Teaching with Technology On-campus and Online  by Mojdeh Mardani

I have been teaching Electrical Engineering courses since 2003. As an educator it is my responsibility to equip, motivate, and support my students in their learning endeavors. As a mentor, my goal is to prepare my students to answer the questions of today and to imagine and explore the questions of tomorrow.

I discovered early on in my career that each student learns differently and gets stimulated with various methods of teaching. I’ve learned to come up with different teaching techniques and use various approaches to capture the interest of students to get them excited about learning. Some students learn by writing down the material, some by listening and absorbing the teacher’s work, others learn by real life examples or role-playing, or hands on experiments.

My lectures are interactive and students have the opportunity to work on engineering problems in a group setting, as well as independently. Addressing various engineering and design questions that need the fundamental knowledge of electrical engineering concepts helps students sustain a deeper comprehension and appreciation for them. Laboratories and hands-on group projects are powerful tools for students to acquire teamwork, leadership skills, and the value of creativity.

The use of technology in both lectures and laboratories is crucial. By incorporating engineering software, interactive homework, online quizzes, and practices, laboratory simulators, individual and group projects, online media and discussion boards my students develop both physical and technical (online) results to enhance their education.

Mojdeh Mardani

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I saw a news report on March 1st asking the question, why we say “March comes in like a lion, and goes out like a lamb.” Probably because March is such a volatile month, full of transitions to spring and summer and not really letting go of winter. I feel like our life at CILT is kind of like that on a weekly basis. The world of technology is ever-changing with so many new and exciting initiatives to support. We listen to students and faculty about what they want, the old, the new, and many times, everything. Our March newsletter highlights some of the new instructional technologies, Open Education Resources (OER), Skype for Business, Steelcase Thread system, and an article sharing results from our Fall technology survey.

Dr. Virginia Clinton is jumping into the Open Education Resources world of possibilities by adopting an Open Source textbook for her Introduction to Psychology course. She tells her story on how this happened and why it is so important to select the best and most cost effective resources for students. On a national average students pay approximately $1,249-$1,364 per year on textbooks. In North Dakota that rate is $1,000 per year, still very high. CILT offers workshops on OER and partners with the Chester Fritz Library in helping to provide guidance to faculty interested in selecting quality, peer-reviewed open education textbooks and other resources.

Take a look at the technology survey results. Our Service Desk continues to receive high marks for customer satisfaction – 94% - wow, kudos go to our student employees who manage the Service Desk! Students find that their use of Blackboard helps them prepare for class, work more efficiently and provides easy access to course material and grades, anytime, anywhere.

Hope you all enjoy what’s coming up in our volatile month of March weather. We will be here to help answer any of your instructional technology questions and guide you through the “March Lion” challenges.

Since all my classes are hybrid (they are offered to both on-campus and online students) use of technology is inevitable. Tegrity and Blackboard are two of the powerful tools that I have integrated into all my classes. Some of my classes are offered in flipped-style. For those classes I have used Tegrity to pre-record my lectures. I have also experimented with some external software and web applications, like TopHat, which help with uploading my recordings to Blackboard and YouTube or saving as podcasts. Online homework submission, the use of e-books, online quizzes, online labs simulations, engineering software, and both anonymous and regular surveys are some of the tools that I have integrated in my classes and I could not do what I am doing without them.

My objective, like any educator, is to acquire different ways and tools to engage and inspire my students in their learning adventure. I have been lucky to have the support of our dedicated professional staff here at College of Engineering and Mines (CEM) as well as the Center for Instructional and Learning Technologies (CILT) at UND.

CILT to Host 11th Annual Teaching with Technology Seminars

Teaching with Technology (TwT) seminars are designed for instructors interested in exploring how teaching with technology opens new opportunities for learning in the classroom, online, and in hybrid/blended environments. New or existing courses will be reviewed and designed using instructional design guidelines and assessment rubrics.

Each day will include large and small group discussions, guest speakers, hands-on activities and technology demonstrations. One previous attendee stated, “excellent variety and insights provided by their experiences. Starting with the planned outcomes is absolutely the right formula to build out the engagement tools and processes.” Following the seminar several past attendees indicated that they were planning to or had already incorporated what they had learned from TwT into their courses.

When asked if they would recommend TwT to their peers one past attendee stated, “Absolutely, I loved it and am very pumped about using what I learned in my teaching. The staff was very knowledgable, friendly, and accommodating.” Others indicated that they had already talked about their experiences with several colleagues.

The last day of the workshop will include presentations by the participants on their projects. A final report will be required at the end of the workshop and participants may be asked to present at other campus forums/events during the following academic year.

