Annual Reports & Administrative Documents   The Center for Teaching Innovation & Nexus Learning

6-2011

2010-2011 Best Practice Sampler: The Theory and Practice of Teaching at Philadelphia University

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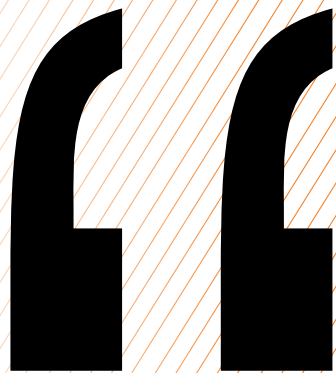
BEST ,, PRACTICES SAMPLER

Best Practices:

*The Theory and Practice
of Teaching at Philadelphia University*

Edited by:

*Jane Antheil
Marion Roydhouse*

*Center for Teaching Innovation
and Nexus Learning
2011*

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> IT IS THE
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> CHANGE.
>
> -CHARLES DARWIN

The learning styles of college students have changed dramatically over the last decade. Philadelphia University recognizing that change has adapted with lightning speed. Indeed, a hallmark of this institution is its ability to be the connective tissue between the students and their professional lives. That connective tissue is given life through the pursuit of purpose-filled knowledge. Indeed, we believe that the distinctiveness of a Philadelphia University education advances learning in a manner that empowers students to become leaders in their fields; powered to do what's currently important and advanced in their decision-making abilities to pursue the urgent issues on the horizon.

Teachers are essential to this empowerment. This volume reveals how faculty carefully and thoughtfully construct learning experiences. They support students in the risky business of learning, of facing new challenges, of making mistakes and then solving problems with innovative and creative thinking. The professional world demands people who are flexible, expect to learn new things all their lives and who understand the global nature of the world in which we live and work. Our teaching and learning practices support students as they prepare for this new workplace and the rapid pace of change. This volume on Best Practices in Teaching reflects the Philadelphia University philosophy of Nexus Learning and our commitment to teaching excellence in our Center for Teaching Innovation and Nexus Learning, led by founding Executive Director (and former Dean of the School of Liberal Arts) Marion Roydhouse, Ph.D. We support the development of great teaching that is active, real-world, collaborative and infused with the liberal arts. We present actionable strategies that build exciting and relevant learning experiences for both the teacher and the students.

All academic disciplines and student life are represented in this document. It is a testimony to the faculty and professional staff's commitment not only to teaching excellence, but also to teaching distinctiveness. Teaching is about knowing one's field and knowing appropriate and effective teaching strategies for that field. Teaching at Philadelphia University is more than communicating knowledge particular to one profession or one area. Student learning at Philadelphia University reflects our conviction that teaching and learning must not be confined to one discipline or to the classroom alone, for either the teachers or the students. It is key to our success that we recognize that effective professional education in the 21st century crosses disciplinary boundaries and the physical boundaries of learning spaces. While we are not the only university that believes in transdisciplinary education, we are one of the very few who has a university-wide commitment to it.

My congratulations to faculty and staff who have their effective teaching pedagogies (teaching stories) and reflections on the theory and impulse behind their work printed here.

Stephen Spinelli Jr., Ph.D.
President

Preface

Teaching at Philadelphia University:
Celebrating Our Best Practices

EFFECTIVE PROFESSORS
GUIDE STUDENTS IN FINDING
THEIR OWN PROCESSES AND
SOLUTIONS AND DO NOT
DO THE WORK FOR THEM.
THEY HELP STUDENTS FIND
THEIR OWN VOICE, WHICH
IN TURN BUILDS STUDENT
CONFIDENCE AND SUCCESS.

WE HOPE THAT THIS SET OF "BEST PRACTICES" WILL INSPIRE NEXT YEAR'S COLLECTION. OUR GOAL IS TO STIMULATE DIALOGUE AROUND TEACHING AND RESEARCH ON TEACHING. FOR EXAMPLE, QUESTIONS NOT RAISED HERE INCLUDE: HOW MIGHT GRADUATE TEACHING DIFFER? WHAT DO WE KNOW ABOUT STUDENT ENGAGEMENT IN ONLINE AND HYBRID LEARNING STRUCTURES? WHAT IS MISSED IN THIS YEAR'S EXAMPLES THAT YOU WANT TO SHARE? WE HAVE BARELY BEGUN TO SKIM THE SURFACE OF WHAT WE KNOW IS HAPPENING IN OUR CLASSROOMS, STUDIOS, LABORATORIES, STUDENT LIFE PROGRAMS AND SPACES, AND REGARD THIS SPLENDID COLLECTION OF WHAT WE DO TO FOSTER DEEP STUDENT LEARNING AS A BEGINNING IN DEFINING OUR BEST TEACHING.

Every faculty member at one time or another has known the sinking sensation that he or she is just not reaching students. Since we entered the profession because we love learning and love to facilitate learning, blank stares and dull eyes lead not only to frustration, but also to disappointment. Paraphrasing Lee Shulman, past President of the Carnegie Foundation for the Advancement of Teaching, and a leader in professional education, it is one thing to be competent in subject knowledge and another thing to be competent in subject knowledge pedagogy.

The examples and ideas expressed in these pages come from our own faculty, teaching our own students and were developed to expand the tools they use to impact learning. Too often, good techniques and activities often are not shared, missing the opportunity to build on one another's ideas and experiment with new pedagogy. There seems to be little time and no forum for practice exchange and even less opportunity for researching new pedagogical approaches. John Lewis comments,

"The choice of innovative teaching strategies largely depends on the willingness of an instructor to continually test both effectiveness and acceptance of a particular technique. Learning has taken place since the dawn of civilization and some teaching methods have existed just as long. The innovative instructor often recognizes that 'tried' is but a rearrangement of 'tired.' However, some teaching practices have survived solely because of their effectiveness and their demonstrated evidence of strength. Therefore, instructors who regard time-honored practices as co-ingredients with sparkling innovation usually see marked growth among learners who have joined them in discovery. Techniques that reward creativity often yield subject mastery at the highest level of application and experimentation toward the establishment of new theory."

In addition, there can appear to be disincentives for sharing practice. As one faculty member noted, we can come to a university teaching with a desire that our sections succeed better than others. Consequently, if we have a technique that works well, we may keep it to ourselves. That same faculty member expressed great satisfaction when, in time, she learned that sharing collaboratively results in even more powerful ideas, as well as significant collegial support. Another faculty member, Jesse Coale, has found the same support by sharing his ideas,

"We continue to try to find the balance between experiential learning and boring lectures. Often this happens as an organic process — sitting around the lunch table when someone presents an idea and it gets discussed, finessed and implemented. Having a faculty group that is open to new ideas and methods is essential to try these different ideas."

The Best Practice Sampler, composed of just some of the approaches evident in our classes every day, offers a way both to share techniques and activities and also to celebrate the dedication and creativity of the Philadelphia University faculty and staff. In each section, loosely organized around our Nexus Learning strategies of active, collaborative, engaged, real-world learning, employing the methods and knowledge learned in a study of the liberal arts and sciences, the authors have responded to the question, "What do you do that makes for effective student learning?" The short pieces chronicle many of our best pedagogical practices. They show how teachers implement their ideas and beliefs about teaching and learning, in a concrete and practical way.

Marion Roydhouse
Jane Antheil

June 2011

Part One
Teaching the Learning Process

YOU LEAD STUDENTS TOWARD A DISCOVERY. YOU DO NOT TELL THEM WHAT IS WHAT. WHEN THEY ARE ENGAGED IN ACTIVE RESEARCH, THEY WILL LEARN MORE. I GET THEM ENGAGED BY ASKING THEM QUESTIONS. THEY HAVE TO APPLY NEW THEORY OR DESIGN NEW RESEARCH. THEY HAVE TO WORK IT OUT.

"

Learning works best when teachers and students both understand the expectations set for their learning space. No matter what stage of their education, students need to learn how to be learners in a particular discipline or in a specific learning space. Peer review, design critiques, participation in discussion and expectations for classroom behavior are all skills to be learned and then transferred from one class to another, one semester to another. Each faculty writing here reflects upon a conscious process of teaching their expectations. This basic process is key to successful student growth and to a successful course or program.

Establishing Expectations is the First Step
John Pierce
Psychology

Teaching starts with creating an inviting environment. "You are welcome to come into this place." We treat our students as adults and initiate them as equal partners in learning. We do that by making clear in the syllabus that this is how they will be treated and how we wish to be treated. Questions will be dealt with in a respectful way. "Student-centered" means we provide focus, but entrust them with learning. We are helping them along.

Class Participation: Bringing Shy Students into Discussion
Katie Turner
History

The art of calling on students: It has to be done carefully, calling on just the right student with the right question or invitation. When I do it right, shy students are brought into the conversation (and will often volunteer after that); dozing students are gently awakened; unprepared students are invited to participate while being nudged to be prepared next time; and eager students are led to higher-level thinking. If I can control myself when I don't always get the answers I'm "looking for," I am rewarded often by getting answers (and connections) that I would never

have thought of. I also use the chalkboard a lot and really like writing students' comments on the board, counting on the fact that other students usually write down everything I write on the board. I think it gives students a sense of accomplishment when everyone writes down their contribution.

Modeling the Process: Talking About the Work on the Wall
Carol Hermann
Architecture

We do a lot of work on the wall. So we have conversations about how we're going to talk about it. "This is about the work on the wall, not about the student who put the work on the wall." You can't just say 'I like it.' You have to say why. For the first project, students are put into small groups and each student gets a buddy to take notes about what was said. Often the student who is getting the critique is too nervous to hear what is said. For the second project, the whole class critiques. All of the students get sheets to write down what they think. Also, they still have a buddy taking notes. The third time, we have guests and the students get quiet again. But if a few speak up, I will say, "Joe and Jane, you get bonus points for speaking up." By stepping it up all the way through, it is ingrained by the time they are juniors and seniors. So we're teaching them to be involved on a step-by-step basis. We lay out the process, but also model it — guidelines plus enforcement.

With upper-level students, where the projects are longer in duration and where they have a lot of this already, every Monday we'll devote to small group critiques. Three students will put their work up on the wall and those three students and I will talk about the work. When you have only three students, they have to talk. I spend the first hour with three students, then the next hour with another three. Then we rearrange the groups. We go through this process every Monday with different groupings.

HUMOR IS A GOOD MEANS TO SOFTEN THE DISTINCTION BETWEEN TEACHER AND STUDENT.

ONE OF THE THINGS I DO WHEN WE ARE HAVING PRESENTATIONS TO GET AWAY FROM THE DEATHLY SILENCE IS TO SAY "WE AREN'T DOING THAT HERE. IT'S NOT HAPPENING!"

The Art of Discussion: Setting Standards
Anne Bower
Biology

One of the things I do when we are having presentations to get away from the deathly silence is to say, "We aren't doing that here. It's not happening!" I make that very clear at the beginning. When we finish with a presentation, we will have comments, questions, feedback or suggestions. I give students those options on how to participate. They can do any one of those things, but they will do at least one of them. What we're driving toward is a take-home message. We will meld a take-home message out of the material we've gone through. Then I shut up. I make it clear what is expected, then I get quiet. Then it starts to happen.

Paying Attention to Each Student's Responses: Boosting Participation
Stephen Spinelli Jr.
Entrepreneurship

I make a few short notes on each student in the class on a sheet, noting if they are speaking, are shy, reticent, or places where they have difficulty. It might be a few students in a class, but generally I will get to all of the students over a period. I follow up on these class notes responding to what I have noticed, with an email so that we are talking one-one-one. I might ask "what was the most interesting thing" for that student in the class we just had or the material coming up. I might warn a quiet student that I am going to call on him or her during the next class and give them a topic so that they can be prepared. Then I lob the student a softball the next class so that he or she is able to answer with confidence and will get more respect from his or her peers, and have their self-confidence boosted. It works to bring into active discussion those students who are not participating and it is a way of reaching out and encouraging students to talk with me.

Mistakes Lead to Learning: Avoiding the Familiar
Christian Jordan
Architecture

In the classroom, I am constantly pushing students to reconsider, specifically their answers to a given design problem, and more generally, how they see the world around them. I am not only aiding in the creation of architects, but more importantly, critical thinkers. I find myself playing the role of instigator between a student's first or second answer and his or her inquisitive nature.

I believe this method to be effective when students feel comfortable expressing their ideas regardless of how erratic or mundane they may believe those ides to be. There is a wealth of information to be gained by understanding the mistakes and shortcomings of a design solution — perhaps more so than studying an answer perceived to be flawless. I am asking my students to avoid the urge to "self-edit," an idea before it has a chance to make it into their sketchbook or be discussed with fellow students. I believe that this method has achieved its desired effect when students recognize the benefits of making mistakes more quickly and realize that they, with all of their successes and failures, are part of a critical discourse within the studio environment.

