

Literacy Link

Fall 2011

From the Editors' Desktops



Helen writes:

"This fall, I discovered I am being evaluated. Discovered is the key term, since as a lecturer, I am evaluated every five years, but I am not very good at keeping track of time. In fact, I am not very good at keeping track of a lot of things, including letters detailing my service, multiple semesters of student evaluations, lists of conference presentations—all the materials that should be found in my PPC file.



"This is why one recent weekend I found myself in my living room, with stacks of these papers around me, trying to organize and fit my work life into three-inch binders. And while it was a frustrating and rather messy process, it was also an illustrative one. It is a rare gift to be asked to reflect on the work that you have done, to see the scope of your professional life over time. I spend so much of my time at SVSU, like many of you I am sure, in the particular moment—the classroom dialogue, the hallway exchange with a colleague, the pressing issue in the department, the research discovery in the library or lab. Yet the work we do is made of these individual moments, and forms a much larger picture of who we are, and what we value."

In fact, the definition of evaluate is "to determine the significance, worth, or condition of, usually by careful appraisal and study." It is a form of metacognition, isn't it? To reflect back on your work with care and attention, to determine its significance. It is the heart of good thinking, and, of course,

good teaching, and in this issue of *Literacy Link*, our writers here are evaluating their own practice, encouraging us to do the same.

We have two articles that reflect on the importance of global education in the classroom: the first, "Sofas or Study Abroad: Benefits of and Tips for Successful Study Abroad" by Marcia Shannon, winner of the 2011 Ruben Daniels Service Award, discusses her study abroad trips with her nursing students, giving us insight into the ways we can integrate travel experiences as a teaching tool in our various fields of study. The second article by Diane Boehm, "Globalization in the Classroom," follows up on her article in the Winter 2011 issue of *Literacy Link*. This article further explores her virtual classroom collaboration with her colleague Lilianna Aniola-Jedrzejek in Poznan, Poland, and discusses the ways the wiki tool can be used to help students collaborate across various disciplines and cultures. Finally, Andrew Chubb, winner of the 2011 Franc A. Landee

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Teaching Excellence Award, reflects on the importance of teaching interaction literacy to our students.

We hope you enjoy this issue of *Literacy Link*, and the articles will encourage you to reflect on your own practices. (Perhaps we'll even keep track of this issue, and

it will make it into our PPC files for another evaluation.)

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Literacy Link Co-Editors



Sofas or Study Abroad: Benefits of and Tips for Successful Study Abroad

Marcia Shannon

Assistant Professor of Nursing, Winner of the 2010 Ruben Daniels Community Service Award

Recently one of my sisters said to me, “I don’t understand why you waste so much money on travel. Your kids can’t inherit your memories.” This comment provoked many thoughts—not all of them friendly. How do you explain all the riches that the world has to offer to someone who has never traveled? How many people have spent an afternoon in the Tanjing jungle in Borneo communing with orangutans and learning about their habits and impact on the environment? Trekked to the Mt. Everest base camp from both the Nepal and Tibetan routes, meeting many wonderful locals along the way? Watched an elephant walk down the street while eating dinner at an open-air restaurant in Cambodia? Climbed into the Cu’ Chi tunnels once used by the Viet Cong in Vietnam? These are just a few of my most treasured experiences; however, every day is an experience to treasure when traveling.

For many years I have not only traveled personally, but I have taken groups of nursing and health care students to multiple destinations in China, Cambodia, Vietnam, Indonesia, and India to experience health and health care in those countries. In the Nursing

Department, and in the courses I teach, such as Mental Health Nursing, the value of international travel for students is clear. Time spent on travel and study in another country and environment has the potential to have a significant impact on student learning both personally and professionally. Students return as changed individuals, and better nurses because of their experience, and they add so much richness to class discussions back on campus that they themselves can positively affect the cultural competence of their peers.

In fact, research shows that international health care educational experiences can not only increase students’ cognitive knowledge, but also encourage personal growth, help students become more aware and accepting of other cultures, and aid students’ understanding of how context influences health care outcomes (Wilson, 1993). Students can also develop a broader worldview, while confronting stereotypes. For instance, causes of mental illness in many developing nations are related to bad spirits or possession, not neurotransmitters. Although students can learn about health practices in other cultures by reading, they may be limited by incomplete or misinterpreted information (Caffrey, Neander, Markle, & Stewart, 2005). An actual experience gives a new “insider” view of practices in other places. This immersion allows for a deeper, richer understanding of another place as well as a student’s own beliefs (Wiegerink-Roe & Rucker-Shannon, 2008).

