ESSENTIAL STUDIES ASSESSMENT WEEK

It’s time again for UND’s Assessment Week – when students in Essential Studies (ES) capstone courses complete a performance task to assess learning in one of the ES Program goal areas. Data collected from each of the two previous Assessment Weeks have been valuable for identifying ways in which the program can be improved, such as by considering how to ensure more students get experience with information literacy, or whether additional practice in oral communication should be required. Assessment Week data are informing discussions the ES Committee is currently having about how to improve the program based on last year’s program review recommendations.

For Assessment Week to continue to be a valuable contribution to our understanding about UND undergraduate student learning, your help is invaluable. Hundreds of faculty, staff, and students have so far contributed their time and expertise to this shared endeavor, such as by writing performance tasks, participating in scoring sessions, proctoring, or completing assessments. Please consider volunteering to help with this year’s efforts, perhaps by recruiting students in your capstone course, by proctoring during an Assessment Week session (held at various times on Feb 17, 18, 19, and 23), or by being part of a scoring session.

To volunteer please contact Joan Hawthorne (joan.hawthorne@und.edu) or Ryan Zerr (ryan.zerr@und.edu).

THE FIVE STAGES OF CHANGE:
A JOURNEY TOWARD EVIDENCE-BASED TEACHING

John Shabb, Associate Professor, Basic Sciences

My becoming an “early adopter” of active learning in biochemistry education did not happen overnight. It was a long and halting process punctuated by occasional leaps of understanding and risk taking. The steps I went through in my transformation from a teacher-centered to learner-centered practitioner are not unlike the five stages of behavior change that are associated with smoking cessation: pre-contemplative, contemplative, preparation, action, and maintenance.

As a new faculty member at UND in 1992 I had little formal teaching experience. I was eased into team-taught courses a few contact hours at a time in order to get acclimated to the classroom and to build a portfolio of lectures. My more experienced colleagues served as role models. Performance expectations were modest. I did my job well if my student evaluations were comparable to that of the average lecturer. Over the years my PowerPoint presentations became quite refined. I did my teaching in an environment that did not encourage experimentation. This was my “Pre-contemplative stage”. There was no reason to change my teaching methods because I did not see them as a problem.
Continued from page 1

My first real exposure to active learning was in 1998 when the medical school curriculum went through a major overhaul. Part of the traditional discipline-specific lectures were replaced with patient-centered problem-based learning activities. I was passive during this transition. Somebody else wrote the case studies, organized the small groups, and devised assessment tools. All I needed to do was follow the script as a facilitator and grader. Over the years I had plenty of time to compare the pros and cons of this learning approach with the other part of the medical curriculum which remained firmly entrenched in traditional lecture mode. During this “Contemplative stage” I actually started to think about teaching effectiveness.

Eleven years later, my teaching buddy, Kathy Sukalski, somehow convinced me to go to the first American Society for Biochemistry and Molecular Biology Symposium on Student-centered Learning in the Molecular Life Sciences. I was somewhat skeptical and went not really knowing what to expect. What I encountered was an almost militant group of biochemists whose mission was to transform the teaching of biochemistry. They were answering “A Call to Action” issued in 2009 by the American Association for the Advancement of Science’s landmark document “Vision and Change in Undergraduate Biology Education”. It was my first meeting with Vickie Minderhout and Jenny Loertscher, the biochemistry apostles of Process-oriented Guided Inquiry Learning (POGIL). They made so much sense, and they had data to back up their teaching methods. Active learning works, they urged. Go home and try it out yourself. In this “Preparation stage”, the evidence could not be ignored, and a path forward presented itself.

I went to the symposium to learn how to rescue an advanced undergraduate biochemistry course serving a handful of chemistry majors who were completing a biochemistry course in a traditional team-taught lecture-based fire hose of a course. In the fall of 2009, Kathy and I separated the undergraduates for the first half of the course and with them cut our teeth on POGIL using activities published by Minderhout and Loertscher. When the students returned to traditional lecture for the second half of the course, the contrast was stark in how they responded to the two teaching strategies. Whereas students actively worked in groups in the POGIL experiment, they sat passively and in isolation in the lecture hall. Whereas they were wedded to their textbook in the POGIL experiment, they stopped reading it with lectures. Whereas they always came to class (and were always awake) in the POGIL experiment, they gradually started drifting from the lecture hall. After that kind of feedback, we felt it unconscionable to subject another group of students to the same fate. The undergraduate course has since remained entirely lecture-free and has evolved with its own unique theme, goals, objectives and activities. This small-scale experimentation was the beginning of “Action stage, part 1”, in that we implemented evidence-based teaching practices in a small classroom setting.