I endeavor to keep students outside of their comfortable zone of operation. Complacency is the enemy of critical thought. It is, therefore, my responsibility to identify where a student may feel most comfortable and coax them into avoiding the familiar while striving to explore avenues they have not yet considered.

Serious Engagement
Natalie Nixon
Fashion Industry Management

Expectations have to be set and articulated, but there also is enforcement that has to happen in the very beginning to show them you are serious about this. I'm not the only one who will be speaking in this course; and you can't answer in "text-message"

responses. It doesn't happen right away and is different from section to section, but by mid-October it is working. More diversity in class levels lends courage to students to pipe up. Also, I notice that there is a change after I've brought in guest speakers who model speaking up/discussing.

Designing Over and Over Again
Kimberlee Douglas
Landscape Architecture

Studio can be overwhelming to first- or second-year students as they are not accustomed to the design process. There is a lot to think about and juggle. There is also trial and error in designing any project and you have to be willing to design the same thing over and over again until you are somewhat satisfied with the result. Students often get discouraged by the process, so I decided to break up the project in smaller steps that are diverse.

I conduct class in a multitude of ways for each design step, so one day we write about our project, the next day we sketch, and we may use models and collage another. We also use a local site so students have access to the community and its issues. This is also helpful as we can relate local issues to global ones. Their end product is reached using various means of expression; each step works towards a more complete idea that has been explored in many different ways, and at times, in discreet steps. I found this helped with the many steps and ideas we need to comprehend, by organizing the assigned project in a way that lessened the amount of information they had to consider at one time. I also try to give more positive feedback more often at each of these steps, rather than waiting until the mid or final review to formalize the reaction. It seems to work as the students have expressed that they feel their ideas are more complete because they have reached them in a variety of ways. One approach doesn't always work with a student, but given they have many avenues to a design solution, they usually find one (or more) that resonates with them and their design.

Thinking Broadly: Thinking Analytically
Muthu Govindaraj
Textile Engineering

There is a challenge in getting students to think more broadly, more widely, not just restrict themselves to a narrow discussion. So I ask questions to move the discussion that way. I participate actively, keep on asking questions — change the direction of the conversation when needed to make them think and not conclude too soon. Premature closure is the correct word to use. They are trying to get to a solution and they are not really thinking about the whole thing. We work on how to change the conditioning has taken place up to the time they reach us, to get them to think more analytically.

Fluency in New Languages: Verbalizing the Decision-Making Process
Jacob Tucci
Interior Design

In my classes, my goal is to help the students achieve improvisation in their design process. I can't expect students to utilize improvisation until they become fluent in the language of design and visual communication, which is the dynamic visual conversation with self, the paper and others. Learning to communicate visually benefits from a master-apprentice (do-what-I-do) approach, with a lot of practice on the student's part.

In teaching perspective and rendering, I perform several progressive demonstrations from start to finish. While I draw or render, I verbalize my decision-making process, so the student can hear the reasoning behind the finished product. I want to take the mystery out of it. I encourage the students to ask questions throughout. Then for homework, I ask them to produce the same thing with a little flexibility on color choices rather than ask them to render their own drawing. This minimizes the variables that can come into play when rendering, such as different lighting sources, which could hinder their under-

OUR EXPERIENCES FEED US MATERIAL IN DIFFERENT WAYS, AND TO BE TRULY CREATIVE, YOU MUST HAVE ACCESS TO ALL OF YOUR EXPERIENCE IN THE PRESENT MOMENT.

"

STUDENTS ARE ASKED TO AVOID US-ING PHRASES SUCH AS "MY PROFESSOR MADE ME DO THIS", "I/WE HAD TO...," "I DID NOT LIKE...," "WAS ASKED TO RESEARCH...," TO BE REPLACED BY "I RESEARCHED...," "I EXPERIMENTED WITH...," "I MADE CHANGES BECAUSE..."

standing. As the lessons progress, I add more room for creativity until I am having them design their own perspective of a space from a simple narrative. I realized I could not expect students to be adaptive to creative problems until they grasped the skills to communicate creative ideas. To test this, I ask the students to draw a perspective of their own design of a hotel lobby to their best ability on the first day of class. Towards the end of the lessons, I ask them to do the same thing. Their creativity and execution increase dramatically, as well as their confidence.

Learning to Write by Writing More
Katie Gindlesparger
Writing and Rhetoric

I like to always have students overproduce on their writing, at least by half. So, if the end product is going to be 500 words, I almost always have the writer produce 1,000 words, if not a little more. I do this for a few reasons: (1) this means no one is ever stuck up against a deadline without content, (2) students dis-cover content they wouldn't have otherwise because they were forced to write more, (3) working in terms of word count gives student writers more freedom as to what kind of content they want to produce (rather than saying, "write up through X scene"), and (4) word counts push students out of their writing com-fort zones — just like exercising a little beyond your

comfort zone builds muscle, writing a little outside of your comfort zone builds stamina, patience, and a critical eye. The more you write, the more experience you have with writing. Period.

Learning the Studio Critique
Stuart Fineman
Design Foundations

In the first semester Drawing course, for the first third of the semester, "critique anonymity" is condu-cive to maintaining morale and the desire to learn.

For these freshman students with no prior drawing familiarity, it is vital that they remain positive and cel-ebratory for each advance they achieve. Discourage-ment comes quickly. A negative comment can defeat the process of advancement. They get humiliated quickly and lose all desire to press forward.

Slowly during the semester, ownership is estab-lished during critique and advancement is noted. Even later in the semester; however, if a work is especially poor, anonymity is preserved. I have found this practice to be successful in insuring a high morale for incoming freshman. The beginning of their first semester is a stressful time for these young students.

"

Course Design: A Common Set of Acceptable Behaviors

For some courses and studios, a formal set of guidelines has worked to establish baseline behaviors that will carry through over the whole undergraduate (and graduate) experience. This handout has been in place for a while and is reproduced here as another example of how students learn what is expected of them.

MANY ARE FEARFUL SINCE THIS IS A HUGE NEW EXPERIENCE AND CHANGE FROM HIGH SCHOOL. (I STILL REMEMBER MY OWN FRESHMAN YEAR AT COLLEGE AWAY FROM HOME). MY NUMBER ONE GOAL IS TO GET THEM TO RELAX AND FOCUS.

College of Architecture and the Built Environment

This document is intended to create a clear description of student and professor expectations, requirements and responsibilities. The Philadelphia University Studio Culture document works in conjunction with Studio Policies, the Philadelphia University Student Handbook and the Philadelphia University Strategic Plan.

Studio Culture, which promotes an active learning environment, is the essence of design education. Design students draw from all of their academic courses, life experiences and extra-curricular activities; the importance of all of these sources should not be diminished. Above all, the fundamental component of our success is RESPECT.

Respect for Ourselves

Faculty are qualified and experienced individuals who bring their skills and dedication to the learning process. Students bring their immense energy, talent and dedication to the learning process. Students learn as much from each other as they do in class; therefore, they are expected to work in studio frequently.
- An atmosphere of encouragement and positive reinforcement should be upheld.
- Students need to strive to present the best work that they are capable of, only then can they excel.
- Students should be empowered to expand their knowledge by taking reasonable and appropriate intellectual risks.

Respect for One Another and Our Craft

We encourage one another to learn about, respect and embrace all disciplines, as they bring important perspectives to the educational process. As part of the professional atmosphere, both students and faculty must be punctual and respectful of one another, our schedules and external obligations.

Students should be aware that design studios demand a significant financial commitment. Professors should respect students' varying financial conditions (i.e., they should discuss general costs for the semester and be aware of material availability).

The course syllabus must be clear and encourage equitable standards across sections of the course.
- All involved are encouraged to value process (theory, precedent and research) and final product (both graphic and oral presentations).
- Effective ways to teach design include pin ups, group discussions, one-on-one desk critiques and integrated design charrettes.
- Effective presentation techniques include hand-produced drawings and models, digital media and well-prepared oral presentations, and each should be used appropriately according to the circumstances.
- Reviews will be a constructive, interactive learning experience.
- Faculty members are encouraged to establish deadlines providing students enough time prior to the review to recuperate and prepare (a "Pencils-Down" policy) to foster more interactive and effective critiques.

- Faculty members are encouraged to organize critiques so they enhance discussions and involve all students.
- To promote collaboration and respect, students are required to attend and encouraged to participate in critiques of students in other majors and years.
- In order to make the most of everyone's time, guest jurors should be alerted of relevant project information and given an agenda.
- Grading systems will follow the prescribed schedule as outlined in the syllabus.
- Faculty should give verbal or written progress reviews within a reasonable time following each major assignment, and an exit interview should serve as the culmination of the semester.
- Faculty are required to use the Academic Alert system to issue prompt and appropriate notification of unsatisfactory or failing grades.

Respect for Facilities

Studio space has been entrusted to students and faculty in order to advance learning and build an effective studio culture.
- Studios should be treated as a professional workspace. Excessive noise and other inappropriate behavior do not belong in studio.
- Studios are a communal area used by many students and should be treated accordingly by adhering to the School Studio Policies.
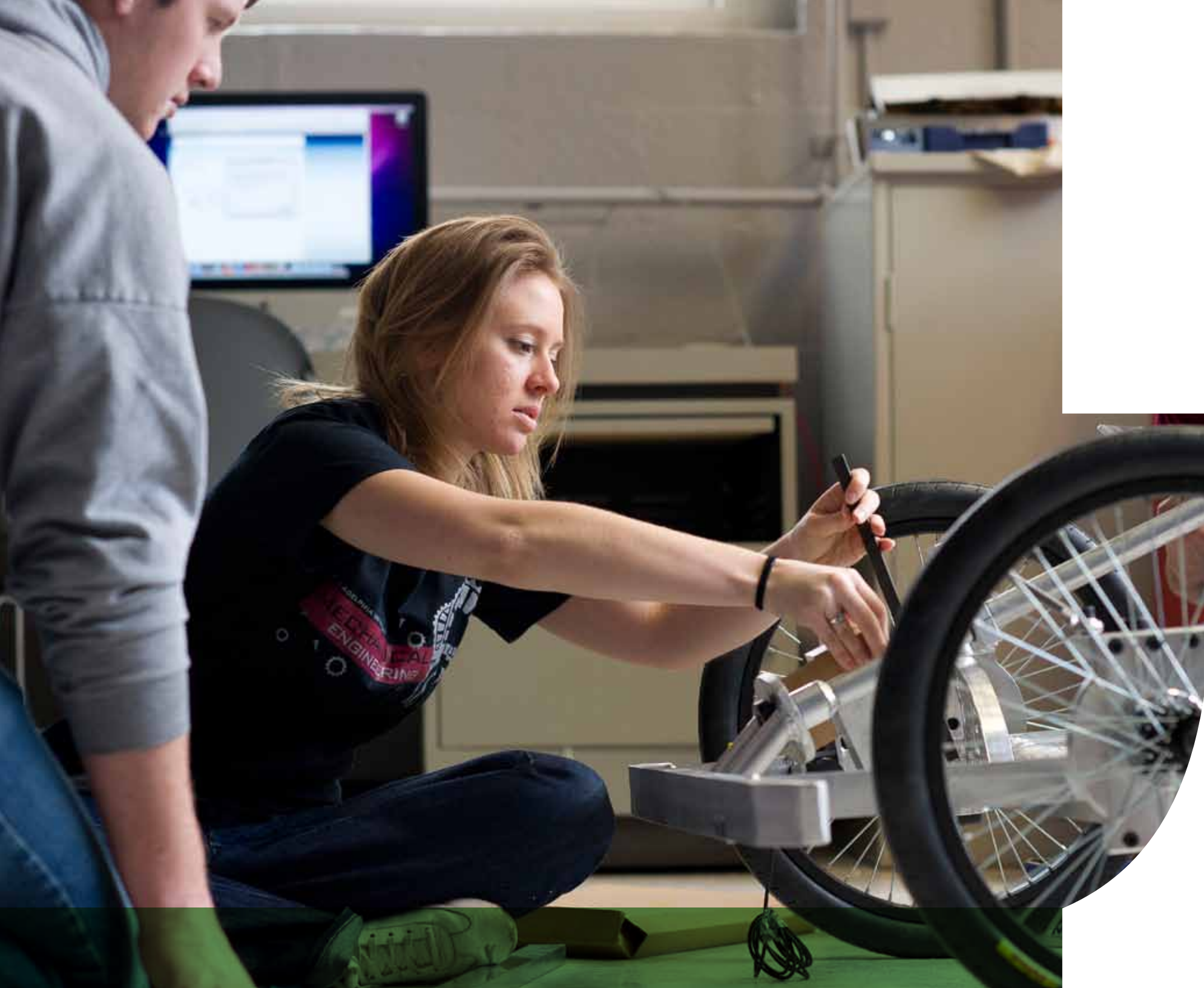
Part Two
Student Engagement

THIS LEVEL OF CONNECTION BETWEEN THE STUDENTS SEEMS BAR RAISED, AND I GENERALLY SEE AN IMPROVEMENT IN STUDENT WORK AND IN THEIR ABILITY TO PRESENT IT VERBALLY.