Recognizing these benefits, in the following paragraphs, I would like to share some effective techniques for planning a study abroad trip

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Professor Shannon with students at the Taj Mahal in Agra, India, in 2010 after they had traditional outfits made by a tailor in Leh, Ladokth, high in the Himalayas.

and share some student reflections about what they learned by participating in faculty-led study abroad programs.

Plan, Plan, and Plan Again

Probably the most important thing that can be done to ensure a good study abroad experience is effective pre-planning. Faculty must carefully construct desired course outcomes and then construct experiences geared to meet the course objectives. It is not enough to turn over the trip to a travel company that may not fully understand the educational portion of the trip. In my case, for my students, it is imperative I contact hospitals, schools, and other institutions and interact directly with these local service providers to develop a mutually beneficial itinerary. As a result, I have had my students engage in a community assessment with local university students where both groups learned about the community that was the focus of the assessment, as well as the cultural norms and expectations of a culture with which they were previously unfamiliar.

Pre-planning has also enabled SVSU students to complete evidence-based practice projects on topics suggested by the countries we have visited. As a result, sharing then occurred via group discussion with a small panel of hospital personnel in China and through a presentation to an international conference attended by a thousand professionals, as happened during

the Spring 2011 trip to Indonesia. If contact is not made before the trip begins, the professional experiences may be nothing more than a quick “visit” to a place and not a real informational exchange. Students need more depth than the average tour, and without careful planning, the trip may be limited to just that.

However, I also find it helpful to have students experience what the country has to offer in terms of cultural experiences and ecotourism. The cultural experiences often challenge students’ thinking about the differences or similarities among citizens of other countries. Planning to visit local artisans or a regional industry helps students gain firsthand knowledge about the lifestyle of the local people in any given location. Also, because ecotourism is often the “wow” factor that students crave, these outside experiences, like white-water rafting on the Indus River in India, visiting the Tanjung National Park in Borneo, or hiking in a jungle in Vietnam, encourage discussion about the environment and how humankind influences it. These types of experiences also seem to reenergize the students after long days of professional interactions.

Make the Connection between Course Activities and “Real Life”

Students must see the connection between course activities and real life to maximize learning. Research confirms that perceived relevance of course activities to course

content is clearly tied to learning outcomes (Fox, 2010). Thus, before embarking on any study abroad trip, instructors and students must discuss the real-life cultural aspects of the country being visited, so students can understand and appreciate what they will see and experience. Open discussion before leaving on the trip will not only help students to better understand what makes up a culture, including taboos like not using your left hand to pass dishes at a meal in India, but will also help to foster a safe environment for continuing questions upon arrival in the country of interest.

Some of the most dramatic changes often occur at the personal level for students.

Helping the students understand what they will be seeing and experiencing will assist in decreasing culture shock when they arrive in the country. For instance, I find many students are surprised to learn that the family, not the individual, is often the smallest unit in many cultures. Locals often explained to us that an individual's concerns are subordinate to the needs of the family or community. This was clearly seen during a 1999 trip to China. Our Chinese hosts discussed their support of the "one child rule" established in 1979 to limit population growth so the country could prosper. Despite what families wanted in terms of number of children, they complied and had only one. Another example was seen in 2010, as an Indian family talked about the caste system and arranged marriage. In this system, spouses are selected by parents for children based on economics and status, not love, and many people with whom we interacted told us they were married in this manner. Students understood the reasons for these actions but were still amazed that such practices remain popular in many countries. To quote one student, "The U.S. is all about me, me, and me. We can maybe learn from other nations to broaden our views."

My students were also surprised to learn that they engage in ethnocentric thought. This point was very evident when we visited a mental hospital in China and saw "magnet therapy" being used for a variety of diagnoses. Essentially, patients were put into stadium seating between two large magnets, which were turned on for about ten minutes. That was the entire treatment. We had a good laugh about this until we got home and discovered that the United States' National

Institute of Mental Health was using magnet therapy on depressed patients and getting good results (Lou et al., 2003; Savitha et al., 2007). I'm sure all of us are now more aware of our ethnocentrism and guard against it, for this kind of thinking can indeed happen at times, and we must be able to label it, explore the cause, and learn alternative ways of reacting to new information to get the most out of international travel.

