality of the person sitting in it, carefully tucked in and separated from others by the tablet, the common tables reinforces the collective nature of the small group.

Changes in classrooms are visual and startling, giving faculty and staff in the college a heightened sense of empowerment, since they identified this need and can daily see the results of their resolve. They report that students also enjoy the changes and feel that teaching must be valued in our college. Said one student: "It looks like someone cares about our learning environment." Indeed, more than any other action we took to focus on teaching/learning, the classroom upgrades trumpeted our new goal. We surveyed faculty in

our fourth year of renovations to ask their reactions to the new spaces; 90% of the replies urged us to continue. A sample reaction was: The renovated classrooms “inspire instructors to create active learning opportunities for their students and allow them to integrate technology as a model of instruction.” From another faculty member, “I have a sense now that at least in our college, the administration puts teaching and learning at the highest priority, which affirms my work.” And another, “I believe that the use of new technology tried out in various classes has resulted in better dissemination of content information.” And finally, “My students have become more willing to ask and answer questions in class. They now appear to be more interested in the process of learning/problem solving than just ‘what the right answer is.’”

## **Lessons Learned**

I think it is a Chinese proverb that says to be careful about what you ask for, because you might get it. The issue of unintended consequences looms large after major changes in classrooms.

**“Don’t touch that chair!”** One problem we created stemmed from our universally endorsed, joyous move to flexible furniture. Why were we surprised when classes actually moved the furniture? The interior architecture students and I exhausted all scientifically possible ways to arrange the furniture, often taking into account over 30 arrangements during countless hours of research. So when the furniture arrived, we arranged it in our prize-winning design. No wonder I began to develop body tics when I passed by classrooms arranged in “different” configurations, often with unused tables haphazardly stacked on top of each other. And then the complaints started from instructors whose idea of ideal space clashed with the previous instructor’s ideas. The lecturers and the “discussants” could come to fisticuffs over this physical embodiment of their differences. How does one solve this chicken and egg dilemma? Should the students lose the first or the last five minutes of

their classes moving furniture? And with all this moving, and stacking, and moving, how is the furniture itself holding up? I began to long for the days of simple tablet chairs that seemed to stay put or were so easily moved that no one complained.

**Elbow room.** Another troublesome consequence we are still dodging is that one can put more tablet chairs into a space than tables with chairs. Giving students needed table space takes up more room than stuffing them into those skinny little tablet chairs. We were all so happy that students would have better *quality* space that we skimmed over the *quantity* issue. I think we were so dazzled with the innovations that we just assumed that there would be enough smaller classes to use the new rooms. But we did not consider where exactly the classes with the larger enrollments would go. Where they went is to the dean's office to complain! Now, several years later students in classes of 28 scheduled in rooms that hold 24 like the table arrangements enough to endure how close the tables and chairs are to each other. And we have worked to better match class size to class location, as well as expand some rooms.

**Cleaning issues.** While we wanted the classrooms to look and feel like a nice conference center's, we had not taken into account the implications for maintenance and cleaning. The old plastic barrel chairs with their plastic tablets needed little upkeep or cleaning, and linoleum floors did fine with occasional sweeping and a yearly wax job. The new upholstered chairs and light laminate tops shouted for attention by the end of the first year and the carpet's stains sat too long for easy wiping up. While the maintenance staff was initially supportive of our changes, they probably focused too much on our agreement that the carpets did not have to be vacuumed every night like the linoleum had. While we still have not conquered this hill either, we have added new cleaning routines at the end of every semester.

**White board blues.** Faculty and students expressed glee and jubilation when the white boards were installed and then gloom and desolation several days later when the boards no longer erased. Who could have known that less expensive white boards were not

intended for heavy classroom use, even two days of classroom use? Luckily, we were able to replace the first round of white boards with a second round that was more suitable and continues to erase years later. This year we plan to experiment with a new product, a dry erasable wall covering that can be “wallpapered” over black boards or white boards that have hit the end of their life span.

The white boards also presented other new challenges. We never had much of a problem with people walking off with chalk, but dry erasable markers had an initial shelf life of barely 2 days. Although the fad has run its course by now, we certainly underestimated the initial replacements required. This problem was exacerbated because the maintenance staff no longer kept the supply of blackboard chalk flowing, since they thought everyone was using the white boards. For a while instructors were carrying their own personal markers to class.

Cleaning white boards is also more complex than the simple dust eraser. There are several kinds of hard erasers, tear-off sheets, and liquid sprays and the worry that red or green little flakes will stain clothing.

**Colors.** The design professionals reminded me that the greater contrast between a surface’s color and papers used on the tables, the greater the eye strain. So in our first set of rooms, we created a calming, tone-on-tone light beige theme for tables, chairs, and flooring. Thereafter, I created another rule: the lighter the surface, the more it craves an artist’s touch. The lighter colored chairs, carpets and floorboards also spotlighted stains, scuffs, and accidents, so our more recent classrooms sport more defensive darker colors.

While most people fancy themselves as capable of picking out colors for classrooms as they are for their own clothes, the urge should be stifled. If one person makes the choice, many people have to live with that person’s personal preferences—and that person has to take the daily guff from those with different tastes! We found that using students and faculty in interior architecture or art and also getting additional opinions before making color choices helped us survive the gauntlet of opinions.

**Overhead smashes “Elmo?”** The video-projection device or “elmo” was a shoo-in to replace the overhead projector, we thought. It projects a greater variety of things, eliminates making overheads, zooms in and out, and the camera can scan the classroom itself. Traditionalists counter that the overhead projector shows vertical images like most of their own notes, while the elmo’s projection screen favors horizontal. They note that the old workhorse’s images are sharper at a distance than the elmo’s. Camps are forming; we had an email debate over removing overhead projectors from rooms that already have elmos.

**Conclusions.** We made a lot of mistakes, corrected them on the next round and discovered new mistakes. But we kept going, knowing that with each new space, flawed this way or that, we were creating our own new reality, a reality that keeps shouting, “Teaching counts!” Both students and faculty are urging the college to continue to focus on teaching in general and on learning spaces in particular. As we look ahead at new materials, new spaces, new challenges, new considerations emerge. How can we use hallway and outdoor spaces to facilitate learning? How might we use the new product, dry erasable wallpaper? Is it possible to use the psychology of color for better learning environments? What physical changes might facilitate small learning communities in large classrooms?

The sheer magnitude of older classrooms across the country that are shouting for passage into the 21<sup>st</sup> century is staggering. Yet we have found that overcoming the tendency to become overwhelmed and instead forging ahead room by room can be exciting and successful. I suppose we can endorse the observation of the old newspaper cartoon character, Pogo, who said: “We face almost insurmountable opportunities.”

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