"

Throughout this collection, you will find the following words used to describe the best learning experiences: active, engaged, collaborative, connected and integrated. Learning takes place when students cannot be passive observers in their own learning process. Self-directed learning and life-long learning demand involvement with the material, rather than simple rote memory or repetition of content. Analytical thinking, critical thinking and manipulation of knowledge and skills are learned in an active and engaged classroom. Learning communities, problem-based learning, peer critiques, desk crits, hands-on discovery-based methods, experiential learning, all lend themselves to deep student engagement and are therefore highlighted in this section. These examples point to the wide variety of ways an active classroom can be constructed and not just in the classroom, for active learning takes place in student life programs, student-run associations and service learning.

## Creating the Learning Community: Encouraging Trial and Error

John Lewis
Disaster Medicine and Management

The most effective course facilitators strive to build learning communities within each class, regardless of delivery mode. The post-secondary environment provides an excellent opportunity for learners to be integrally involved as they invest both time and money in achieving objectives. Learning community teachers do not operate under an assumption that those taught know less than those who teach. Of course, factors of experience and formal preparation are elements that enable instructors to "mine the minds" of the learners and to bring forth ideas and concepts often overlooked by teachers. Effective instruction demands respect for the roles of everyone involved in a class, and provides mechanisms for excellence to emerge across the continuum of a course. Genuine activities that encourage trial and error, honest solicitation of opinion in dialogue and non-judgmental interactions contribute to the construction of a lasting learning community.

Analytical Thinking: Problem Solving

Matt Milkevitch
Chemistry

Students need to learn how to approach and solve problems. My approach in Chemistry is aimed at teaching them not to be afraid of the problem and to develop the thought processes necessary to analyze and work through the problem. I believe the development of these skills which can also be described as a "chemistry sense," is critically important to their success as future professional scientists. I can observe that this method is succeeding when entirely new chemistry problems, oftentimes not related to the current lecture material, are presented to students and they can extend what they know and at least work through part of the problem. Commonly this is good enough, since the goal is for the students to problem-solve and apply what they know. These skills are absolutely necessary to even this small degree, since chemistry is an experimental science and problems encountered in research are almost never easily solved or familiar in nature.
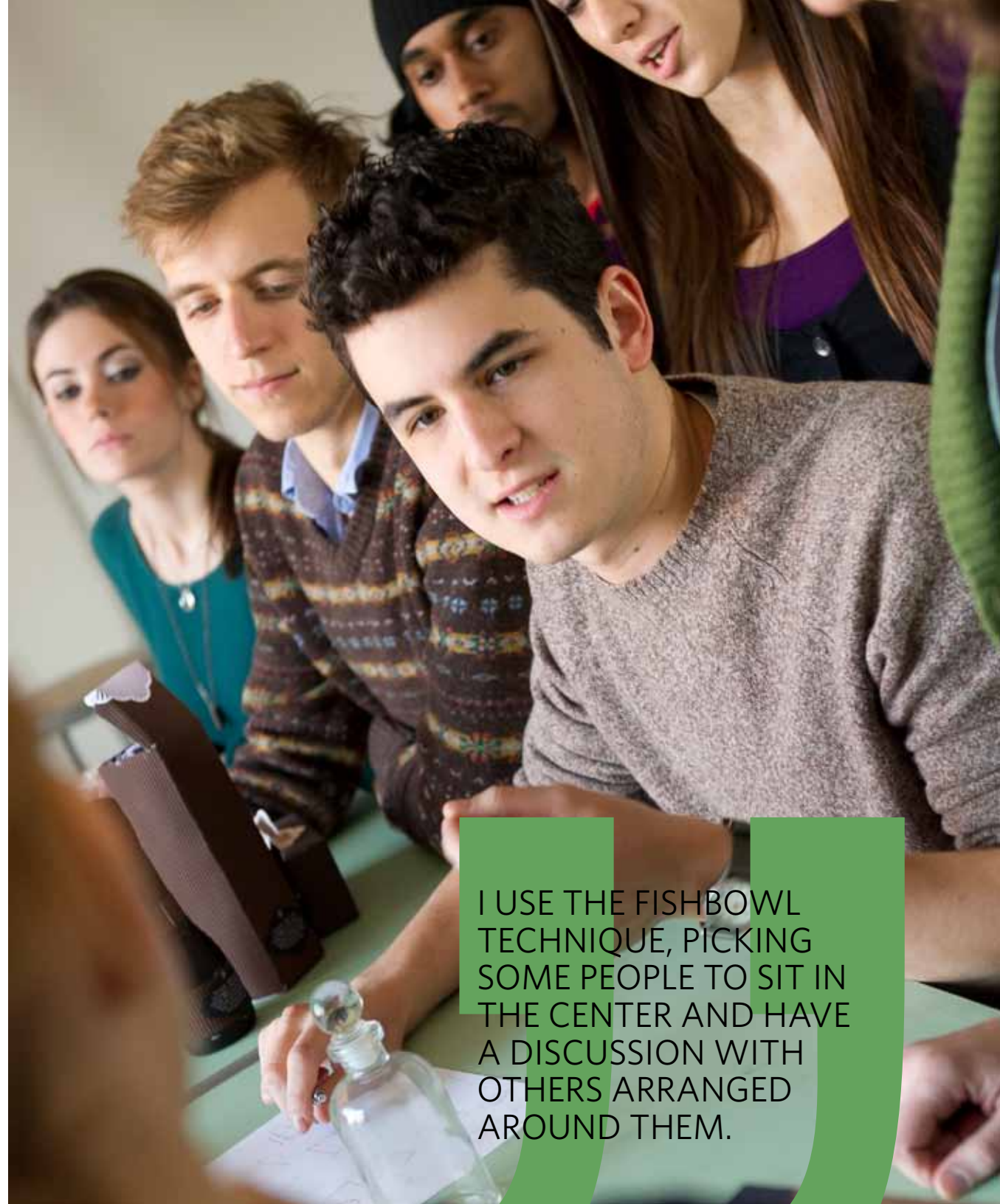
I USE THE FISHBOWL TECHNIQUE, PICKING SOME PEOPLE TO SIT IN THE CENTER AND HAVE A DISCUSSION WITH OTHERS ARRANGED AROUND THEM.

> ## IT IS A GREAT OPPORTUNITY FOR STUDENTS TO BECOME MORE VERSED IN SPEAKING ABOUT DESIGN WORK, ESPECIALLY WORK THAT ISN'T THEIR OWN.

Working With Everyone: No Protected Seats
Meriel Tulante
Italian Language and Literature

A simple, yet effective strategy that I use is to insist that students sit in a different seat every time they come to class. A change in physical space means that students do not rely on routine or reflexive physical responses and avoid falling into habitual mental patterns as well. They are more engaged and alert as a result. This movement also ensures that they do not sit next to their friends, with whom they might be tempted to chat, but instead get to know other students in the class, creating a cooperative, convivial atmosphere. A key component of this strategy is that weaker students will get to interact with stronger ones, so they can benefit from each other's knowledge. The teaching in class then frequently occurs between students who arrive at an understanding of the material collaboratively and through practice. As the students are working in groups, I move constantly around the room from one group to another, observing their work; answering questions; and offering help, corrections or elaboration. I find that they are more likely to ask me for explanations if they are having difficulty with the material in this setting rather than in front of the whole class. Depending on the material covered in the group work, I might ask for groups to report back to the class, so important issues are identified for everyone.

The Noisy Classroom: Analyzing Discussion
Katharine Jones
Sociology

I use the fishbowl technique, picking some people to sit in the center and have a discussion with others arranged around them. The center group discusses. Afterward, the outer group talks about what they learned, and what didn't get talked about. Then I'll comment on it. It's important to explain to students that being able to think on your feet and talk in front

of others is part of your professional training. They should think about how they talk to each other as part of professional practice.

Ownership of Your Own Learning Inside and Outside the Classroom
Götz Unger
Industrial Design

Industrial Design faculty have developed many tactics that encourage the students to take ownership in their education. The result is that students become partners in education and, as such, we acknowledge to each other that we seek to extend the whole by leveraging our respective "fits and gaps."

A result of this learning partnership was demonstrated by the students' action after an intense charrette. Students had become reliant on each other, wanting to learn from their peers. When the faculty was unable to create an event that allowed the students to gather and discuss their work without prompting by faculty, the students organized themselves during the weekend to discuss and analyze their design projects.

Calling on Students: Drawing in the Whole Room
Nancy Sorkin
Literature and Writing

I always call on the students in the back of the room first (there often are too many desks in a room to make a circle) to make them feel like they're in the front row. I never let a student say "I don't know." I will work with them until they at least make some contribution. At the end of a unit/module in a course, I ask the students to do some free writing on the two or three most important things they have learned in that unit; how this new knowledge has changed their perception of an issue or a region of the world; how this new knowledge has made them think more critically; and how this new knowledge fits into their intellectual and professional development.

After the free writing, I ask selected students to share with the class what they wrote (I don't collect it, but I walk around the room as they write to make sure they are actually doing it). One of the advantages of "free writing" is that EVERYONE has something to say. Often, their responses are startling different about how new knowledge has had an impact on critical thinking. What I find particularly interesting is how students are so interested in this exercise, hearing what others have to say. Frequently, this leads to more discussion and, I expect, more student learning.

Peer Critique: Articulating Ideas and Creating Camaraderie
Sara Gally
Architecture

To encourage interaction between students, I designate one of our three major projects in the class to be critiqued by the students themselves rather than outside jurors. Students are graded not only on the work they present, but also on their feedback and assessments of other students work. It is a great opportunity for students to become more versed in speaking about design work, especially work that isn't their own. When students present their own design work, they are presenting a thought process that they have been working through for weeks or even months and with which they have most likely developed a comfort level.

Having students critique focuses them to think critically about design on the spot and to articulate themselves in a meaningful way. This style of critique also gives students the opportunity to share the technical knowledge that they've learned through their individual work, which is something that not every juror could comprehend or contribute. I also generally find a level of camaraderie during these critiques, which can be a bit of a relief from more formal, traditional crits.

After student critiques, I often find that students talk more to their neighbors during class, to get an

opinion, technical advice or simply to keep up with what their classmates are doing. The lines of communication are open between the "A" student and the "C" student, and they no longer have to rely just on themselves or the instructor to keep them inspired. This level of connection between the students seems to raise the bar and I generally see an improvement in student work and in their ability to present it verbally.

Using Problems to Connect Theory and Practice
Vidya Nandikolla
Engineering

Teaching engineering courses can, at times, be heavy on theoretical concepts in order to understand the principles behind design methods before students can actually apply the knowledge to hands-on experimentation. Since application is an important ingredient of teaching engineering, the trick is to balance between theory and practical bridging within a course.

To address this issue, I have incorporated an active element in all of my courses. If it is a conceptual course, then I prepare a complex problem and ask students to work in groups and make presentations, both written and oral. If it is a junior- or senior-level course, I build project-based learning with teams similar to the real world so that they are able to apply their fundamentals integrating the concepts. Student involvement is very crucial — it doesn't matter what style is implemented. They have to apply the concepts they understand in their styles to be able to design and communicate.

A New Language: Discussing Controversial Topics
Stacey Van Dahm
Literature, Cultural Studies

One thing that works well for challenging discussion topics like class and race is to prepare the students with readings that offer conceptual tools. The definitions and examples give them something fairly

STUDENT INVOLVEMENT IS VERY CRUCIAL; IT DOESN'T MATTER WHAT STYLE IS IMPLEMENTED.

> STUDENTS WILL SELF SELECT INTO A COMFORT ZONE. THE ROLE OF THE PROFESSOR IS TO PUSH THEM OUT OF THAT COMFORT ZONE IN ORDER TO CONNECT THE DOTS.

concrete and evoke personal examples and stories. I also ask students to reflect on discussion, in these cases especially. I ask them to start with the assumption that no one in the classroom is racist, and that everyone has good intentions. Assume the best of each other. I acknowledge with them that the topics are tough, and that this is a chance for them to learn some ways to talk about a difficult topic/issue. This usually puts us in a good position to start a productive discussion.