Provide Activities for Self-Reflection

Some of the most dramatic changes often occur at the personal level for students. Some of these can be structured, by asking pointed questions and then facilitating discussion. An example would be "How did it feel to be a minority in a country that is 98% Muslim?" Other times growth comes serendipitously. One discovery many students make is that even though many countries are very different from ours, there are many similarities. One student who went to Cambodia in 2008 said, "I couldn't believe that in a developing nation where I expected to have nothing in common with the people, I felt comfortable. People everywhere just want to laugh, have enough food, enjoy family and friends and be safe!" This statement has been repeated in many ways by almost all students I have taken on study abroad trips.

Students also report that their self-confidence grows when they have to learn to use public transportation, negotiate for a better price from a street vendor, or converse with people without knowing their language. One student, from a trip this past summer, told this story: "My alarm clock broke and I needed a new one. I went into the store and pointed to the shopkeeper's watch and said 'Ding, Ding, Ding.' The storekeeper took me right to the alarm clocks. We also shared a laugh! I'm amazed at what non-verbal communication can do and how many skills I have!"

As these student comments show, it is important that one of the course objectives be related to self-reflection. By clearly establishing this objective, students can make the connection between keeping a daily journal and relating their observations to course outcomes. Faculty can then frequently discuss what students are learning, using the students' own ideas as starting points.

In this way, students will clearly know what is expected as a course outcome and why assignments such as journaling or participating in group discussions are more than just busy work.

Establish Relevance Between the Study Abroad and the Students' Course of Study

Faculty often think the links between assignments and course outcomes are very clear and will be seen by all students as being relevant to their major. Unfortunately, these connections are not always as obvious to students as faculty would like to think. Faculty should clarify that the knowledge students gain in another country can assist them in meeting their goals at home. For instance, on nursing trips, access to health care, disease statistics, and immunization patterns are a few of the items always researched, no matter the destination. Learning how other places are improving patient access to care or decreasing certain diseases can give students ideas about how the U.S. is on the right track—or where we need to improve. Other issues such as affordable health insurance may be broached in the same manner.

By far, the most consistent comment students make about home is, “No matter what problems we have in the U.S., we should be grateful.” Although urban areas in many countries, including Indonesia, have technologically advanced hospitals and health care options similar to what we have in the West, we visited remote communities in Indonesia that had only a midwife with a three-year degree after high school to minister to all their health care needs (although the Indonesian health care system is improving rapidly due to many government initiatives). For the students, discovering that the biggest health care concerns in many places are communicable diseases (like polio) and not lifestyle illness (like obesity and heart disease as in the U.S.) is eye-opening. Students readily make the connection between our immunization patterns for infants and the impact immunization has on our overall health, by comparing our health outcomes with other countries’.

Additionally, almost every student comes home saying they will be more open to discussing cultural practices with patients

and honoring them, as evidenced by these student comments:

- “I used to get upset with hospital patients that had a large family in the room with them. I thought they were in the way. Now I will look at them as being important to healing.”
- “I will now have no problem asking a Hindu if he needs a shrine space or if a patient who is Muslim needs someone to be in the delivery room to whisper a prayer in the baby’s ear. I can be an advocate now.”
- “Everything we do has relevance to the class and holds my attention. Discussing our learning is ‘real’ so I never wonder, ‘why are we learning this?’ I’ve learned so much.”

In every country I’ve visited with students,



© David Shannon
Professor Shannon with students and Flower Hmong ladies in a market in Vietnam in May 2008.

we had open discussions about cultural and religious practices, including beliefs about alternative health practices. One student group visited a “therapeutic healer” who cured by removing a black magic curse given in a former life, causing bad karma. Students learned the value of this practitioner in Bali, where the people believe in the constant battle between good and evil. As one student commented, “This is not really different than the power of placebo in our country. The mind is powerful and connects to health.”