This year’s session will take place May 23-26 and May 31-June 3, 2016 from 12:30 p.m. - 4:00 p.m. as well as June 13-16 and 20-23, 2016 from 8:30 a.m. - 12:00 p.m. Registration is limited to 12 faculty (per seminar), and a $500 stipend is offered. The May session is full but there are still seats available in June. Applications will be accepted on a first come basis. APPLY before April 1, 2016 at UND.edu/cilt/services/training-development/twt.cfm.
Adopting an Open Source Textbook by Dr. Virginia Clinton

Like many faculty members, I have been alarmed about the rising costs of textbooks. I always factor cost into my textbook adoption decisions, but often find that the least expensive option is around $200, often more. Students often cope with textbook costs by not buying required course materials, even though this often hurts them academically. I’ve had students tell me that they have relied on free internet sources, which may not be reputable or reliable, to do assignments.

I had heard about open-source textbooks, but had concerns about them and didn’t know how to begin to look into adopting them in my courses. So, when I had the opportunity to learn about open-source textbooks, I was eager to take advantage of it! This involved going to Valley City for a morning workshop to hear David Ernst talk about the Open Textbook Library at the University of Minnesota and Tanya Spilovoy speak on her work promoting open-source materials in the NDUS. I also reviewed an open-source textbook (Introduction to Psychology through Open Stax at Rice University). These experiences addressed concerns I had.

**Concern 1: Open-source textbooks would be lower quality than traditional textbooks.**

We often tend to assume that if something is inexpensive, it isn’t good. However, this wasn’t the case with the open-source textbooks I reviewed. These textbooks had comparable quality with writing clarity and content accuracy as traditional textbooks. Yes, all textbooks have errors and the open-source textbook I reviewed was no exception. To correct these errors, the Open Stax textbooks had an erratum submission I took advantage of, and my submissions were quickly addressed by Open Stax. In addition, the authors of open-source textbooks are similar in reputation and background to the authors of traditional textbooks. Just to clarify, even though the books are free, most authors and developers of open-source textbooks are paid for their time and expertise. But, instead of getting royalties based on sales through publishers, they are paid up front through grant funding (e.g., The Bill & Melinda Gates Foundation).

**Concern 2: Open-source textbooks are only electronic.**

It may seem odd considering how much time our students spend staring at screens, but many of my students have told me they have a strong preference for a paper textbook. Open-source textbooks can only be completely free electronically because of paper costs, but often bound hard copies can be ordered at low cost (around $30). Also, because they have Creative Commons licenses, most open-source textbooks can be legally printed by the student.

**Concern 3: The instructional design of open-source textbooks would be poor.**

As an educational psychologist, much of my research is focused on instructional design, specifically the use of visuals. I know that graphic designers are expensive and was concerned that open-source textbooks would have limited visuals to promote learning, such as tables and diagrams. However, I found that the use of helpful visuals in open-source textbooks was about the same in quality and quantity as traditional textbooks.

**Concern 4: Open-source textbooks wouldn’t have support materials.**

All faculty are busy and often take advantage of test banks and PowerPoints. These test banks are critical if you use formative assessments like clicker questions and quizzes in addition to exams and need a large number of questions for each course. The Open Stax textbooks have PowerPoints slides and test banks, which are helpful. There are also video links embedded in the textbooks that can be incorporated into lectures.

Given all of these experiences, I have decided to adopt open-source textbooks in my courses whenever possible in the future. If faculty are interested in learning more, I highly recommend searching the University of Minnesota’s Open Source Library for books in your discipline or talking with an Instructional Designer at CILT for advice!

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**Open Education Resources (OER):**

- OER Commons
- Creative Commons
- Merlot
- Open Education Consortium
- Openstax College
- The Orange Grove
- MIT Open Courseware
- Saylor Academy
- National Science Digital Library
- UND Chester Fritz Library
- UND Center for Instructional & Learning Technologies
UND Celebrates Digital Learning Day with Atomic Learning Webinar

CILT sponsored a webinar with Dusty Nelson, Atomic Learning, on learning anywhere and anytime using digital technologies. UND students, faculty and staff have access to Atomic Learning tutorials and learning links on over 250 software applications as well as college and career readiness skills, and leadership topics. Dusty Nelson discussed tutorials on note-taking, effective listening, working in groups, test taking tips, plagiarism, and APA guidelines. He also demonstrated how easily faculty can embed those tutorials into their Blackboard courses. These tutorials are additional ways to support student retention efforts on campus.

A recording of the webinar is available on the CILT website.

Meet our Staff

David Levenseller
I started working at UND in 1990 as a computer mainframe operator and have been at the Help Desk/Technical Support since 1992. I am currently a Senior Technical Support Specialist at CILT. I enjoy working with technology and assisting others with technology questions or problems.

I have a lovely wife, three grown children and 3 grandchildren. In my spare time, I enjoy outdoor activities including ATVs, snowmobiles and collecting rocks and minerals.

Gary Johnson
I was hired by the ITSS department in 1995 as a Desktop Support Specialist and manager for multiple computer labs operated by the ITSS dept. I have been working as part of the CILT group since about 2010 when ITSS was restructured and desktop support functions were moved to CILT. Prior to UND, I had twenty years of working in the private sector in sales, customer service, technical support, office/business management and system design with many varied types of businesses, including Northwestern Bell Telephone Co., a collection agency, several small computer shops and many local area businesses. UND/ITSS/CILT desktop support has been a great learning environment, but the best part has been meeting and getting to know a lot of fascinating UND faculty, staff and students.