Stop, Think and Do it Yourself:
Problems, Concepts and Interactive Classrooms
Harry Woodcock
Physics

Pedagogy has been well researched in the field of physics. At a 1996 conference of the AAPT, I saw a meta-analysis of more then 6,000 students nationwide. The meta-analysis indicated that students who were taught using interactive teaching methods were far more successful in mastering complicated physics principles of forces than those taught using a lecture-only method. Based on this pedagogy research, my Physics 201 lecture/laboratory uses "open book, open notes, open intelligence of neighbors" class exercises in which students are presented with a problem-set or concept question. For example, in one, they

test applications of the Second Law for 10 minutes, and they problem solve together in multiple team combinations to work out the rationale and steps needed for the application. Students submit their own individual work at which point the instructor reviews the key concepts with the group as a whole. Individual work is graded and returned at the next class for immediate feedback. I have seen dramatic results and exam scores have improved significantly, reflecting that students engaged in active learning where they stop, think and do it themselves are more able to master and retain concepts.

Learning From Each Other and Balancing Faculty Time
Frank Baseman
Graphic Design Communication

One teaching technique that I have picked up through the years when teaching a studio course with many students (and quite honestly, in an effort to have enough time to get around to each of the students) is to often break the larger group into smaller working groups of Group A and Group B (or even smaller) for more intimate immediate feedback to work. This could be based on what project the smaller teams may be working on.

This method can almost be the best of both worlds between a full-blown large critique and literal one-on-one desk crits. In smaller groups (of six, seven or so), we can still look at each individual students' work and, at the same time, other students can get a chance to see how someone else's work is progressing. Obviously, part of my job is to lead the group, but it's also to foster the atmosphere that the students can learn from each other. I strongly encourage open dialogue among all of the students — I want the students to have as much ownership over their work as possible. In the smaller groups, they can get feedback from their peers, as well as from me, but it also allows less of my having to repeat some of the same common themes to 15 individual students, and therefore allow my ability to reinforce core messages.

A Question of 'Raising of the Hand'
Adam Melinn
Philosophy

One of the most interesting phenomena in the classroom is the "raising of the hand." I have discovered that if you ask the class to respond to a question, there is the deadly silence that destroys the rhythm of the class. I discovered that if you rely on the hand-raising method, the course is dominated by a certain type of individuals and most of the class will disengage, surrendering power/control. To avoid this problem, I do not ask questions to the class, but rather ask direct questions to particular students. Of course, if a student asks a question, I will respond to his/her raised hand. However, I find that discussion starts successfully by directly engaging students rather than asking them to respond. I thought about these phenomena and propose that students will not raise their hands to answer the question for the following reasons:
- They do not know the answer
- I have found this reason to be more likely
- They are not sure they know the answer and they are afraid of judgment.
- They know the answer, but they feel they might be evaluated by their peers as being aggressive

By calling on students directly, the professor takes the hand out of the way; eliminate #2 and #3 above along with class domination (a key to this is respect on both sides). A mutual promise between the professor and student mostly develops over time. Essentially, the professor will not embarrass the student and the student will not let down the professor, along with the class.

Further, addressing #1, the quiet student may feel that since they don't raise their hand, they do not have to prepare. This disengagement is eliminated by actually bringing that student in. I have found that once all students understand that they are in play, they don't want to embarrass themselves in front of their peers, and since I pushed them into the forum,

it lessens the risk. Now that they are in (not due to their choice), they start to enjoy their voice and start to enjoy the feedback they get, which further encourages them and leads to more confidence.

The Studio: Isolation Amidst Company?
**Lisa Phillips**
Interior Design

Studios, drawing courses and computer classes tend to be lighter on lectures, but they require more individual time with students [in Interior Design]. Surprisingly, these courses can often lead students to feelings of isolation from their peers. Without special attention on behalf of the instructor, students can feel as though their main source of interaction is solely with the professor and students have cited that they feel as though they are "working in a bubble" without knowing what everyone else is doing.

An obvious solution to this problem would be group pinups and critiques, but students are quick to voice frustration sitting through pinups of the entire class on a regular basis. They feel their course work suffers from too many group meetings as the work time in class can contribute greatly to their end product. Where is the balance in engagement that leads to a feeling of connection while maximizing work time? I have tried many techniques to solve this problem in the past, but by far my favorite is to engage the students in small group peer reviews. In this method, groups of three or four present their ideas and projects to each other, while the remainder of the students work. As I move through the groups, I lead the conversation with focused questions, but the students are responsible for providing feedback to each other. The small group setting allows students to feel more comfortable speaking up than in larger presentations. They also tend to become invested in the projects of students they provide suggestions to, often bringing in clippings from magazines or mentioning websites to each other to benefit their peers' projects. Most importantly, they are instantly reconnected with their classmates in a manageable manner.

" STUDENTS OFTEN REFLECT THAT THEY ARE ACTIVE LEARNERS, MORE ENGAGED IN THE MATERIAL...
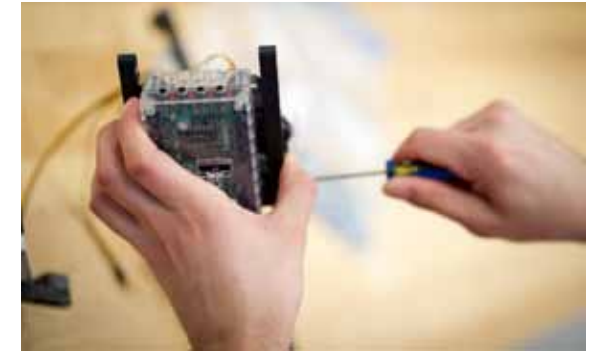
IN ADDITION TO SHARING
COMMENTS IN 'THE FIRM,' EACH
STUDENT MAKES HIS OR HER
COMMITMENT ON PENDING
PROGRESS TO THE GROUP AND
THE GROUP REMEMBERS

"

The university is committed to the education of a professional. Preparing for the professional life means understanding the world in which they will work. "Real-world" learning is a cornerstone of this approach, whether it involves projects with industry, problem-based learning, case studies or client-generated projects. Students respond to this integration of professional perspectives and classroom/studio work with enthusiasm. "The real-world sponsored projects are awesome, " said one student succinctly. Another said,

"The real-world simulation gives meaning to work and development of skills. It gives me the opportunity to build communication and interpersonal skills during collaboration with other schools in the University, to get experience in working in firms with real-world clients. Having knowledge and foundations in the liberal arts and sciences allows designs and ideas to be grounded in theory, different perspectives and also gives us an edge over others. I can write well. I understand how physics, ethics and politics really impact my work as a designer. I learned so much in these three years that it blows my mind. Being able to work with the business school really has helped with marketing ideas."

These students have embraced our mission to educate professionals who have a broad understanding of the economy, politics and cultures of the international community. When learning tasks prepare students for their roles as professionals and citizens, students understand and examine the current 'real world,' and undertake visioning for the 'future real world.'Theory, practice and innovation are essential, and reflect the way learning and teaching practice mirrors the professional workplace. Student learning also mirrors the professional workplace's necessity for collaboration among perspectives born of individual disciplines, as well as a global outlook.

—

Company People in the Classroom: A Broader Perspective
Muthu Govindaraj
Textile Engineering

It helps to bring outsiders into class, such as company representatives who can describe the kind of conversations that regularly happen on a project from start to finish, how they keep the thinking open and change their ideas through conversations as so many things come into play. Students can see that it is an open process. When we have alumni come to campus, the presentation is more complete, including all the things that should be thought of, so modeling the broader perspective. The students find this interesting.

Case Histories and Group Analysis
Diana Cundell
Biochemistry

We have case history days, where we have a series of patients with diagnoses. I throw in red herrings or withhold specific information. I then move students around in different groups so they are not always in the same group of friends.
I also use group debates: One part of the immune system is going to be allowed to stay, which one should we keep? Or, we're going to leave one kingdom off the Ark. Which should it be? They research and build a case. It can get dynamic. It is useful as the wrap-up of the semester.

The Client and the Audience: A Dialogue with the Creator
Hy Zelkowitz
Industrial Design

In their presentations for Senior Studio, I let my students know that design is not a conversation they are holding with themselves, but rather a form of communication. Everything we do — sketches on

THE STAFF AND ACTORS IN THE ROOM GIVE POSITIVE AND CONSTRUCTIVE FEEDBACK TO THE TRAINEE. WE PROCESS HOW THE TRAINEE AND ACTORS FELT THE SITUATION WAS MANAGED AND REVIEW NECESSARY POLICY AND PROTOCOL.

napkins, marker sketches, renderings, white models, prototypes, CAD drawings and so on — are all props that help us communicate an idea and open a dialogue with our clients and audience about those ideas. This is how we find out what valuable things our audience knows about their own lives and what our clients' insights are into their own field. Without this conversation, we are just guessing.

I had a professor who once told me not to be fooled by the designer sketch that showed lines that seemed to cross each other with uncertainty. That imagery is to make it acceptable for the audience to question the size, shape and form of the object with their experience and opinions. If the edges seemed too precise, it would mute all discussion.

Yet, at the same time, there is a kind of perfect illusionary magic that is also necessary to allow the audience to suspend disbelief and imagine they are using the future reality you have designed. The analogy I have used to describe this aspect of presentation is the transporter room in the Starship Enterprise. We watch as a character stands on a circle and vanishes in a flurry of sparkling confetti. With luck, the sparkling confetti ends up in some other place and resolves itself into the very same character. That is what we do with our ideas and visions. They need to go from the perfection of our imaginations and reassemble with mirrored clarity in the minds of our audience.

Real-World Learning: Role Playing
Shana Alston
Student Life Education

During Resident Assistant training, we conduct a role-playing activity we call "Behind Closed Doors." We use real-life situations similar to what RA's will encounter, such as confrontation, alcohol abuse, conflict, accidents or facilities issues. New staff members are put in teams of four or five. Situations are staged in different residence hall rooms or hallways with returning student staff playing the parts in the scenarios. The returning staff members are briefed

ahead of time with scripts and reminders on the constructive intention of the experience.

As they move from room to room, new RA's are read a brief description to frame the context (Wednesday night at 8:30 p.m. and you're on-duty rounds). They will encounter when they knock on the door. The scenarios last about eight minutes and are made as realistic as possible. New RA's are then debriefed by professional staff, the older RA's and the other members of the new RA team. The staff and actors in the room give positive and constructive feedback to the trainee, we process how the trainee and actors felt the situation was managed and review necessary policy and protocol. How did it feel, what went well from your perspective, how could it be handled differently? Using returning RA's as actors and evaluators refreshes their own training, provides more practice giving constructive feedback and helps build RA teams.

At the end of the two-day exercise, new RA's respond to guided questions in an open discussion on Blackboard where they reflect on their experiences. These reflections may be quite powerful, even emotional, so that sharing the experience and processing it is very helpful. The students have expressed that "Behind Closed Doors" is the most powerful learning experience in RA training.

A MAJOR ASPECT OF THE COURSE IS MEETING AND WORKING WITH CLIENTS AND PRESENTING FINISHED PROJECTS. "

Working for Clients and Considering the End-User

Frank Baseman
Graphic Design Communication

In the Philadelphia University Design Workshop course, students have an opportunity to work on real-life projects for real clients in the Philadelphia University community and/or nonprofit institutions or organizations. Projects have ranged from the design of exhibitions to branding/identity, from posters to marketing and promotional campaigns to websites. A major aspect of the course is meeting and working with clients and presenting finished projects. Intended to function as a "working design studio" (within the admittedly unrealistic timeframe of six class hours a week) students not only get an opportunity, but are actually required, to present their work to clients. It train them to be articulate about not just their finished work, but the process of design (and how they got from point A to point B). Once a project has been approved by the client, students then learn how to prepare files for print production, digital production or manufacturing. Included in this are things like writing print specifications, interfacing with vendors, going on press to supervise printing or manufacturing, etc.

We have eight projects in the studio right now: working with the New Jersey State Police on a *Survey of Gang Activity* in the state to find a way to make this information more accessible to the public through a website that graphically represents gang activity with searchable functionality, creating an interactive exhibit at the National Constitution Center, developing branding and exhibition design for the mbrella Consortium — a collaborative industrial design project involving students from PhilaU, San Jose State and Lincoln University in England.

Preparing the Professional: Interactions with Employers

Trish Shafer
Career Services

For several years, we have partnered with faculty in the Fashion Merchandising major to bring employer interaction into a classroom assignment. Students in five sections of the Retail Strategies and Structures course taught by three faculty, participated in an end-of-semester mock networking reception with actual employers who typically recruit students from their major into internships and full-time positions.

Students were assigned two employers to approach as though they were at a networking reception or career fair. They introduced themselves to the employers who evaluated them on the following criteria: 30-second "spot," handshake, knowledge of career path as it relates to skills, knowledge of company, student's ability to ask questions, closing, resume and overall professionalism. The evaluations were submitted to the faculty members who discussed the feedback (some individually, some collectively). The evaluations were factored into the student's grade for the assignment. Prior to the networking reception, Career Services presented demonstrations, role-plays and critiques to prepare them for the areas included in the evaluation. We also ask the students to wear professional attire to class so we can (respectfully) critique and make suggestions for improvement.