Some Concluding Thoughts

Studying in another country is challenging, but it can also introduce students and faculty to opportunities and challenges that

can't be easily created in the classroom at home. International experiences can have a long-term impact on students that is meaningful far after the semester ends. Students grow in their self-confidence about their abilities. Students also challenge their current thinking about their chosen profession when confronted with new ideas from other places. My students report being more open to differing ideas about what constitutes health and health care because of study abroad. Additionally, as they share their experiences and learning with contacts outside the university, the students' insights impact the broader community. Thus, the community benefits from the world-class education that students get through the study abroad program from our small, friendly, "local" university, SVSU.

It would be hard to put a monetary value on what is learned and how people change after moving outside their comfort zone into, literally, another world. But I would still assert that what is gained is far more valuable than a new living room set or other material possessions. I would also tell my sister that what we let our kids and students inherit from us through travel may include acceptance of others, an expanded and richer worldview, and a broader perspective on life. I'll continue to spend my money experiencing the world! I hope you are fortunate enough to do the same.

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Globalization in the Classroom—Part II

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In the previous edition of *Literacy Link*, I described the type of collaborative wiki assignment my students have conducted over the past seven years with the students of my friend and colleague Lilianna Aniola-Jedrzejek in Poznan, Poland; I also provided background information about our teaching contexts. In that article, I promised "more specifics about our processes and suggestions for those who wish to design similar wiki as-

signments," the purpose of this article.

The first question many of you may ask is "why?" Why invest significant time and energy in the planning complexities such a project requires? I really have two answers to that question. The first is that all students, but SVSU students in particular, need a global worldview if they are to be successful citizens and leaders in future generations.

When students do not know how the world changed after the Soviet bloc dissolved some 20 years ago, or cannot recognize the huge transformation that has occurred since then in Eastern European countries such as Poland, or are unable to identify the impact the European Union or the transformational economic growth of China have had in their lifetime, they simply cannot understand much of what is making today's history and tomorrow's newspaper headlines.

But there is another reason these projects are worth my time investment: they re-energize *me* and broaden my own understandings. I teach writing courses to native speakers of English. Lilianna, with a Ph.D. in Physics, teaches English to Polish students of physics and computer science using a Content and Language Integrated Learning (CLIL) approach. Our teaching contexts could hardly be more different. Many of the strategies we have developed evolved by trial and error and ongoing conversations about how best to achieve our mutual goals in such different environments.

The online international collaborations unfold in three phases. I begin by preparing SVSU students to understand the rewards and challenges of cross-cultural projects. At the beginning of the semester, the students introduce themselves and post their photos to a VSpace discussion forum. When we are ready to begin the collaboration with the Polish students, I assign a follow-up task. I review with them some of the many ways in which speakers of American English can cause misunderstanding when communicating with those of other cultures: allusions to American history and historical figures; idiomatic expressions and ambiguous word choices (e.g., football); acronyms and abbreviations; sports and gambling metaphors; different units of measure. Then I ask them to revise their introduction for a "world English" speaker, thus beginning the process of building bridges to those who are English language learners. Each time I use this process with my students, I too develop keener insights into enhanced strategies to transcend language and cultural barriers.

The actual project begins as we divide our

classes into cross-cultural teams of 4–6 students, each with a topic chosen from the list prepared by the Poznan University of Technology (PUT) students. This semester the topics range from nanotechnology in medicine to shale gas as a fuel.

Each team begins with a virtual chat in VSpace, getting to know each other and thinking about how to accomplish the project. Each team is given a VSpace discussion forum to continue their communication and gather materials for their wiki, with multiple threads to exchange information, brainstorm ideas, collect information, post attachments, and lay the groundwork for their wiki. Students often also use e-mail, Facebook (also popular in Poland), or Skype to communicate.

As these initial steps are completed, I remind myself that arranging students into cross-cultural groups does not necessarily guarantee intercultural learning; teachers must take an active role in helping to make such learning happen (O'Dowd & Eberbach, 2004). As students in both countries undertake the project, I work to help them recognize the dual nature of their writing: not only must it complete the project, but it must also do the work of relationship-building in a cross-cultural context. And these must happen simultaneously. American writing courses, which tend to center on basic principles such as purpose, audience, and rhetorical strategies, generally assume that their audiences will have similar ethnic, social class, and cultural backgrounds. In cross-cultural communication, these common understandings likely do not exist.

