

Notebook – November 2011

From the Director

Debra Lohe, Ph.D.

Learning can happen anywhere: in classrooms and clinics, in prisons and coffee shops, and across fiber optic lines and webcams. Particularly at a Jesuit institution, we believe that some of the deepest learning happens not in the classroom, but out in the community—in sites and spaces where learners become teachers, and conceptual understanding becomes concrete reality. In this issue of The Notebook, we invited contributors to reflect on the idea of “learning spaces,” broadly conceived, and their creative contributions highlight one important fact above all others.

For deep and lasting learning to occur, it isn't always the *condition of the space* that matters; it's the presence of the *right conditions for learning*. As long as there is someone in the space who knows things, others in the space who want to know those things, and some kind of structured learning experiences happening in the space, something educational will happen. Even more interesting, perhaps, are the spaces – or sites, as I prefer to think of them – where deep, lasting, transformational learning occurs. A quick look at the Association of American Colleges and Universities (AACU) website on High Impact Educational Practices reveals the importance of meaningful, authentic learning sites (e.g., learning communities, first-year seminars, capstone experiences, service learning, etc.), sites that – and here is the really important part – *engage students* in meaningful ways.

True sites of learning engage the whole student, empowering him or her to knit together the various threads of learning he or she has been doing into an integrated whole. At SLU, there are all sorts of “high impact” or transformational learning experiences being created, in a variety of “spaces,” and SLU faculty have been experimenting with alternative sites for learning for as long as the campus has been here. Throughout its history, the University has occasionally been called upon to reconsider its “space” in mid-town St. Louis, but it has successfully made the case, time and again, that *this* place is the place where students can fully inhabit their journey, acquiring knowledge both inside the classroom and out.

As Lynda Morrison's column makes clear, one of the single most important conditions for learning is “intellectual space,” space cleared out, space that makes room for new ways of experiencing the world. The CTE's new innovative Learning Studio, which opened this fall, is one kind of physical space on campus where faculty are given experimental space in which they can try out alternative ways of conceiving of their classrooms. In just half a semester, we've already seen the Learning Studio help faculty to “Open the borders and let ‘They’ and ‘I’ become ‘We,’” to quote Hamish Binns's contribution to this issue. The faculty teaching in the Learning Studio – our Innovative Teaching Fellows – are doing all sorts of exciting things that break down the boundaries inherent in more traditional classrooms. And the Fellows teaching there in the spring promise to do even more! (To learn more about the Learning Studio – and to find out how you can teach there – go to <http://slu.edu/ctl/teaching-innovations/learning-studio>.) So far, the feedback from both students and faculty suggests that everyone is learning here, not just the students. And as images [like these](#) make obvious, teacher and learner become almost indistinguishable in the most dynamic learning environments. When teachers and learners switch places, there is an increased potential for truly transformative learning.

We hope this issue of The Notebook will stimulate your own thinking about the many

“sites” where learning happens for you, and for your students. Whether in your office or on your iPhone, we hope you will continue to find new ways to engage students and create the conditions for learning.

News from the Center

New Staff

As promised, we are thrilled to announce the addition of two new Instructional Designers that have joined the CTE family. In September, we welcomed Chris Grabau and Jerod Quinn to the Center.

Formerly in Student Development at SLU, Chris has a Masters in Education and is a doctoral student in Educational Foundations. He brings teaching experience, knowledge of learning theory, and a deep knowledge of SLU undergraduates to his work in the CTE.

Jerod comes to us from Mizzou, where he obtained a Masters in Educational Technology and where he was designing and developing courses for the Center for Distance and Independent Study before we snagged him. Along with his instructional design knowledge and experience, Jerod brings a passion for technology and its potential to impact learning in new, engaging ways.

Both Jerod and Chris have already begun to make their mark on the Center and its programs, and we are delighted they are here.

Future Directions

As the Center grows and expands its offerings – and as we deepen our commitment to forming and transforming teachers, learners, and learning environments – we are beginning a new round of needs assessment and strategic planning. Center staff, SLU faculty and graduate students, and a variety of other stakeholders across the campuses will be invited to contribute their thoughts on future directions for the Center. But the future directions will be firmly rooted in the values the Center has always held. 2012 will mark our 15th anniversary, and we will kick off a series of anniversary events with some exciting news about a new name for the Center – so, stay tuned!