The event benefits students in multiple ways. Students learn how to research and prepare for effective interaction with each employer (sometimes finding career options or paths they did not know were open to them), they lose some of their anxiety over approaching employers, practice networking and are able to evaluate how well-developed and articulated their goals are. Some students are offered part-time jobs or internship interviews as a result of the event. Finally, students are introduced to the Career Center staff and the resources available to them through the Center, and faculty have the opportunity to renew contact with employers of our graduates.

Engaged Learning Environments: Presenting Student Research

Jeff Ashley
Chemistry

I incorporate research (from inception of an idea and experimental design through data collection, analyses and interpretation) into my upper-level chemistry course entitled "Instrumental Methods of Analysis." These lecture/lab courses rely less on the conventional "cookbook" laboratory experiments students are used to in freshman chemistry courses and more on collaborative research projects where skills are building and honing.

The culminating experience within this course is a poster(s) and subsequent presentation of it at a regional scientific conference. The real-life nature of it really "ups the ante" in students' minds. My approach in this course is to release my impulse to "profess" and adopt a more advisory/"intelligent sounding

...EMPLOYERS WHO EVALUATED THEM ON THE FOLLOWING CRITERIA: 30-SECOND "SPOT," HANDSHAKE, KNOWLEDGE OF CAREER PATH AS IT RELATES TO SKILLS, KNOWLEDGE OF COMPANY, STUDENT'S ABILITY TO ASK QUESTIONS, CLOSING, RESUME AND OVERALL PROFESSIONALISM.

> STUDENTS IN AN INDUSTRY COLLABORATION PROJECT ENGAGED ONE ANOTHER THROUGH INTENSE DISCUSSIONS OF THEIR OWN DISCIPLINES WHILE GAINING AN UNDERSTANDING OF HOW DIFFERENT MIND-SETS WORK. THEY SHARED IMPORTANT CROSS CONCEPTS OF THE DISCIPLINES.

board" role in my attempt to encourage students to think creatively and critically on their own or within peer groups with respect to their scientific research projects.

The suite of skills students garner by active, collaborative research is critical for allowing them to be successful in their science-based careers or post-graduate studies. Upon completion of the research projects and after their conference presentations, I see how much of a positive change that engaging in research can make on a multitude of levels (from confidence to enhanced laboratory skills). Employers and graduate school advisors will often comment how 'prepared' our students are for the research realm.

Simulations and Learning How to Be a Patient
Jesse Coale
Physician Assistant Studies

Physician Assistant education is a dynamic process with many opportunities to evaluate skill and knowledge development. Since students are required to apply new skills in an incremental fashion, we created additional times for students to interact with patients, families and physicians. For example, in the first year students are assigned a hospital experience to interact with patients by completing history and physical exams. Even in this early phase, students begin to develop an appreciation for communication skills and needs. In the second term, after learning about diabetes, students are suddenly "diabetic" and must spend four days going through all of the steps a true diabetic needs to do such as insulin management, glucose checks and food/diet management.

The Studio as a Model Office
Hy Zelkowitz
Industrial Design

I set up the studio as a firm. On a regular basis, each student presents his/her thesis in process to the group. There is time for all voices to be heard.

I inform my students that in most group work situations, you are not just expected to handle your task, but rather you are expected to be a resource, a productive critic and an observer who shares insights on all of the work that is going on.

Work is social. We have our own computers, printers and phones at home. We come to the office to share ideas... to collaborate. Collaboration is as old as the office, though its benefits are rediscovered and promoted anew every few years. In addition to sharing comments in "the firm," each student makes his or her own commitment on pending progress to the group and the group remembers. The incentive on promised progress keeps projects focused and moving.

Real-World Projects: Business and Design Collaborate
Steven Frumkin
Management and Marketing

In the junior year, I have been successful in integrating and co-teaching Industrial Design and Product Development and Innovation. This class developed communications between designers and business students with some limited engineering collaboration. The success to date in bringing a wide variety of business challenges to the students is industry cooperation. Students engaged one another through intense discussions of their own disciplines while gaining an understanding of how different mind-sets work and they shared important cross concepts of the disciplines. Students taught one another about themselves and their skill sets and used this knowledge in collaborative product development addressing the challenges put forth by active businesses.

Part Four
Only Connect:
Integrative Learning Practices

I TRY TO MIX LEARNING METHODS — READINGS, NUMEROUS SITE VISITS, GUEST LECTURES, SKETCHING, DISCUSSIONS, DOING MODELING, ETC. SOMETIMES IT IS THE THIRD OR FIFTH TIME STUDENTS HAVE "HEARD" A CONCEPT THAT THE LIGHT BULB GOES OFF OR THEY REMEMBER WHAT THEY LEARNED EARLIER.

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Think of the daily life of a student — graduate or under-graduate — moving from classroom to studio or laboratory. The subject matter changes with each class, the faculty's demands and teaching approaches differ; evaluation methods may or may not be the same. Faculty members are trained and successful experts in their field and their exper-tise are conveyed in their particular classes. But a student is expected to make connections, to understand methods and material from different disciplines and bring ideas together from inside and outside the classroom. The reasonable and natural tendency is to see each course as a separate entity, with skills and content to be learned and carefully mastered, then put away or aside when the semester is over. Faculty have noted, while doing assessment of student work, that students find the required research, writing and integra-tion of perspectives between professional studies and international issues extremely challenging when doing the capstone College Studies course. Student awareness of the need to consciously make connections is still rudimentary. As the American Association of Colleges and Universities statement on Integrative Learning (March 2004) pointed out,

"Fostering students' abilities to integrate learning — across courses, over time, and between campus and community life — is one of the most important goals and challenges of higher education. The undergraduate experience can be a fragmented landscape of general education courses, prepa-ration for the major, co-curricular activities and "the real world" beyond the campus. But an emphasis on integrative learning can help undergraduates put the pieces together and develop habits of mind that prepare them to make informed judgments in the conduct of personal, professional and civic life."

As teachers, we need to remember that the college students learn as a whole people, consciously sometimes, and less reflective in other times. Their learning need not be compartmentalized into class experience and out-of-class experience. Grappling with an ethical issue in world literature class may suddenly make sense following a heated discussion about reparation for damage on a floor of the residence hall. Philadelphia University learning can

flow over boundaries between the curricular and the co-curricular; learning in any environment reinforces learning in all environments. Our Nexus Learning framework challenges faculty and student life professionals to optimize learning by cultivating thoughtful overlaps, linkage and reinforcement across intellectual disciplines and domains, physical spaces and administrative structures — no small task! Integrated and involved learning can take many forms, but it emerges from the qualities of the learning tasks set before students, the richness of the learning environment and the role of faculty. "Faculty" here includes all staff on campus who "teach" students — whether professors or other university professionals. The following pieces focus on this integra-tive process. We interpret integration broadly to mean both integration of disciplinary perspectives, integration of a wide range of research methods, integration between one class/experience and another, and integration inside and outside the classroom.

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Integrative Learning: The New York Times and Your Design Clients
Hy Zelkowitz
Industrial Design

I encourage my students to read broadly and, ad-ditionally, to make a habit of reading the *New York Times*. I occasionally dissect a copy for them and show them how much of what is written affects us directly. In addition to our own attempts at ethno-graphic research, reporters are being trained and paid to research all sorts of topics that are of value to us. To be unaware of information that is available on a daily basis to your clients is foolish, to say the least.

During the course of a semester, there is rarely even a single thesis project where we have not found numerous related references in NYT articles and which often add depth to the subject. I encourage students to catch these articles for themselves and for each other. Finding references to your area of the-sis interest is a sign that you may indeed have picked up on a "big idea."

THEY NEED TO MAKE THE LESSON THEIR OWN BY GOOD RESEARCH AND A WRITTEN ASPECT THAT HIGHLIGHTS WHAT WAS LEARNED AND THE PROCESS THAT WAS NECESSARY FOR COMPLETION.

> I BRING LOTS OF RESOURCE MATERIAL TO CLASS: BOOKS, MAGAZINES, OBJECTS, VIDEOS, IDEAS... ALL TO ENCOURAGE STUDENTS TO EXPLORE. "

Connecting Science Learning with the World Outside the Classroom
Anne Bower
Biology

Students in my environmental issues class use participatory hands-on, discovery-based methods for learning, both with each other and with a client agency. For the peer-mentored activity, students work in pairs to research the pros and cons and environmental costs/benefits of an everyday practice (eating a vegetarian diet one meal per day, CFL light bulbs, vampire energy, navy showers, canvas bags, metal water bottles) and present their findings to the class as a whole with calculations of what the impact would be if every American tried this "green practice." All individuals try the alternative practice for a week and reflect on their experiences using the online blackboard system discussion board, as well as oral discussions in class. The peer mentors answer questions, identify additional resources, problem solve, encourage and redirect their fellow students during the hands-on experimentation week.

Outcomes include students actively engaging with peers on science driven content and discussions, students actively discussing the pros and cons of new, innovative alternatives with family and friends, and adoption of and behavior change by both students and their friends and family. Students often reflect that they have adopted new habits as a result and save time, money or environmental resources. Students also reflect that they are active learners, more engaged in the material and have a "real-life" example of the process of change to build upon as they continue their environmental career.

Reading, Writing and Design:
Deep Engagement and the Role of Research
Kimberlee Douglas
Landscape Architecture

I tried something new this year in regard to reading assignments. In the past, students have not read assignments thoroughly enough to discuss them in

class. This semester with fourth-year design students, I assigned weekly readings; usually chapters from a book, and required a synopsis and specific response to the reading. The response is then graded, which got them to do the readings. I was quite pleased that the students did the reading and writing assignment AND they were excited by the reading. We then were able to discuss topics in class because they had read the assignment. The feedback on this was positive as the students said they learned something from the reading. If they were critical of some of the reading assignments, students could express their criticism and have a dialog about their thoughts. Honestly, my students don't always see the value of readings and often do not do them. I wish it were different and that they read more, but this might be a way to get them to see reading another way.

Broad Research is Key to the Design Process
Stuart Fineman
Design Foundations

To increase sense of ownership, each studio project in the Foundations Design III course has a research, photo documentation, and oral and written component. This professor finds that if each student (at this level) takes a greater responsibility in project ownership, more aspects of the design components and concepts are retained and understood.

It is vitally important that the student knows why and for what purpose a project given. They need to make the lesson their own by good research and a written aspect that highlights what was learned and the process that was necessary for completion. They reference those designers, architects and artists that influenced their decisions. In this context, an analysis of works that informed their decisions is made part of their written statement.

Photo documentation is mandated for those works that influenced or inspired them and the studies and models throughout the process. High quality images of their final presentation from multiple perspectives is the final aspect of the documentation.

Self-Reflective Learning: The Evaluation Process
Tod Corlett
Industrial Design

I treat students as responsible peers by requiring them to generate the criteria for evaluating their work, as well as generating the work. I know something is working when I see evidence of propositional thinking — students come to me with a proposal or prototype for evaluation, and we have a common understanding of the criteria.

Connecting Concepts in Marketing
Steven Frumkin
Management and Marketing

In the first two weeks of my class, students are asked to conduct research to identify an innovative product or service for either the whole campus population or sub-population of campus. After I receive information about the students' projects, I list this along with their names on 3x5 cards. Throughout the rest of the course, in presenting marketing topics, I use these cards to call on students to relate their concept, population or service to the particular topic under discussion. "Your idea is to create a farmer's market on campus, how does that connect with X?" Because oral communication is particularly important for these students, they must respond with at least 30 words. I then call on other students to expand the thought from the perspective of their project idea. The format is conversational where other students are asked to connect their ideas to the statements of previous students. This format provides relevance to the business world as well as relevance to the students' individual research and innovation ideas.

Also, because so many students are currently employed, I use their place of employment as another starting point for exploring topics. "You work at Wawa, what is the organizational structure of that business and why is it structured that way?" The student may think he or she knows little about the organizational structure, but once having posed the question, they become alert to cues about the organizational structure as the course progresses and bring that information back to the class.

Taking Research Beyond the Classroom and the Studio
Claudia Goetz Phillips
Landscape Architecture

I try to mix learning methods — readings, numerous site visits, guest lectures, sketching, discussions, doing, modeling, etc. Sometimes it is the third or fifth time a student has "heard" a concept that the light bulb goes off or they remember what they heard earlier. I, therefore, vary the ways a concept is disseminated or apply the concept directly to a project. This is the rationale for linking so many of the LA courses. For example, students take hydrology the same semester they are doing their restoration management design studio. For the landscape architecture program, service learning is key to our success academically and our value to the University and larger community. From the beginning, the LA program has been committed to providing leadership in confronting issues that affect urban neighborhoods and ecological systems. How better to accomplish this mission than through a service learning-based education. I have found that most students' interest is peaked by the idea of working on a "real" project- they will put more effort into the design process (even students in our other design programs have expressed to me that they wish their programs did more service learning projects. I also emphasize that no matter what the client/partner's budget is, we must do the best and most creative designs possible, and that there are always ways to bring down installation costs through using donated or recycled materials and/or free labor.