In the second phase, the discussion forum becomes the base for their collective research and problem-solving over a period of several weeks. Now they must begin to address this new complexity, this dual goal, in their writing; when they post, they not only communicate their ideas, but must also develop rapport and trust—without the familiar tools of physical interaction, body language, or other nonverbal clues. Students must build working partnerships and shared understandings while completing a

If students are truly to understand the globalization issues that will shape their lives—and livelihoods—I am convinced they must grapple with them in a way that connects to their everyday lives.

challenging project using only the medium of words—words in electronic formats, at that. I give them a rephrase-and-test strategy to clarify understanding (a strategy I often find useful in class as well): “*I think you are saying x; am I right?*” With each interaction, they learn a bit more about how to write clearly, simply, unambiguously, and directly, honoring cultural differences, without “dumbing down” the language or the concepts they are exploring.

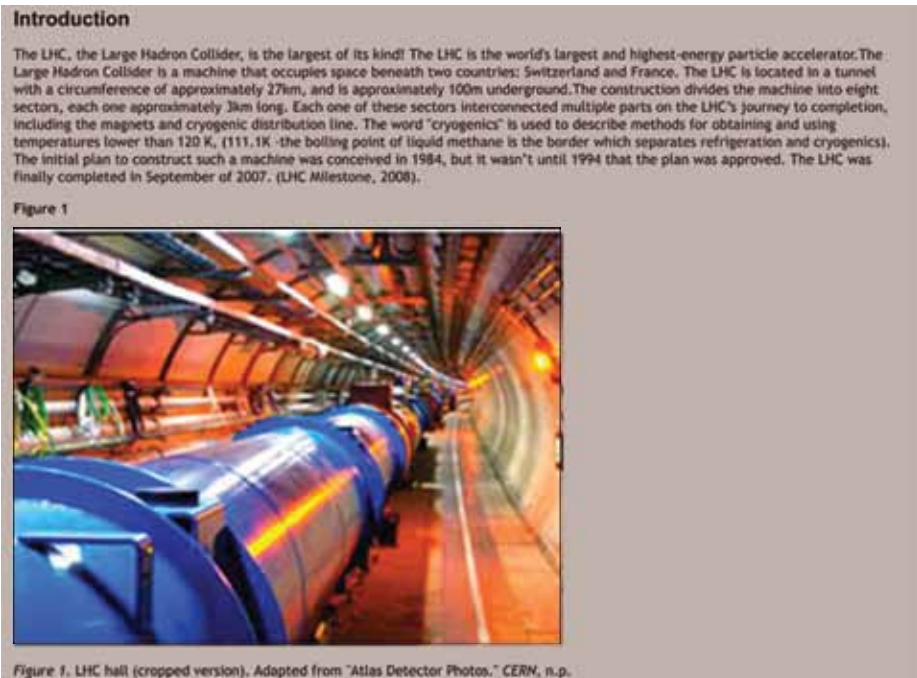
When each group has developed sufficient content and images, they are ready to take on the final phase, the assigned wiki project followed by the class presentations. Over the years, we have found the wiki to have numerous advantages for such a project. For one, it automatically saves earlier versions of the documents. Secondly, because of Wikipedia, the technology is familiar to most students around the world, having already demonstrated to them that nobody “owns” a wiki; collaboration is its essence. Because the wiki is likely to be new to both groups of students, neither can claim the advantage of significant prior experience. Most importantly, it blends images and text in ways that allow nonnative speakers of English to use images, such as diagrams, charts, and photos, to explain complex processes that would likely be difficult for them to put into words. Furthermore, it allows for the

insertion of links to research sources, videos, and other online sources of information.

Beyond these technological advantages, the wiki has other advantages. It teaches “technical literacy, content creation in a digital environment, the art of collaboration, consensus building, creating explicit knowledge from tacit understanding, and effectively communicating ideas to other people through networked knowledge environments” (Bruns & Humphreys, 2005). All of these are valuable professional and life skills. The wiki also supports students’ development as writers, as it fosters continual meta-analysis by the group and incorporates all four aspects of revising (adding text, deleting text, reordering text, and rewording text) in multidimensional and nonlinear ways.

The wiki also demands logical structuring, with headings to guide the reader. And as it is built part by part, rather than on individual contributions, it also focuses on the work of the team, since no names are attached to the various sections of the wiki. This structure can then easily be adapted to the class PowerPoint presentations in both countries, the culmination of the project.