CILT Launches New Website for Spring

The CILT and technical support webpages received a facelift at the start of the spring term. The new homepage now features technology related news, events, and articles. The addition of the orange menu bar across the top of CILT webpages allows for seamless navigation between the various CILT service and support pages.

The Tech Support site previously contained separate webpages for students and faculty/staff. Some people fell into both categories and it could be difficult to figure out which page was best for them to get the information they needed. Many of the tutorials applied to both students and faculty/staff which meant that it was a challenge to keep the many different webpages up-to-date and consistent. The new site has one page for each topic and utilizes tabs to provide audience-specific information as needed.

To quickly access the CILT website, visit cilt.UND.edu. To access Tech Support pages, go to techsupport.UND.edu.

CILT strives to be proactive in providing updated information on teaching and learning technologies. Feedback is always welcome.
Tech Tid-bitz: Student Email Migration  by Afton Cameron

The University of North Dakota has recently migrated student email accounts to the same Microsoft Office 365 email system as faculty and staff. Students now have an @und.edu email address and can be found within the Outlook address book. This upgrade has enhanced multiple features for students and has created new ways for faculty and staff to communicate with students as well.

Students now have access to OneDrive for Business file storage. OneDrive for Business provides users with 1 TB of file storage and allows for collaborating and sharing files with instructors, classmates and groups. SharePoint can now be accessed by students to create their own personal site and collaborate with others. Any department can also invite students to participate in SharePoint sites.

Skype for Business is a great option for instructors to be available for their students. Skype for Business allows instructors to create online office hours virtually anywhere. Audio and video calls are popular options for Skype for Business, but Skype for Business also has a screen share function and allows users to save conversations for record keeping purposes. Another great feature of Skype for Business is the combined Contact list of students, faculty and staff. Users can now search for specific names instead of typing in an email address. From within the Contact list, students can request meeting times and see a contact’s availability.

For help with any of these services, contact UND Tech Support.

Three Classrooms Updated with Thread System  by Dave Bell

Over winter break, the Steelcase Thread electrical power distribution system and new carpet was installed in Abbott 115, O’Kelly 125 and Witmer 303. These projects were funded by Associate Vice President of Facilities, Dave Chakraborty which completed the 16 classroom upgrades that began during summer 2015.

The Thread system, allows for power to be distributed under carpet and accessed from more convenient areas in the room. This helps to create a more active learning environment by allowing for a more flexible arrangement of the furniture, while still maintaining power.

For more information about active learning environments visit our CILT website.
Each semester CILT surveys UND students and faculty regarding their use of UND’s Blackboard Learning Management System (LMS) and other teaching technologies. In Fall 2015, 819 students and 109 faculty responded. Here are some highlights on the sections of the survey related to using Blackboard.

Students were represented from all colleges, with more on-campus (43%) than in online courses (39%), or blended (7%) and hybrid (4%) combinations of online and campus students. Faculty respondents used Blackboard for traditional courses (76%), online and distance education courses (33%), blended (15%) or hybrid (8%) courses, and non-credit courses (2%). Thirty percent of faculty surveyed used Blackboard for committees, groups and organizations, and six percent used them for MyAdvisor sites. Student and faculty logins to Blackboard are shown below in chart 1.

Students and faculty agreed that Blackboard provides access to course content and is useful for academic activities. See chart 2 for details.

**Satisfaction with Support Resources**

**Student Results**
The UND Tech Support Service Desk (Memorial Union) received a 94 percent satisfaction rate. More than half of UND students (58%) used UND Tech Support email support, with a 94 percent satisfaction result; and while fewer students (<40%) used UND Tech Support phone or chat services, those who did were more than 90 percent satisfied. One student commented that UND Tech Support staff are, “awesome folks who helped with several difficult situations.” Others added that the Tech Support Staff were very friendly, helpful, and polite. One student even referred to them as a “life-saver” and another noted that the staff “have always gone above and beyond.”

**Faculty Results**
More than 84 percent of the faculty surveyed used UND Tech Support phone and email services, with a satisfaction rate of approximately 98 percent. Fewer faculty (30%) used the UND Tech Support chat services; however, those that did were 97 percent satisfied with the service. Faculty stated that they found the UND Tech Support staff to be “the best” adding they were very helpful and knowledgeable.

Over 50 percent of the faculty experienced a one-on-one consultation with CILT staff, and 95 percent were satisfied with the service. One faculty stated that the one-on-one consultations were “extremely, wonderfully helpful” and added that “I could not have survived without this.” More than half (67%) of the faculty made use of the Blackboard Faculty Resource Site, with a 90 percent satisfaction result. Over 40 percent of the faculty reported that they used the CILT Teaching with Technology Tips and the CILT Connections Newsletter, with a satisfaction rate of 98% for both.

For a full copy of the Fall 2015 Survey, as well as past surveys, please visit the [CILT website](#).