In addition to the advanced undergraduate biochemistry course, our department also teaches introductory biochemistry. By 2012, this team-taught, traditional lecture course had grown to about 150 students, serving majors as diverse as biology, chemistry, chemical engineering, forensic science, medical laboratory sciences, and nutrition and dietetics. The course was in need of reform and one of the two instructors was about to retire. Kathy, the remaining instructor, was looking for a solution. Concurrently, the SCALE-UP room in O’Kelly Hall was being constructed to provide an active learning environment for large enrollment classes. The call was out for interested instructors to schedule the room if they were ready to apply evidence-based teaching practices to their courses. I told Kathy I would join her on the condition we switch the course wholly to active learning. She agreed as long as we took the 7:30 am slot. Thus, we entered “Action stage, part 2”. “Action stage, part 1” was peanuts in comparison.

Our first try in the spring of 2013 was a shock for the students and a lesson in survival for the instructors. We learned from our mistakes and, through formative assessment, improved the course in each subsequent iteration. Figure 1 illustrates a timeline of key events. The great challenge from the beginning was scalability. POGIL has been well documented for smaller class settings, but teaching large enrollment biochemistry courses in this format was largely uncharted. We created a completely original set of course activities to fit our learning goals and content preferences. Technology and logistics were critical to success. Intensive use of Blackboard was essential for managing pre- and post-class assignments and quizzes. The use of laptops during in-class sessions made it possible for small groups to complete and submit activities electronically. We employed teaching assistants both in and out of the classroom to guide students and grade assignments. This high level of course structure is designed to help students take ownership of learning complex concepts in biochemistry.

Continue on page 3
Implementing pedagogical change on this scale is hard work. Is it worth it? What are student perceptions now that we are three years in and about to go for round four? Are they learning biochemistry concepts better? We observe that at 7:30 in the morning, from the dark cold of January to the warm green of May, attendance hovers around 95% in a large enrollment class. Students are alert and on task in class and they work outside of class too, as measured by assignment completion on Blackboard. Student feedback shows an almost wistful longing for the lecture. They say that they work very hard and that they have to teach themselves. It is encouraging that after that first most challenging year in which student perceptions hit bottom, student satisfaction with the course has returned to that of pre-POGIL days. Assessment using 35 discriminating multiple choice questions retained from lecture days showed that student performance remained essentially unchanged in the first two years. By year three, the mean score for the lower quartile of students improved a remarkable 10 percentage points compared to lecture days. Perhaps this improvement will be sustained this coming semester. As we enter our fourth year of active learning in introductory biochemistry, we are now, I suppose, in the “Maintenance stage”. That is, the practice of active learning is firmly embedded in our classroom culture.

One behavior change I have yet to experience on this teaching journey, “Relapse”, lurks in the shadows. There are times when the temptation is to retreat to the safety of the lecture where the instructor is in complete control. It is hard to ignore the plea from half of the students for “more lecture”. This is a difficult issue. Any introduction of “lecture” into the classroom diminishes time available for active learning. As an alternative, we may introduce short videos as part of pre-assignments to reinforce the more difficult concepts. Would this be considered “Relapse”? If we do it, I’d rather think it of it as an evidence-based change in teaching practice.

One last word. When Kathy and I switched to active learning, we did it wholesale, which amplified the risk, effort, and student resistance. It doesn’t have to be that way. Some experienced practitioners recommend incremental change. In the end, any introduction of evidence-based teaching practices into the classroom is a step in the right direction.
SPRING FACULTY STUDY SEMINARS

Faculty Study Seminars allow faculty with common interests to learn more about a teaching-related topic. This semester the Office of Instructional Development will sponsor four. Each group meets four times a semester, at times mutually agreed to by participants, to read and discuss a teaching-related book (books provided by OID). Your only obligation is to read and to show up for discussion. To sign up for a group, e-mail the facilitator noted below with your contact information (e-mail and phone). You will be contacted once the group is full to set an initial meeting date.