Connecting What Students' Know: Relating One Class to Another
Anne Hand
Fashion Design

Based on conversations with Celia Frank, I closely mirror the research methods, feedback and language that she uses in her Fashion Design class. Students take this class alongside draping, so consistency of message and how one class relates to another is key. When I review research and sketches for final designs, I use tissue overlays to sketch along with the student and push them further. Our students are very visual so if I can show them what I am talking about, they seem to have a better grasp of the concept. I bring lots of resource material to class: books, magazines, objects, videos, ideas.... all to encourage students to explore.

> **STUDENTS WHO APPLY SKILLS THEY LEARNED IN ONE SUBJECT TO ANOTHER ARE HIGHLY DESIRABLE. STUDENTS NEED TO BE TAUGHT THAT NO MATTER WHO, WHERE AND WHEN, PEOPLE ARE VALUABLE TO THEIR OWN WORK.**

I AM NOT ONLY AIDING IN THE CREATION OF ARCHITECTS, BUT MORE IMPORTANTLY, CRITICAL THINKERS.

Gathering and Integrating Information: Teaching Critical Analysis
Frank Wilkinson
Chemistry

In biology, students do a "meta-analysis" of the arguments surrounding some controversial issue while refraining from evaluation with their own opinions. The arguments provide a framework to review (but not lecture on) the scientific aspects of the controversy. The intended outcome is for students to develop critical thinking and communication in debate and, ultimately to recognize the various influences that contribute to the formation of their opinions. Students submit two items (articles/opinion pieces/websites/blog entries) supporting conflicting opinions and a summary of the arguments made therein. Recent examples included genetically-modified organisms in the diet and the use of embryonic stem cells as research and therapeutic tools. The class is polled and brief discussions help to categorize their findings (scientific, moral, ethical, practical). Compiled arguments are then used in a debate between super groups (pro and con) made by dividing the class. One group begins the debate by offering an argument from the collection. Rebuttals frequently use posted arguments but have often bought new issues to light. Since the class has rarely been split 50/50 on an issue, students may find themselves arguing for a position that they may personally oppose.

I developed this exercise so that students can learn to evaluate opinions and to develop an understanding of the origins of their own opinions. Further, it demonstrates that there are times when science can clarify an issue (such as the difference between adult stem cells and embryonic stem cells), but also times when scientific knowledge itself is insufficient to formulate opinions because good science simultaneously supports conflicting opinions (ethics of genetic modifications).

Thus students develop a distinction between knowledge and values and come to the realization that both of these thought processes are important when formulating opinions. It is important that our students have the intellectual tools to make these distinctions. Our graduates will then have the tools to make meaningful contributions to the public debate.

Learning the Context for Integrative Assignments
Alex Messenger
Architecture/Interior Design

We have four hours a shot for a studio, so an integrative project combines a lot of issues — social, economic, structural — the students talk to each other and I walk around focusing them. The essence of design is that the discipline requires thinking about different areas of expertise and how to bring them all together. You prepare them by asking them to do some readings, look at certain references. We're working now on designing a theatre by looking at it from different perspectives — the actor or an audience participant — so we talk about that. There are a lot of issues, so you set the context in which they may come together.

Part Five
Collaborative Work

THEY TEND TO BECOME INVESTED IN THE PROJECTS OF STUDENTS THEY PROVIDE SUGGESTIONS TO — OFTEN BRINGING IN CLIPPINGS OR MENTIONING WEBSITES TO EACH OTHER TO BENEFIT THEIR PEERS' PROJECTS. MOST IMPORTANTLY, STUDENTS ARE INSTANTLY RECONNECTED WITH THEIR CLASSMATES IN A MANAGEABLE MANNER.

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Teachers are deeply aware that our graduates need to be skillful in working with others. Sometimes described as collaborative work, sometimes team work, sometimes as group work, we are aware that we must teach how to work together and how to learn in a group. We are also aware that this expertise does not come easily. While some students in focus groups acknowledged that collaborative work "is beneficial, by working with others, ideas are formed easier." Others complained of the difficulty of getting team members to pull their weight or the time constraints to arranging meetings outside of class. We learn from and with others, yet collaborating is hard — whether it is getting along with your peers in the residence halls, classroom or off campus. In this section, teachers from many different units on the campus tell of ways they approach this problem.

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Effective Teamwork Takes Training
Valerie Hanson
Writing and Rhetoric

In my class, I teach the process of collaboration through class work. Groups plan their work process and then turn in a plan of who is going to do what and by when to create a shared vision of how they will complete their project. Additionally, after presentations, students then answer questions about how their presentation and their process went, to develop reflective practices about this process as well as to emphasize that they are learning about collaboration and about the material they presented. Students also answer questions about others' presentations to provide feedback on how audiences viewed the project. This feedback gives details about how the audience responded to and assessed their presentation, which can further inform their sense of what worked in their collaborative process and what did not in relation to what the groups produced. In this way, students learn to collaborate, develop their reflection about collaborative work, and engage in collaborative learning about the topic of the presentation.

Building Teams Inside and Outside the Classroom
Tim Butler
Student Life

With many of our student leader (Student Government Association, Kanbar student staff, Greek organizations, etc.) training programs, we use low ropes exercises for teambuilding and group dynamics. We facilitate and/or have outside facilitators for low ropes exercises either on campus or at another location. Groups are presented with specific tasks along with guidelines and rules. They run from there. For example, in the Spider Web exercise, groups are presented with web of rope five feet off the ground. The web has holes of varying sizes. Students must get all members of their team across the web. Once a hole in the web has been used two times, it is "sealed," and they must negotiate another way across.

All of the activities put our students in a position where they might be challenged as teams, partnerships or individuals to accomplish the tasks at hand. The work is all hands-on and requires active participation. The beauty of this method is that it is very organic and can play out in so many different ways. There are many topics that can be covered including:

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THE STRUCTURES CREATED AS THE RESULT OF GROUP WORK ARE GENERALLY RISKIER/BOLDER AND MORE FUNCTIONALLY SUCCESSFUL.

WHEN I FIRST STARTED TEACHING, I DID WHAT WAS DONE TO ME— LECTURE. THEN I DEVELOPED A SERIES OF TOPICS AND HAD THE STUDENTS INTRODUCE THE TOPICS. THEY PRESENT INDIVIDUALLY; THEY PRESENT IN A GROUP.

team building, group dynamics, trust, communication, diversity, leadership, etc.

The key piece to all of these activities is processing and reflection — pointing out "learning moments" to students as they are happening and fully process the experience following each activity. This is often accomplished through group or one-on-one discussions. We also use journaling to go beyond just a "feel good" experience (and yes; for most it is a feel good experience as well). There must be a time in which they reflect on their experience in order to fully understand the impact to be able to transfer what they have learned back to their roles on campus. Without that piece, learning is left on the course.

Talking to Each Other
Carol Hermann
Architecture

On the nature of group work and how it progresses from year to year: On day one, we put freshmen in teams, with very little instruction, just to see how they do. We start with a short-term, five to seven day project, so they have already developed immediate relationships. It's not really about how the product turns out; it's about making them talk to each other. Second semester, they do a half-semester project with one teammate. We talk about how you share money, how you share time. We talk about how you set up time to do group work. If it's not working well, we make a contract for an equal division of the work and advise how you don't throw your partner under the bus, even if they are a "free rider." We have series of conversations about it all through the semester.

The third year, we do a two-week group event and again we talk with them about who is doing what. By the fourth year we just say go do — figure it out. In the fifth year they do a semester-long project chained at the hip with two other people. Hopefully, they have learned how to do it. Last week, we acted like lawyers with a team and did dissolution of partnership because it just wasn't working out. That's learning too. How does the teacher see there is no way a partnership is going to work — absolutely no way — and how

do you figure a way for the students to get something out of that situation, as well?

How to Do Teamwork: Evaluating Your Peers
Barbara Kimmelman
History

When I assign group work, groups must meet at least six times. Each one must submit a log describing their group work. They reflect on how the group is working and I can compare what they say. This is a way of directing what they are doing in their meetings away from me.

Being Equipped to Work Together
Harvey Lermack
Management

I have found that many students like team projects themselves but don't enjoy working with their teams because they are not equipped to plan and execute the work, and especially because they are not equipped to handle controversies that may arise with other team members. I often find they have never received training in how to lead teams and projects.

At the outset of a new project, I ask each team to develop and have each member sign a contract that determines their objectives, expectations of each other and methods of handling conflicts that may arise. When issues arise during the semester, I require that they handle them according to the contract.

Early in the project, I provide guidance regarding what makes teams successful, and resources to which they can refer as they proceed. Students hand in assignments periodically during the period of the project, so that they do not leave all of the work to the end. With each submission, every team member completes and turns in a peer evaluation for their team members (including themselves) where they can identify and discuss how they have addressed any issues or problems. Finally, I ask that they debrief at the conclusion of the project, to identify what worked well and what they will do differently the next time.

No Lectures and the Success of Group Work
Anne Bower
Biology

Here is an example from chemistry, from the National Science Foundation. A lot of time and money has been spent on this. It's called POGIL. The gist of it is, there is no lecture at all. The students work the entire semester in groups and the groups are assigned roles; groups don't stay the same the whole semester. And the roles are very clear. In terms of what the leader is to do. There is no way to have a "free-rider" the way this is set up. We need to see outcomes. We want to see analytical thinking. This is written up to the level of organic chemistry. The thing is, the A student is going to be an A student, but what this does is save the D student. Because chemistry is one of these subjects where people who get a C, D or F get turned off and they never catch up. But this method saves the C and D student in terms of knowing the material. This reminds me of individualized reading packets for elementary kids. They spent scads of time on the curriculum. They ask each other, did you get this? Why did you do that? There is a lot of give and take.

A Project Manager: Students as Leaders
Frank Baseman
Graphic Design Communication

My students routinely work in interdisciplinary teams. This semester, given so many projects and the complexity of them, I started to assign project managers to the projects in an effort to: keep organized, and to foster collaboration, to have students have even more ownership not only to their own work, but also the work of the overall team. So far, I think the students have worked so wonderfully together and there has been a very productive, lively dynamic in the studio. It's been invigorating and really great!

Working Together, Working Alone: A Delicate Balance
Nancy Sorkin
Literature/Writing

A teaching practice that I have found effective involves a combination of group work (brainstorming, mining a text for evidence or collaborating on interpretation) with individual free-writing. Here is one example, used in a junior seminar class the first day of discussing a novel. First, small groups were asked to examine one chapter of the text for evidence (overt or implied) that tells us about the kind of world in which the characters live, its practices, values, beliefs and list as many "facts" from the text, with accompanying page numbers, as they could find in 10 to 15 minutes. Then, each individual was asked to circle one item on the list and spend several minutes free writing about how or why this element of the fictional world seemed to be significant. When the class came together to share information, everyone felt as if they already knew something about the text. It was relatively easy at that point to facilitate discussion that allowed the class to dig into the text, broadening and deepening the understanding they had already started to arrive at by themselves. Some days I start with a group activity leading into the individual effort, and sometimes the other way around. This loose template is infinitely variable. Whichever way I work it, connecting collaborative and individual work seems to give students the maximum advantage of both. Even when this kind of exercise doesn't seem to work so well, it reduces the drag engendered by the underprepared while allowing all students a chance to show what they are capable of and advancing discussion.

Collaboration, Feedback, Brainstorming and the Successful Studio
Susan Seip
Interior Design

One teaching method I have integrated into my design studios is a short, collaborative brainstorming session during concept development. I have found that collaboration is such an integral part of a successful design studio. However, students tend to lack the confidence to give thoughtful feedback to each other, especially in the beginning of a new semester when feedback is vital. To make the process less intimidating and more fun and interactive, I have created a short brainstorming session. I lead, but all students are required to participate. Utilizing the white board, I focus on one project at a time; however, I set a time limit of three to five minutes for that project discussion. The student tells us very briefly what their initial concept is and then we have three minutes to throw out descriptive words that come to mind when hearing the concept. I quickly write down the words the students yell out and compile them into one list. We then start a new list where we translate the descriptive words into architectural and design terms (i.e. descriptive word: organic Architectural; word: curved surfaces). Making this process short and informal, I find the students are more willing to

participate. Using this method in the beginning of the semester breaks the ice and sets the tone for the rest of the semester. The students realize that their feedback is important and it can be delivered in a way that they feel comfortable.