Perhaps the best way to demonstrate the results of the wiki project is to provide an example from one group in last year’s first year writing class.



The Large Hadron Collider is the most powerful of its kind ever built, and its purpose is quite simple: to recreate the conditions similar to that of the Big Bang to figure out what the universe is made of. Smaller scale experiments have taken place to try and answer this question over the years with little to no avail. They have, however, helped in defining the LHC's purpose: to finally come up with factual answers. Physicists around the world have tried to get "big answers with modest means," but such an approach often concludes with results that are heavily lacking. That is why the magnitude of the LHC is astounding, because it has the capabilities to produce such experiments that will finally give physicists answers (Acherbach, 2008).

Although more easily said than done, such a feat is incredibly important for physicists worldwide. With information gained from experiments with the Large Hadron Collider, physicists may be able to explain how humans came to live in a universe that "grew with just enough more matter than antimatter" (Acherbach, 2008). Antimatter is like matter, but with an opposite electric charge. Everything on Earth is made of matter, but when the Big Bang happened, equal amounts of matter and antimatter should have been produced. When particles of matter and antimatter meet, they annihilate each other, creating energy. Physicists believe that a small fraction of matter survived to create our Universe. The experiments the LHC will conduct may help answer questions about this unstudied topic (Why the LHC, 2008).

The LHC can also help to explain what 84% of the Universe is made up of. All of the Universe we understand consists of matter, but dark matter and dark energy are what is presumed to be the other 84%. These types of matter are extremely difficult to study, but with the experiments the LHC can do, physicists may soon understand more (Why the LHC, 2008). Also, such experiments could possibly help in finding the elusive Higgs particle which was, 40 years back, proposed to be existing, but has never been found. The Higgs particle is said to have 100 to 200 times the mass of a proton, precisely the reason why having such a large collider is the only way to produce one (Acherbach, 2008).

For example, Figure 2 shows how a Higgs particle may be formed in the Large Hadron Collider. It depicts two gluons, which are mass-less particles, broken down into two parts: a top and an anti-top. The top of one gluon and the anti-top of another gluon then combine to form a Higgs particle. Before the LHC, depictions such as this were not testable.

Figure 2

Figure 2. Higgs Boson Diagram. Wikipedia, n.p.

All in all, the Large Hadron Collider serves a purpose common to numerous inventions and machines: to gain knowledge by experimentation. The LHC will someday help to explain what the universe is made of, and many more unanswered questions that have puzzled physicists throughout the years.

History

The LHC was originally created in the 1980s, and approved for construction by the CERN council (the European Organization for Nuclear Research) in late 1994. In June of 1995, Japan became an Observer of CERN and began to financially contribute to the project. Japan made two other financial contributions in 1998 and 1998. In October of 1995, the technical design of the LHC was published. In March of 1996, India made a financial contribution to the construction of the LHC, and in June, Russia also made a financial contribution. Canada also made a financial contribution in December of '98.

In February of '97, a model the size of the LHC main dipole magnets was lowered into the tunnel of the future accelerator. In December of the same year, the U.S. signed an agreement to take part in the LHC, and they also agreed to provide superconducting magnets for the accelerator. Also during this month, the Italian Institute INFN delivered the first prototype of the 15 metre dipole magnet, which constitutes the heart of the LHC.

In June of '98, the first prototype magnet with the 15 metre nominal length was tested successfully. A year later, in June, Bulgaria became the 20th Member State of CERN. In February of 2000, the first LHC elements were sent by the U.S.

In January of 2003, the first magnet for the LHC manufactured in the U.S. arrived at CERN. In March of the same year, the last cubic metre of ground was dug for the whole LHC project, which marked the end of excavation work for the new accelerator. In October of the same year, the first short straight-section of the accelerator, which contains a main quadrupole magnet and corrector magnets, was assembled and successfully passed its first tests.