Unflattening by Nick Sousanis (Harvard University Press, 2015)

How do we think? How do we make meaning? How do our students construe the information they encounter? In Unflattening, Nick Sousanis defies conventional forms of scholarly discourse by using graphic art to provide a serious inquiry into the ways humans construct knowledge. Through its graphic innovations, Unflattening challenges the kind of rigid thinking that Sousanis calls “flatness.” By fusing words with images, Unflattening produces knew forms of knowing and encourages readers to access modes of understanding that move beyond traditional learning methods. As the first graphic scholarly text ever produced, Unflattening provides an engaging and challenging read and will evoke as much discussion over its form as its content.

Tami Carmichael, Director of Integrated Studies, will facilitate this Faculty Study Seminar. To join the group, contact: tami.carmichael@email.und.edu

Curious by Ian Leslie (Basic Books, 2015)

Everyone is born curious. But only some retain the habits of exploring, learning, and discovering as they grow older. Those who do so tend to be smarter, more creative, and more successful. So why are many of us allowing our curiosity to wane?

In Curious, Ian Leslie makes a passionate case for the cultivation of our “desire to know.” Just when the rewards of curiosity have never been higher, it is misunderstood, undervalued, and increasingly monopolized by a cognitive elite. A “curiosity divide” is opening up.

This divide is being exacerbated by the way we use the Internet. Thanks to smartphones and tools such as Google and Wikipedia, we can answer almost any question instantly. But does this easy access to information guarantee the growth of curiosity? No—quite the opposite. Leslie argues that true curiosity the sustained quest for understanding that begets insight and innovation—is in fact at risk in a wired world.

Mark Dusenbury, Associate Professor, Aviation, will facilitate this Faculty Study Seminar. To join the group, contact: dusenbur@aero.und.edu
Advancing Social Justice, by Tracy Davis and Laura M. Harrison (Jossey-Bass, 2015)

Many educators are committed to diversity, multiculturalism, and social justice but are unsure of how to realize these commitments in the classroom. The gap between our values and teaching practices continues to grow as we grapple with questions such as: what does it mean to have a social justice-based curriculum and how does it apply to my students? In Advancing Social Justice: Tools, Pedagogies, and Strategies to Transform Your Campus, Davis and Harrison help educators gain a clear understanding of what social justice is, along with describing effective practices to help us embrace a broad social justice approach both inside and outside of the classroom. Advancing Social Justice underscores that social justice is not an add-on to student learning; rather, it must be treated as the essence of education. You should consider this seminar if you are curious about how you might design and implement social justice interventions in your courses.

Kate Schaab will facilitate this Faculty Study Seminar. To join the group, contact: katharine.schaab@und.edu

Multimodal Literacies and Emerging Genres edited by Tracey Bowen and Carl Whithaus (University of Pittsburgh Press, 2013)

Are you interested in increasing student engagement in writing projects? One possibility is to move beyond traditional academic essays and research projects by integrating multimodal writing into your course. Multimodal writing assignments invite students to work “across multiple modes of communication” and offer new opportunities to learn, experiment, and make meaning that are increasingly critical to future success.

Over the last several years, digital and information technologies have allowed scholars to consider new possibilities for student research and writing. This collection of essays discusses these new possibilities and explores “how understandings of genre and media can be used in classrooms to help facilitate students’ development as writers able to work across modes and across genres.”

This seminar will be beneficial if writing is essential to your course, whether you are already using writing assignments that ask students to compose in various genres and/or media types, or are just interested in discussing these possibilities and potential challenges.

Shane Winterhalter, Coordinator of the University Writing Program, will facilitate this Faculty Study Seminar. To join this group, contact shane.winterhalter@und.edu
Summer Instructional Development Projects (formerly Summer Professorships)

Proposals for Summer Instructional Development Projects (SIDPs) are due March 1, 2016 (by noon). Summer salary stipends are $4,000.

The Office of Instructional Development and the Faculty Instructional Development Committee (FIDC) award Summer Instructional Development Projects (SIDPs) to faculty working on innovative instructional Projects. The Projects are intended to support instructional development that has the potential to improve the quality of teaching at UND and goes beyond normal course development.

To submit a proposal, you will find the necessary information on the OID website under “Funding”, then, “Summer Funding”.

If you would like to discuss ideas and drafts before submitting a proposal, contact Jeff Carmichael, (777-4233 or Jeffrey.carmichael@UND.edu).

FIDC Funding

The Faculty Instructional Development Committee (FIDC) provides support for course and curriculum development, which goes beyond the means of the individual faculty and academic units.

FIDC grants may be used to purchase instructional materials, travel for pedagogical development, travel to make a Scholarship of Teaching and Learning (SoTL) presentation, or other projects related to teaching.