The Studio: Using Collaboration to Promote Engagement
David Breiner
Architecture

I use a variety of formats. If you do desk crits every week, you'd lose out on the collaborative, whereas if you do only collaborative, then the students aren't honing their own skills, especially the ones they might be weak on. So I think what also matters is to have a plan to do small groups, desk crits, large groups, lectures, trips; you have to rotate through all of those. Vary the type of activity and type of experience to stay engaged.

" I HAVE FOUND THAT COLLABORATION IS SUCH AN INTEGRAL PART OF A SUCCESSFUL DESIGN STUDIO.

IT CAN BE DIFFICULT FOR
INSTRUCTORS TO ADMIT
THAT THEY DON'T KNOW
EVERYTHING ABOUT A SUBJECT.
IN FACT, OUR PRIDE CAN OFTEN
BE AN OBSTACLE TO OUR
TEACHING METHODS.

"

What does all this look like in action? Master teachers are analytical about their behavior and their classroom persona. They reflect upon what they do and how students react to what they do. The role of the faculty becomes that of learning architect, weaving theory, fact and foundation with interactive experiences chosen to move students to the next level of understanding and skill. Philadelphia University's Nexus Learning is not autodidactic, it is guided learning. This kind of learning takes a great deal of preparation. Below are examples of that conscious dissection of the learning space and the learning process. Included also is a narrative on one day in a studio. This piece is a fascinating ethnography/observation of the mood of the room, as well as the learning process. Every teacher has to develop teaching styles that fit them, be they quiet or effusive, ebullient or calm. It is evident in these examples that these teachers have realized their own strengths and can use them extremely effectively.

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"How Do I Put Together a Semester?" A Tale of Course Construction

Tom Schrand
Sustainability/History

I try to think of my job as instructor in terms of designing educational experiences, which, for me, means paying careful attention to all of the components of the experience and making sure that students (and I!) are aware of the goals that we are trying to achieve. What I'm going to describe is a best-case scenario to illustrate this idea; what actually happens in real life on a day-to-day basis isn't always this polished or intentional.

So, ideally, the design process begins with learning objectives for the course and for individual segments of the course. Once those are defined, I can begin identifying appropriate course materials: usually books or articles, and sometimes videos. For reading materials, I spend a lot of time finding texts that are appropriate to the knowledge and reading levels of the students (I think the theory here is called "zone

of proximal development" — I want to acknowledge where students are starting from and then set realistic goals of progress from there). My goal is to find readings that are immediately accessible to the students so that effective learning can begin as soon as they start reading. If the reading is too difficult, then I feel like that opportunity for individual learning outside of class is lost. For most reading assignments, I usually assign some kind of study exercise, either reading questions or a discussion board assignment on Blackboard. These serve two purposes: it makes students more accountable for doing the reading and integrating into their own knowledge base, and it gives me some feedback on their mastery of the material in the text.

Classroom time is usually devoted to group discussion of the readings, with supplemental information provided by me as needed. This is an opportunity to elaborate on key themes or concepts and to address any questions or misunderstandings about the readings. It also allows our class to practice critical thinking together, as we work through the topics. Sometimes, I divide the class into small groups to work on discussion questions and then report out to the class, and sometimes the discussion is held with the class as a whole.

The final piece in this instructional design is a summative assignment, usually a writing assignment that requires students to synthesize the material that we have covered in that segment of the course. This assignment typically poses a broad question and requires students to cite a certain number of our course texts as part of their analysis. I give students an assignment sheet with a rubric that explains the key points of the assignment and what I expect to find in a high-scoring paper. I use writing assignments because they require students to articulate their learning in an organized format and it gives them an opportunity to apply and develop their critical thinking skills by presenting evidence-based arguments.

In this idealized version of my teaching method, I know that my method is succeeding (that students

HOW DID I GET TO BE A GOOD TEACHER? TAKE THE PULSE OF YOUR STUDENT. REALLY KNOW YOUR STUDENT. TRIAL AND ERROR.

I STOP AND HELP ANY STUDENT THAT IS GETTING FRUSTRATED, ALTHOUGH I'M ALSO ENCOURAGED BY THE INCREASING AMOUNT OF HELP THEIR PEERS ARE PROVIDING.

are learning) when they have successfully completed the steps described above, which culminate in a written exercise that demonstrates their fulfillment of one or more of the course's learning objectives. Students have shown that they now know or can do things that they didn't know or couldn't do prior to participating in the course.

Designing the Semester: Student-Driven Pacing
Lisa Phillips
Interior Design

In Interior Design, the senior design studios are the cumulative experience of a student's undergraduate studies. The list of learning objectives is lengthy and the list of drawings and deliverables is even more exhaustive. As a result, I usually set a rather aggressive schedule to pace students throughout the semester. This past fall, I tried quite a different approach. I sat with the students in a group, explained the rigor of the semester and asked for student input. The students were more than happy to oblige me. Together, we formed a game plan and they actually

chose more aggressive deadlines than I would have even dared propose. Since the students helped to establish the deadlines, they suddenly had ownership over them. They met them more often than any other class I had ever taught, across the board. I think partially because they weren't just letting me down if they didn't meet them, but rather they weren't meeting their own expectations.

Teaching Engineering: A Special Challenge of Integration?
Vidya Nandikolla
Engineering

Engineering classes require explanation of core engineering concepts plus engaging hands-on experimentation. The concepts are not always easy to explain by practical application without a strong theoretical reasoning, and teaching only concepts without experimentation is also not enough. It is not magic why it works the way it does, but purely science and applied math to make it functional. I have struggled to balance theory and hands-on practice, which led to the development of different levels of labs with teaching theory depending on the students' learning styles.

Here at PhilaU, our students have foundation gaps, which makes it more challenging to link the fundamentals from previous classes and connect to what I am teaching. I have to be creative developing easy ways to reduce the gaps from class to class. Students, if challenged, learn more rather than just teaching a process. They need to think how to implement. I make group work where they help each other and discuss their ideas, sometimes they get it or they discuss their idea with me.

Instead of just showing them the solution, I explain how their approach will lead to some solution and/or how it can be modified. I believe in encouraging students who can think for themselves. Students initially struggle with this style and complain a lot, but as I don't give up, they slowly buy in and enjoy it.

Some don't understand, but the only way to help them is to push them to help themselves. I am here to teach, not to spoon feed; there is a difference and that's my style.

I work hard along with students; I don't show them book solutions, but work with them in different ways, to answer them in however they approach. I don't do PowerPoint presentations nor do I teach directly from one book; I cover from many books. Some problems I create myself so there is no online solution for them to copy. I believe in solving on the board in front of students. They need to see how it is done; books sometimes skip a few steps and students don't understand how to link the foundation to the problem.

In my undergraduate classes, I show students the bridging once so they understand how the prerequisite courses connect to the rest of their curriculum. I encourage project-based learning (PBL) in lab courses; students have to define the problem, set the criteria and propose a solution. This forces them to apply the theory learned in class for the analysis part. When students complete their tasks with different solutions than other groups, it tells me that they tried to be creative in developing a working prototype design in their style. The best evaluation from one of my classes was "you teach very difficult concepts in a simple manner....I wish other faculties could do the same..." (Electrical and Computer Engineering student from Boise State University, 2009). I believe in breaking down the concepts and connecting them at the end so that students see the relevance. This is hard since I have to work a lot but makes it worth the time to prepare my engineering students.

Making a Class Work: Mindful Teaching
Stephen Spinelli Jr.
Entrepreneurship

I look for the blank responses on students' faces all the time, to check whether they are with me. I want to see the synaptic process at work. I had a good mentor who observed one of my classes early in my teaching career. He sat in my class and shared his observations afterward. He noticed that I was looking to one side of the room more than the other and students on that side where I was facing became more involved in the class than the other side, which was a self-fulfilling prophecy. If I didn't look at them, they were inclined to stop trying to answer questions.

As a consequence, I am very conscious of looking right and left and center. I pay attention to make sure I am looking at all the students to keep them with me. I react to the blank stare and follow up to see how and where a student got lost. Was it a phrase I assumed that everyone knew — cash flow, for example — or even a word that is not in this particular class' vocabulary. I remember using the word "chasm" and getting blank looks, for example. You never know when you might be losing the class just because of a particular word, or whether it is a deeper problem of the concept as a whole that you are trying to get across.

Enveloped in Enthusiasm
Adam Melinn
Philosophy

Exaggerated enthusiasm might be the best description. When I teach a new argument in philosophy or ethics, I actually do little dances, pump my fists in the air and stand up on top of chairs and desks. Then combine these physical signs of excitement with my outbursts of "isn't that amazing!", "how cool is that?", and "this really ought to be blowing our minds!" Yes, perhaps it is over the top, but I try to behave as though I am learning that day's information for the first time, as most of them are. Then I demonstrate the extreme appreciation that one could have for this revelation. The humor helps. However, my antics serve to show that learning the argument is great, but seeing why the argument is important to us is essential.

STUDENTS LOOK TO US AS MODELS, WHETHER WE LIKE IT OR NOT, AND THIS IS AN ENORMOUS AMOUNT OF POWER. WHY NOT USE IT TO THEIR BENEFIT?

HOW DID I GET TO BE A GOOD TEACHER? LISTENING TO OTHER TEACHERS — I LEARN FROM MY COLLEAGUES.

Inspiring Creativity : A Fuzzy Mystery?
Hy Zelkowitz,
Industrial Design

In senior design studio, there is a specific pedagogy I have developed. I would call it modeling creative thinking. Every semester on every project, we ask our students to come up with concepts and ideas. Students are encouraged to be prolific in their concepts by adding numbers to our assignments... ten sketches, two dozen variations, etc. The actual act of creative thinking remains a somewhat fuzzy mystery. I am always amused when students question my "going off on tangents." I explain that we connect ideas, synthesize bigger thoughts sometimes out of seemingly isolated experiences, and that, in fact, what I do best is tangents. I spend increasingly longer periods of time with individual students during the semester getting them comfortable with moving ideas around, finding parallels, connecting our bodies of experience to their project. We enjoy the inherent humor and respect the craziness of some ideas without self-censorship and recognize that our experiences feed us material in different ways and that to be truly creative, you must have access to all of your experience in the present moment. For some of my students, the processes allow them to see the work as a three-dimensional body of evolving ideas rather than as a linear string of tasks leading to a solution.

Course Design/Reflective Teaching
Stephen Spinelli Jr.
Entrepreneurship

I am pretty conscientious about reviewing each semester to see what I can improve. I believe that student evaluations are a strong indicator of what works and what does not. After each semester, I look at the student evaluations and decide that I will change three things to improve the course. I am looking to take the bottom three evaluation categories where students indicate that I am doing less well, and decide what I will do to make those three the top three rankings the next semester. Not always an easy thing to do, but it leads me to focus on specific things.

Moving Out of the Studio: Expanding the Reach of Learning
Craig Griffen
Architecture

One of the more successful teaching tools that I have employed for years is the "Coffee Talk" section of my fourth-year design studio courses. Because I found it frustrating to get some students to participate in group discussions on readings I had assigned, I decided to allow them some autonomy to choose subject matter that would encourage passionate discussion and even debate. I pulled this out of the studio context to make discussion easier. So for one hour per week of our 12 hour meeting time we meet, at first in the Common Thread and then at a local coffeehouse in Manayunk, to discuss an article a student has selected. Each student takes a turn and can choose any subject of interest to them as long as it related to architecture. There are often articles about sustainable construction, suburban sprawl and computer technology but some of the most interesting subjects are questions of ethics. For instance, one student proposed the question "Would you take a commission to design a Hooters restaurant?" It sparked much thoughtful discussion (and ultimately was divided along gender lines). Another asked everyone to bring in a favorite song and a favorite building and discuss any relationships between the two. The students respond well and consistently comment that this is a favorite part of the course.

My Teaching Style: Engaging Discussion
Katharine Jones
Sociology

My teaching style is to encourage the students to talk and participate. I seem to spend my life finding new ways to do this, whether it be asking them to write informal comments on others' discussion questions (so they have something about someone else's ideas to say), or putting them into small groups to work on a task, or having them "pair and share" about a topic very quickly to give them confidence to speak. I also try not to be the one to always respond to students' comments, so I ask them to respond to each other's ideas during discussion. In addition, I sometimes schedule debates or make them move to particular sides of the room to argue a point (whether or not they agree with the point in question). I also explicitly talk about why we are having discussion. We talk about their responsibility in a discussion and why I sometimes take a back seat. I urge them to take notes on what other people say in the class, as well as me. And I also encourage them to do close readings of texts — in other words, I try to force them to stay close to class texts as they speak (so I ask them what page inspired a comment, for instance).