In December of 2001, the last of the eight 4.5 kelvin (-268.7 degrees Celsius) refrigerators were delivered, which are an essential part of the cryogenics (cooling) system. In June of 2004, the LHC magnet test facility was completed. The facility must evaluate all the superconducting magnets at their operating temperature. In April of 2005, a cryogenics unit cooled to 1.8 kelvin (-271.4 degrees Celsius) for the first time, which is the operating temperature for the LHC. In March of 2006, the gigantic CMS solenoid magnet was cooled to its operating temperature, -269 degrees Celsius. (LHC History, 2008)

Of course, these educational advantages of the wiki need not be limited to international communication. Last winter, Sherrie Beattie and I used a similar process in our RPW 300 (Writing in the Professions) classes. Her class was online; mine met face-to-face. Again the goals were to use online tools for collaboration, problem-solving, and document creation. This project likewise had several phases; my student teams created fictional entities (businesses or non-profit organizations); her students then created appropriate marketing materials for these entities. Both of these sets of documents were posted to a Wikispaces wiki. My students then critiqued the marketing materials, gave feedback, and eventually presented their entity and marketing materials in class presentations; her students wrote a reflective critique.

Collaborative problem-solving skills are an asset in all phases of life. If students are truly to understand the globalization issues that will shape their lives—and livelihoods—I am convinced they must grapple with them in a way that connects to their everyday lives. Indeed, one of our ultimate goals as educators should be to help students develop intercultural communicative competence. Students need not necessarily agree with the views and opinions of others. The more important question is this:

can they recognize, understand, and respect differences, and effectively communicate and negotiate in spite of them?

At the end of the project, students are intensely proud of their accomplishments; Ashley Shiefer, an SVSU student from last fall's class, put it this way:

I loved getting to know my new Polish friends and researching on a unique topic together. The students knew English, but they were not fluent in the language. On the other hand, they went to a science school and were studying Physics. I did not know very much about Physics. By helping the Polish students with their English, they helped us with Physics. It opened my eyes to a new world in which we are able to globally connect to others and work together even without knowing each other.

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Interaction Literacy

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My students are much more proficient at electronic communication than I am, especially when it comes to social media (one of these days, I will get around to finding a bookstore that sells *Facebook for Dummies*), and as I struggle to adapt to the changing electronic landscape, the continuing importance of direct, personal interaction becomes increasingly apparent. Although advances in electronic media may make the transfer of information faster and easier, it should not be seen as a replacement for personal (i.e., face-to-face) contact. Instead, technological advances should enhance this vital foundation of interpersonal communication. As a teacher, I find myself reflecting on the ways personal and immediate experiences can be more powerful educational tools than anything in the “virtual” world. Technology is best used to *facilitate* interpersonal communication, rather than substitute for it, since true communication is active—not passive—learning.

A somewhat unconventional example of the importance of direct interaction is in “person-to-chemical” interaction (feel free to substitute the appropriate counterpart for your discipline). Several years ago, I received an examination copy of a “virtual” organic laboratory software package. As laboratories are inherently “hands-on,” virtual laboratories have, to me, always seemed to be paradoxical, if not an anathema. However, my curiosity got the best of me, and I decided to see how “real” this product could be.

First, some background information. The Grignard reaction is one of the fundamental reactions in organic chemistry. Its versatility and elegant simplicity is counterbalanced by its characteristic petulance when it comes to laboratory execution. The blessing and curse of the Grignard reagent is its high reactivity, which makes it highly useful, but also means that it reacts with things such as water and carbon dioxide (often preferentially to what your plans

for it are), both of which are difficult to eliminate from reaction apparatus.

The Grignard reaction thus should be an easy example to test the capabilities of the electronic laboratory, and so I dutifully performed the reaction as it should be done: I “assembled” the proper glassware, “added” the correct reagents in the proper order, and “stirred” the reaction mixture for the allotted time. Upon proper “workup and isolation,” I was rewarded with, well, a message that informed me that I had done everything correctly. Okay, great. What would be the consequences of incorrectly “performing” the reaction? So I set the reaction up again, but this time, I went to the other extreme: I “added” water to the virtual Grignard reagent and virtually sealed up the reaction apparatus. I was very quickly rewarded with an amusing virtual explosion, glass shards and all. I should have been impressed.