To submit a proposal, you will find the necessary information on the OID website under “Funding”, then, “FIDC Grants”.

If you would like to discuss ideas and drafts before submitting a proposal, contact Jeff Carmichael, (777-4233 or Jeffrey.carmichael@UND.edu).

FIDC Deadlines

<table>
<thead>
<tr>
<th>Month</th>
<th>Projects</th>
</tr>
</thead>
<tbody>
<tr>
<td>February</td>
<td>Travels &amp; Materials</td>
</tr>
<tr>
<td>March</td>
<td>Travel &amp; Materials &amp; Summer Projects</td>
</tr>
<tr>
<td>April</td>
<td>Travel &amp; Materials &amp; Mini Projects</td>
</tr>
<tr>
<td>May</td>
<td>Travel &amp; Materials</td>
</tr>
</tbody>
</table>

UPCOMING FORUM

Supporting Online Student Success with Analytics

This forum will highlight tools being used at UND and in collaboration with peer institutions to provide data about the performance of online students and ways to improve student success. What is the data? What does the data mean? How do we use this data and tools to support student success?

Save the date: Wednesday, February 17, 11:30 am – 1 pm, Memorial Union

More Information will follow through ULetter and webpage at http://und.edu/academics/extended-learning/on-site-events/online-student-success.cfm . You will need to register by noon on February 11 to reserve a lunch.

Sponsored by Online & Distance Education Senate Committee, Office of Extended Learning, Center for Instructional & Learning Technologies, Office of Instructional Development, Student Success Center
Spring 2016

ON TEACHING SEMINARS

On Teaching Seminars are an opportunity to share a meal and discussion of teaching issues with colleagues from across campus.

All sessions take place in the Badlands Room of the Union unless otherwise noted. Please note the seminar times and the deadlines for registration.

**Teaching with Open Source Materials**
Thursday, January 28, 11:30-3:30
(register by Tuesday, January 26 at noon)
Note: This special four hour seminar will be held in the River Valley Room of the Memorial Union

**Active Learning and Flipped Classes: Lessons Learned**
Tuesday, February 9, 8:30-9:30 a.m.
(register by Friday, February 5 at noon)

**Designing a Writing-Enriched Curriculum: Reports from Across the Disciplines**
Tuesday, February 23, 12:30-1:30
(register by Friday, February 19 at noon)

**Evidence-Based Reasoning in an Interdisciplinary Curriculum:**
**Progress on the AAC&U Scientific Thinking & Integrated Skills (STIRS) Initiative at UND**
Friday, March 11, 12:00 - 1:00 p.m.
(register by Monday, March 9 at noon)

**How Your Students Use the Writing Center**
Monday, April 11, 12:00 - 1:00 p.m.
(register by Thursday, April 7 at noon)

**Teaching Students with Disabilities**
Wednesday, May 4, 12:00 - 1:00 p.m.
(register by Monday, May 2 at noon)

To register and reserve a meal, visit oid.UND.edu.

For information, contact Jana Diemert at 701.777.4998

---

FACULTY WRITING GROUPS

Each year the Writing Across the Curriculum Program sponsors one or more faculty writing groups. Some groups meet only for one semester, while others choose to be ongoing. In either case, the object is to create a supportive, collegial environment and provide incentives to get the work done!

If you’d like to take part in a faculty writing group this spring, or if you’d like to learn more about the groups, contact Shane Winterhalter at 777-6381 or shane.winterhalter@UND.edu
ON TEACHING
Office of Instructional Development
O’Kelly Hall, Room 300
221 Centennial Drive Stop 7104
Grand Forks, ND 58202-7104

UPCOMING DEADLINES

February 01, 2016:       FIDC Travel & Materials Proposals due
February 05, 2016:       Register for 2/9 On Teaching seminar
February 11, 2016:       Register for 2/17 Supporting Online Student Success with Analytics forum
February 19, 2016:       Register for 2/23 On Teaching seminar
March 01, 2016:          FIDC Travel & Materials Proposals due
                         Summer Instructional Projects (formerly Summer Professorships) due
March 09, 2016:          Register for 3/11 On Teaching seminar

ON TEACHING is published six times a year as a service to UND faculty.
OID Director: Jeff Carmichael.
WAC Coordinator and newsletter editor: Shane Winterhalter.
OID/WAC Staff: Jeanne Boppre & Jana Diemert.