The Importance of Positive Responses
Marcia Weiss
Textile Design

From personal experience, I know that we as designers, artists, creative people derive greater benefit from thoughtful, critical feedback than from positive, cursory responses. We certainly see this in our students as well when their work takes new turns as a result of critical feedback. Often we are too close to our work to see what is evident to others. We see the approach of our students and their resultant work become more fully resolved following critical dialogue.

Reading and Thinking: A Variety of Approaches and Sources in Provoking Critical Analysis
Barbara Kimmelman
History

Developing "signature learning" at Philadelphia University, defined as hands-on, active and collaborative, encourages professors to develop a wide range of pedagogical methods, some traditional and some less so. Some involve encouraging students' classroom participation, as individuals and in groups. Others include distribution of prep questions, which students can answer in class, on Blackboard, or with submission during or after class. Recently developed teaching software can enhance active preparation through student postings prior to class.

I think it is important to acknowledge that not all active learning is produced or expressed through verbal and interactive activity. Assignments that require active and attentive reading promote active learning, and I use such assignments regularly. For example, in HIST-114-American Transitions, I include three to six "history labs" each semester, which demand 20 to 25 dedicated classroom minutes where students are asked to read a brief selection from a primary source (often, but not always, previously read by the students) in which students are asked to interpret aspects of the source in response to a prompt. I always prepare students for these labs with prior "worksheet" assignments that ask both specific and more open questions about the primary source. We discuss their answers in class, either in groups or in full-class discussions, and the fact that the worksheets as well as the "labs" are graded encourages active engagement with the reading.

I highlight these somewhat more "traditional" assignments to express my conviction that teaching students active reading techniques is a crucial part of active learning pedagogy.

A little slice-of-recent-life narrative: A Day in the Animation Studio
Geoff Beatty
Animation

It's early Wednesday morning. The sunlight coming into the room is bright enough for us to leave the fluorescent lights off. The classroom door is open and junior animation students are rolling in to their five-hour Motion Graphics I class, groggy from the previous night's homework. As they take their seats, we start talking about the weather, the latest movie, a memory of our recent trip to a film festival in Canada.

As they become engaged with one another in conversation, I return to the whiteboard where I've written an inspirational or thought-provoking quote along with our agenda for the day. I clear my throat to get their attention and we start class formally by going over the agenda and discussing it. Was there something I had promised to go over in the last class but forgot to include in my lesson plan? Is there something the students would like me to address in addition to what I've listed?

We start by screening the most recent assignment. It was a mini-assignment, a low-threshold project to prepare them for the larger project. In this instance, I had asked them to create a short biographical video in the style of Amelie or The Royal Tennenbaums (the beginnings of which I had screened in the previous class). We screen them on the projector (after first lowering the shades and turning up the speakers). The students howl with laughter at some of the oddball attributes their classmates have chosen to share in the video.

We then move on to the project at hand, something we call "Poetry in Motion." Essentially, students select a poem and create a short piece with video, narration and typography. I explain how some of the aspects of the short biographical video they just completed feeds into this larger assignment. The smaller video gave them a chance to experiment with sound, cinematography and editing, without the anxiety of being graded for it. In addition, they were becoming more comfortable with the equipment and software they are going to be using.

I check on progress, but usually I break students into small groups to workshop their animations. This is a delicate matter, with egos easily bruised. So, in order to get around the natural hesitancy to give feedback, I tell them to simply ask probing questions (what's going on here? why did you choose that typeface?) rather than attempt to make judgmental statements (you should change that font to something else). This also helps the receiving student to think critically about their own work and develop an articulate defense of their own choices.

After the students feel sufficiently work-shopped, they take an extended break, get coffee and reset themselves for the next part of class. When they return, we begin a short tutorial on the software

> " I'M NOT AFRAID TO SAY "I DON'T KNOW THE ANSWER." I THEN FOLLOW UP WITH, "A GOOD QUESTION FOR YOU TO RESEARCH," OR "GO ASK SO-AND-SO," OR "I'LL GET BACK TO YOU FOR THE NEXT CLASS." I THINK THIS SETS A GOOD EXAMPLE FOR MY STUDENTS.

they are using for their project. In this instance, it's different ways to composite video. Instead of simply demonstrating several techniques, I give them a mini-mini-assignment. We pretend that we are emulating an interesting masking effect we saw in the opening to David Lynch's Mulholland Drive (again, screened in a previous class). Everyone takes some footage that they've already shot and digitized, and then proceeds to use that for raw material. I reinforce organizational habits, even if this is a project with no real client or ending. During the demonstration, I also share some experiences I've had in professional projects that are relevant. Equally important is that also I don't sit in my chair for this demonstration, or hardly sit in it. I'm constantly roaming the studio as students are working through this to make sure that no one is lost or falls behind. I stop and help any student that is getting frustrated, although I'm also encouraged by the increasing amount of help their peers are providing. Perhaps next year, they won't even be coming to me to solve their questions.

We finish up the demonstration and then take another very short break. When the students return, I've got a stack of DVD's on the desk, and I'm putting one into the computer. I start by showing them a scene from a recent movie that has an interesting title sequence. Then I pop in an animated short film with beautifully morphing text. Then I change direction and put in a movie with no on-screen text, but with wonderful editorial rhythm and cinematography. We watch that for awhile, and I'm usually annoying them because I pause frequently and point things out or talk over what's going on. Usually they're also frustrated because I've just introduced them to something completely new to them and now I've got to turn it off.

Finally, we spend the last hour of class working on projects. I'm available to answer questions about animation or advising issues or the meaning of life. Sometimes I notice a student making a particular choice and I engage them in conversation about it. With the last few minutes of class, I go over what's

due for next week, when the next guest speaker is coming in (or Skyping in), and other events of note (an animation show downtown, a new movie coming out, etc.). With that, I wish them well and we leave the lab for the next students. I usually forget my water bottle on the desk.

AS A STUDENT IN GRADUATE SCHOOL, I OBSERVED AND WAS A STUDENT FOR FACULTY WHO USED A MYRIAD OF TEACHING STYLES — SOME SUCCESSFUL AND MANY THAT WEREN'T. I CONSIDER MYSELF TO BE A KEEN OBSERVER AND HAVE THE SKILLS TO ANALYZE WHAT SPECIFIC TECHNIQUES WORK UNDER VARYING CIRCUMSTANCES AND WITH DIFFERENT STUDENT GROUPS.

> "
> INSPIRE THE
> STUDENTS
> SO THEY
> WILL BE
> MOTIVATED
> TO LEARN ON
> THEIR OWN.

Teaching gives life to this University: it defines our central purpose and is sustained by those catalytic moments of learning, which are continually generated by the interactions of faculty and students. The purpose of this collection is to foster a teaching environment that builds on our strengths by purposefully sharing our pedagogies and philosophies of teaching. It results from a unique collaboration between faculty, student life professionals and administrative staff.

We publish these insights about teaching at Philadelphia University in conjunction with the official opening of the Center for Teaching Innovation and Nexus Learning (Kanbar 306) and the appointment of Dr. Marion Roydhouse as its inaugural director.

The underlying purpose of the Center is to nurture teaching approaches that actively engage students with the process of learning, integrate real-world problems into the classroom and use learning strategies that incorporate collaboration and teamwork. Our teaching also nurtures integrative abilities by making explicit the ways in which the liberal arts are part of the toolbox for an effective professional. The Center's broader mission is simply to help teachers across the University maximize their talents. I encourage each of you to take advantage of this valuable resource and contribute to the Center's growth.

Randy Swearer, Ph.D.
Provost and Dean of the Faculty

APPENDIX ONE

The Strategic Plan called for us to develop Philadelphia University's teaching and learning identity that would be our signature in higher education. As the various campus teams developed an in-depth analysis of our existing practices and our goals, it became clear that we needed a better description than simply our "signature" way of teaching and learning. Nexus Learning was the phrase that emerged from focus groups, and the description was adopted by the campus community in the spring of 2011. In the next year, faculty, student life professionals and administrative professionals will continue to define what we prize in our approaches to learning that shape our distinctive identity. Active, collaborative, engaged-learning spaces, real-world connections, learning that is infused with knowledge and insights gained from the liberal arts and sciences, are all key parts of the equation. The description below is our working definition.

What Is Nexus Learning? Philadelphia University's Teaching and Learning Identity

Nexus Learning, developed at Philadelphia University, is connected learning that recognizes the need to understand the intersections between what we learn and how we learn. Intentional pedagogies and integrated-learning opportunities characterize a nexus teaching and learning environment. Nexus Learning is active, collaborative, real-world learning that grounded in the liberal arts.

Nexus Learning helps students integrate and connect learning from different facets of their education. In seeking teaching and learning methods that recognize the way our minds actually work, it becomes clear that no part of professional education can be compartmentalized. Teaching and learning practices, subject matter and co-curricular programs are all carefully integrated. Learning experiences foster an understanding of the human condition, minds that make creative connections, and produce innovative thinking. Nexus Learning functions at the intersection of theory, experimentation and application.

When the liberal arts underpin collaborative, real-world, active and engaged learning, students explore the context of a profession and understand the ways of thinking that characterize the humanities, social sciences and sciences, as well as professional approaches to knowledge. Nexus Learning is a commitment to grounding professional education in the liberal arts and sciences. Students know that effective understanding of the world, inspiration for creativity and models for leadership can draw from the liberal arts and sciences.

The key to success in the professional world is nimble thinking and a continuous learning process. Also key is the ability to work with others in collaborative situations that cross disciplinary boundaries. Engineers work with designers, financiers with research scientists. As a consequence, students who understand how to learn in multiple ways characterize Nexus Learning. That learning also encourages reflective, analytical thinking, and promotes a climate where both students and faculty undertake learning as a joint endeavor, whether it is in the classroom, studio or laboratory.

Philadelphia University is now a campus deeply rooted in the ideas and practice of what we define as Nexus Learning. The PhilaU strategic plan calls for a "signature" learning focus, Nexus Learning, which identifies the University as an innovator in professional education. A concrete manifestation of this commitment to learning that crosses the boundaries of disciplines and traditional education structures is the new College of Design, Engineering and Commerce. Students in the College programs understand how disciplines and professional fields other than their own, think differently and approach problems with different viewpoints. They also understand how to bridge differences in the pursuit of a common goal, using all the combined imaginative and creative skills at the disposal of transdisciplinary groups.

The Center for Teaching Innovation and Nexus Learning supports the University community as it further molds our unique teaching and learning identity.

APPENDIX TWO

Signature Learning Action Team (2009 – 2011)
Members of the team took up the invitation to "help identify ways we can raise campus awareness regarding how we teach and the impact our pedagogical approaches have on student learning." The results of this hard-working and enthusiastic group were multifold. Jane Antheil summed up the work of the group in the spring of 2011 pointing out that we have a clearer understanding of the critical need for learning roadmaps for the University's identity, for students, for faculty and for the development of high-impact teaching as a consequence of the work of the group. She noted that the group concluded that this was especially so for the College Studies piece of the undergraduate programs.

Objectives met by May 2011:
- *A Best Practices handbook on teaching excellence at Philadelphia University (submissions from 50+ faculty, program directors and deans)*
- *Proposal and implementation plan for the Center for Teaching Innovation and Nexus Learning*
- *Student focus groups on Signature Learning/Nexus Learning in 20+ classes/co-curricular settings (recommendation that we need more student profile conversations with faculty at all levels to help inform teaching)*
- *Presentations given to Schools on the PhilaU student profile*
- *New faculty orientation developed*
- *Recommendations made for teaching assessment and consistency, faculty development,and structural (governance and administrative) support*
- *Recommendations made for the role and composition of the Center's new advisory board,and administrative support/structures for the Center*
- *Developed a statement on signature learning and teaching excellence at Philadelphia University, with very lively and engaged conversations about the art and science of teaching. Recommendation made that we need to continue to tap this wisdom, energy and commitment to excellent teaching. Conversations that cross disciplines and curricular/co-curricular are especially helpful. Conversations about pedagogical research were particularly helpful, but pedagogical research needs much more exploration, clearer definition and structures.*

Signature Learning Action Team Members (2009-2011)

Shana Alston, *Student Life*
Jane Antheil, *Special Advisor to the President*
Jean Bail, *School of Science and Health*
Matt Baker, *School of Science and Health*
Anne Bower, *School of Science and Health*
Steve Frumkin, *School of Business*
Rob Fryer, *School of Architecture*
Katharine Jones, *School of Liberal Arts*
Gwynne Keathley, *Provost's Office*
Carol Herman, *School of Architecture*
Mike Leonard, *School of Design and Engineering*
Vidya Nandikolla, *School of Design and Engineering*
Vini Nathan, *School of Architecture*
Lisa Phillips, *School of Architecture*
Marion Roydhouse, *School of Liberal Arts*
Tom Schrand, *School of Liberal Arts*
Aurelio Valente, *Student Life*

ACKNOWLEDGEMENTS

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Powered to Do
What's Next.

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