Columnists

If only Socrates had had a Clicker

Benjamin de Foy, Ph.D. Earth and Atmospheric Sciences

When I ask the class a question, sometimes there are more unspoken than spoken answers. “I’m too confused to even know what to ask.” “I know the answer but don’t want to look like a smart alec.” “I don’t really want to broadcast my thoughts on this subject.” We face the twin enemies of time (only one person at a time) and space (everyone in the room gets to hear what you say). So instead, I think of a problem to project on a slide. Everyone in the room puzzles over it and sends in an answer with a Personal Response System (“Clicker”). All the answers are projected on the board and the students discuss them in small groups. They then

answer a second time and get to see if there has been any change. Depending on the results, I can spend some extra time clarifying an idea, or move on to the next problem.

Eric Mazur developed a strategy called “Peer Instruction” for physics classes, which lend themselves ideally to this type of exercise. There are plenty of problems in physics that can test your understanding of a concept with a simple multiple choice or numerical answer. Students read the book ahead of time and come ready to do intellectual work in the classroom. Discussion with peers leads to better understanding of difficult concepts and better correction of faulty mental models than does listening to perfect explanations. The emphasis shifts from memorizing knowledge to finding and using information (1,2).

I’ve used this for scientific problems, for estimation problems, for opinion polls, for discussion questions, etc. Although the method started with physics at Harvard, it has spread to many disciplines and institutions. We replace the one-at-a-time model with a many-to-many communication model. Once the students have submitted an answer, they have more of a stake in the solution, and once they have discussed it with their peers, they are more likely to discuss it in class. Socrates would have approved.

Note: No clickers? No problem. With PollEverywhere.com students can text their answers in with their cell phones.

1. The [TOMORROW'S COLLEGE](http://americanradioworks.publicradio.org/features/tomorrows-college/lectures/) series, “Don’t Lecture Me” by Emily Hanford
<http://americanradioworks.publicradio.org/features/tomorrows-college/lectures/>

2. Eric Mazur, “Farewell, Lecture?” Science, 2 January 2009, DOI: 10.1126/science.1168927
<http://www.sciencemag.org/content/323/5910/50.short>

Cultivating a Garden of Knowledge: Encouraging Students to Move from Information to Knowledge

Deanne Marie Mason, Ph.D. Nursing-Madrid

Webster’s defines knowledge as, “the fact or condition of knowing something with familiarity gained through experience or association.” Learners might assume collecting information is the same as developing knowledge. However, active engagement is needed to transform information into knowledge.

*“Inch by inch, row by row
Gonna make this garden grow
All it takes is a rake and a hoe
And a piece of fertile ground...”*

Information shared in the classroom are seeds of knowledge; full of possibility and potential, yet unrealized until the information becomes personally meaningful. Seeds can be carried and passed from individual to individual without ever becoming the mature plant they have the ability to be. Only when seeds are deposited into fertile soil, and cared for, does their true potential appear.

Educators have learned the process of changing information into knowledge. Therefore,

they hold a responsibility to assist learners to recognize the value of planting those seeds and caring for them until fully mature. Learning to cultivate a “garden of knowledge” is a task students must practice to create meaning of, and from, information obtained in class. Otherwise the seeds lie dormant, become scattered, or are lost.

*“Pullin’ weeds, pickin’ stones
Man is made of dreams and bone
Feel the need to grow my own
‘Cause the time is close at hand...”*

Teachers can lead students to their gardens by incorporating learning strategies that support the development of knowledge through experience and association. Examples include classroom assessment techniques (CATS) like 1-minute papers and concept maps. Service learning illuminates direct application of classroom learning while engaging in service to the greater good. It is also important to avoid relying on teaching strategies, such as “Sage on the Stage,” that only promote a transfer of information.

*“Plant your row straight and long
Temper them with prayer and song
Mother Earth will make you strong
If you give her love and care...”*

Teaching students to tend their knowledge-gardens encourages a sense of personal responsibility towards knowledge formation. With practice, learners are able to continue tending their gardens and harvesting the fruits of their labor beyond the classroom.

The Garden Song by John Denver. Album: The Country Roads Collection, 1979
If you want to watch the video of this song: <http://youtu.be/D3FkaN0HQgs>

Thinking Space

Lynda A. Morrison, Ph.D., Molecular Microbiology and Immunology

The real estate mantra “Location, location, location!” applies to the learning environment as well. We may consider various physical spaces when looking for ways to enrich our teaching: the layout and accoutrements of the classroom setting, fieldwork sites, or on-line experiences. But because teaching is most appropriately focused on learning, at the root of our deliberation lies the question “How do we best learn?” Thus, as we consider the learning environment or “learning space,” first and foremost we must create intellectual space, not just as a vessel for collecting large amounts of information, but as methods and time for students to grapple with concepts we impart.