Now before I am accused of advocating for the importance of *real* explosions as a teaching tool in undergraduate laboratories, my point is this: in a laboratory experiment, failure is usually much more subtle than an explosion. There are myriad ways to get the Grignard reaction wrong and only a few ways to get it right. I deliberately forced the virtual conditions to get the explosion, but the reality is that nearly all of the skill is in making a Grignard reagent that *can* react violently upon addition of water. In our undergraduate laboratories, our students are taught to read the clues that tell whether the reagent is successfully being formed: tiny bubbles coming off the surface of the magnesium ribbon, condensation of the solvent above the reaction mixture, color changes as the iodine initiator is consumed. By far, most unsuccessful Grignard reactions just sit there in placid obstinance: “I really don’t feel like reacting today, maybe tomorrow. Probably not, though.” Meticulous preparation and

execution (and perhaps a little ritualistic superstition) is required to coax the reaction out of indolence. The only way to teach the technique, the *feel* of the reaction, is through direct interaction with the real thing; a virtual laboratory will never be able to replicate the complexity of variables such as humidity, reagent purity, and emotional state (I have known Grignard reagents to be heartless when it comes to understanding just how important it is to leave enough time to cram for an upcoming exam). Although understanding the theory behind how a particular chemical reaction works is important, one must *experience* it to truly understand and utilize it beyond the virtual ideal that is presented, whether in a textbook or electronic form. This is true in human interactions as well.

A few years ago, I was talking with a friend from another Michigan university after a session at a regional meeting for health professions advisors. Both of us routinely attend both the national and regional meetings, networking with professional schools and gaining valuable information on the changing landscape of admissions requirements and other critical aspects of undergraduate preparation. We realized that, while these meetings were valuable, what was missing was a chance to network, to talk, face to face, more closely with our own in-state professional schools and to focus on the unique issues facing Michigan undergraduate institutions. Thus, the Michigan Advisors for the Health Professions (MIAHP) conference was born.

Then, when the opportunity presented itself, I jumped at the chance to host the MIAHP conference at SVSU this past September. We may not have the national recognition of some of our sister institutions, but we do have outstanding facilities and people. Though the comments I received on the quality and beauty of our physical campus were forthcoming, they only provided a memorable backdrop for the human interactions that were the true intent, and most valuable outcome, of the conference.

Health professions are inherently interactive on a personal level: we speak of the “doctor-patient relationship.” This is why most

professional schools spend so much, in terms of resources, on the interview process; many schools even make a day of it. At the MIAHP conference, I enlisted the aid of student volunteers to help with registration at the beginning of the conference. An additional benefit of this was that these students then had the opportunity to interact with the admissions representatives from various graduate programs who were the conference’s featured speakers. Although most of the students left after their duties were finished, one enterprising pre-veterinary student made the most of her opportunity. Recognizing that one of the speakers was from Ontario Veterinary College (OVC), a school whose distance makes it difficult for most students to visit, she took the initiative to introduce herself. The admissions representative was so impressed with the student’s courage and professionalism that she invited her to stay for lunch so that they could continue their conversation. The extra effort that both the student and the representative made to interact directly with each other has forged a connection that has positive implications for both recruiting (on OVC’s part) and opportunities for professional achievement (on the part of SVSU’s students). These two individuals still communicate by e-mail, especially due to the rather prohibitive distance, but the most vital initial contact was made by taking advantage of an opportunity for direct personal interaction. Now, because of this interaction, the OVC representative has a clearer understanding, a better contextual framework, of who the student is as a person, rather than a collection of statistics on a veterinary school application.

In summary, face-to-face interaction (whatever the other “face” may be) is no less important than it ever has been, even in this age of nearly instantaneous communication. Some might even argue for its *increasing* importance, but I do not believe that it should be an “either-or” situation with technological advances in communication. Universities are excellent settings for personal connectivity, and we should do everything we can to model and foster a culture of interaction literacy for our students.

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Call for Papers

The editors of *Literacy Link* invite members of the campus community to submit articles for review and possible inclusion in the Winter 2012 issue.

Literacy Link is a campus publication that began in the winter of 1992 with the support of Dr. Robert Yien and the Office of the Vice President for Academic Affairs. Editors Sally Cannon and Jenny Senft, in the first issue of *Literacy Link*, focused on three key areas of literacy: writing, reading, and thinking. Over the years, individuals from departments across campus have added to the conversation. For example, members of the Mathematics Department and the Criminal Justice Department have contributed articles on career literacy, members of the English Language Program have written on language development and the hurdles of writing in a second language, and members of the English Department and the Chemistry Department focused on

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Articles for *Literacy Link* should run 500 to 1,500 words in length. Authors should follow either MLA or APA format.

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