How, then, do we best retain, synthesize and apply new information, ideas, and methods to ultimately gain insight into a subject? In bench sciences we have our own mantra, “learn one, do one, teach one.” The process works quite well for learning new techniques because the student proceeds from gathering information to utilizing it, and finally to deconstructing and reconstructing the knowledge gained. Even within the confines of a standard, generic classroom

we can create such intellectual learning space.

Ask yourself, “What is the most fundamental concept to consider, and what kind of exercise will allow students to examine and explore this?” You might give your students a puzzle to solve, a law to write, an event to explain, or an experiment to design, providing them with only bare bones background information to get them started. As you guide students step by step through the exercise, allow them to gather facts along the way in an intellectual “field trip,” fleshing out the essential concept that represents a milestone in their learning. Sharing their ideas and solutions with each other will require them to collect, organize and focus their thoughts and the facts they’ve acquired. They will obtain much the same information that would have been presented in traditional didactic fashion, but in the process of filling this created space, the students will have taught themselves.

Contributors

Trench Warfare in the Classroom

Hamish Binns, M.A. ESL Coordinator-Madrid

The traditional classroom is a battlefield: the teacher mounts a gun position firmly entrenched behind a big desk, and then bombards the students with bursts of information, and barrages them with lectures. The students, huddled in their plasticized green foxholes, shoot glances at each other, and occasionally return volleys of answers or even snipe a quick remark back at the teacher.

Although chalk missiles and professorial incursions into enemy territory to swat students with rulers have been banned, the old territorial borders remain in place. In this modern era of global classroom peace and harmony, the remaining rusted barbed-wire coils must now be torn down and the antiquated martial strategies replaced.

Walk out into the no-man’s land between the desk and the students. Don’t, however, just walk out into enemy territory, lest your intentions be misconstrued: squat down and address the students at an eye-to-eye level, offer information to them and accept offerings in return, let them cross your lines to the blackboard, coax them out of their foxholes, sit with them and share your rations, remember your errors as a student, and fill the classroom with mirrors. Open the borders and let “They” and “I” become “We”.

The Strangest Learning Space? Teaching in a Maximum Security Prison

Grant Kaplan, Ph.D. Theological Studies

My greatest privilege in ten years as an instructor was the opportunity to teach at ERDCC, the maximum-security prison in Bonne Terre, Missouri. Each Friday in the spring 2010 semester, I would arrive at the facility shortly before 7:30am, make my way through security, across the main yard, and into the “education” building, where the classrooms and the library were located.

Outside the prison culture, we tend to think of the classroom as the place we’d least like to be: it is work, both for students and teachers; even for those who love school, they are usually happy to have days off. In Bonne Terre, the three hours of class time were an oasis from a life

that most people would find hellish: cramped cells, daily counts, and soul-rotting monotony.

After weeks of anxiety about what it would be like to stand unaccompanied before a dozen or so felons, the first day was oddly comforting: a white board, desks, and students dressed mostly the same. Within a few minutes I had forgotten where I was. The classroom can transform itself into a kind of prison, and prison walls can be a place of learning. Kant was right: space is not an object out there, but the product of sense intuition. The name of our spaces has a lot to do with our capacity for self-transcendence. One man's place for waiting out death could be another man's space for dying to learn.

When Learning Can be Messy

Shawn E. Nordell, Ph.D. Biology

In many disciplines, experiential learning is a common part of the curriculum. For example, laboratory courses provide a space for students to experience concepts in action and learn new technical skills. But how do you design and teach experiential learning courses? Often in the sciences, these courses are structured as a series of “cookbook” steps for students to follow. Indeed, much of the published laboratory material is specifically in this format. These are not the experiences that excite our students about the discipline.

So what got us excited about our disciplines? For many academics, experiential learning was critical to spark our interest, yet was structured as an inquiry with open-ended problems. How do we provide our students with this same experience of the joy of discovery? Let learning be messy. Design course objectives and rubrics to reflect the process of discovery. Then, let students design and implement their own experiences, and afterward present and discuss their research findings. Just provide the students with a conceptual framework and specific techniques or skills needed and then allow them to “experience.” Failed experiments and negative results are common in most disciplines and although frustrating, they inform our research. Why not allow students this same possibility and let learning be messy?

The Field as Learning Space: Epidemiology Abroad

Sarah Patrick, MPH, Ph.D. Epidemiology

I was thrilled when I was asked to co-teach scientific writing to medical epidemiologists from Afghanistan, Egypt, Iraq, Jordan, Morocco, Pakistan, and Yemen in the Field Epidemiology Training Programs (FETP), and honored to work alongside the course designer, Ms. Elliott Churchill. As Missouri's State Epidemiologist, my staff was quite diverse and many learned English as a second or third language, so I had some experience with the challenges of converting science into messages people can use in a different language. It was yet another task to provide such education and mentoring in the Regency Palace hotel in Amman, Jordan while covering field investigations and following – cultural norms that were all new to me. We supplemented course materials – case studies, draft papers, and class exercises –with Elliott's stories of work around the globe and my technical assistance with research design, analysis, and interpretation. Class took place Sunday through Thursday, 8:30 a.m. – 3:30 p.m. and most evenings were spent editing papers. All FETP participants had to pass English language equivalency tests to enter their post-doctoral training programs, but we soon learned that written

and oral competency and confidence varied greatly within the group. I too had much to learn, specifically as an American woman in the Middle East for the first time, and that was eased by my ‘Iraqi brothers’ joining me for walks each evening, so I could spend some time out of the hotel, with people fluent in Arabic: the teacher became the taught.

Imagine me pouring over maps late at night while editing a paper on the topic of mosquito surveillance in Iraq, in which large portions of the country were unsampled because of the danger and difficulties traveling in conflict areas. My colleagues were ever gracious and appreciative of suggestions and edits. We learned a great deal about similarities and differences in the practice of our profession in different locations. The work continues as many of my new friends will be presenting their work at the Eastern Mediterranean Public Health Training Network (EMPHNET) conference in Egypt in December, to which I hope to bring a SLU undergraduate to assist me in working with the fellows and presenters, introducing another student to experiencing the variety of learning spaces that fieldwork offers.

Take Me Out to the Ballgame: What Does Baseball Have to Do with Learning?

Bryan Sokol, Ph.D. and Leah Sweetman, Ph.D. Center for Service & Community Engagement

Over the past month at SLU, two things have loomed large in the psyches of our students and faculty alike: midterm exams and World Series baseball! Baseball may be watched on television or listened to on the radio, but almost everyone agrees that the game is best experienced “in situ,” as a live outdoor activity. As Walt Whitman, one of America’s great poets, is credited with saying: “I see great things in baseball. It will take people out-of-doors, fill them with oxygen, [and] give them a larger physical stoicism...” While some may be skeptical that watching baseball at Busch Stadium (especially with peanuts and beer in hand) will make us all heartier people, the opportunity to experience a live baseball game opens all of us to the richness of the sport. In much the same way, students’ learning experiences stand only to be further enriched if we take them outside the classroom and into the real-world. Many faculty and students at SLU engage in service-learning for this very reason. Service-learning is a teaching and learning strategy that integrates meaningful community service with instruction and reflection to enrich the learning experience while fostering a consciousness of social justice. The use of service-learning, because it takes “people out-of-doors” as Whitman would say, adds to the context of a course with an additional physical space to learn, as well as providing the reflective space for students to understand course content in new ways. This is because service-learning at its best, much like baseball, challenges students to adjust their understanding to real-life dilemmas, to the circumstances or demands on the field. Service-learning efforts occur in spaces and places all around the city of St. Louis, and all of them are “live.”

A Space to Grow Stronger

Barb Yemm, PT, DPT, OCS Physical Therapy and Athletic Training

As a physical therapy practitioner in an outpatient physical therapy setting, I teach each patient about his or her conditions, options, potential outcomes, and life adaptations. I also empower him or her to control the situation as much as possible; to grow stronger. Teaching this one-on-one patient interaction to physical therapy students is best accomplished through clinical

education. Clinical education immerses students in a real-world physical therapy setting. This unique learning space enables each student to connect didactic knowledge with actual patient care, facilitating a one-on-one learning environment in the “real” world.

As a clinical instructor, I have the ability to assess and assist each student with his or her personal strengths and weaknesses. We work together with the patient, encouraging the students to become problem-solving professionals. The clinical learning space guides students to not only think professionally, but to behave as professionals and as graduates of a Jesuit institution with devotion to work as men and women for others.

Teaching physical therapy students can be challenging for a clinician due to productivity and reimbursement issues. Despite these issues, I have found that communication with eager students about the profession that I love energizes me and confirms my passion for learning, teaching, and serving others. Clinical education provides a space where patients, students, and clinicians all grow stronger.