EL CAMINO COLLEGE
Office of the Vice President – Academic Affairs
January 2, 2013

TO: President Thomas Fallo

FROM: Francisco Arce

SUBJECT: Sabbatical Leave Reports – 2011-2012

Attached are Sabbatical Leave Reports from faculty who were on sabbatical in 2011-2012.

Sara Blake	Fall 2011
Don Brown	Spring 2012
Amy Grant	Fall 2011
Chris Jeffries	Spring 2012
Jennifer Montgomery	Fall 2011
Susana Prieto	Spring 2012
Lijun Wang	Fall 2011
Steve Waterworth	Fall 2011

SABBATICAL LEAVE REPORT
SARA M. BLAKE
HUMANITIES DIVISION
FALL 2011

TYPE OF SABBATICAL:

For my sabbatical, I chose the option of a program of independent study in my teaching field of English, specifically in the area of Basic Writing. I chose to have El Camino College serve as the accredited institution of higher education with Barbara Budrovich, Writing Center Director, serving as my advisor.

DESCRIPTION OF PROJECT:

I conducted a study of Directed Learning Activities (DLAs) currently being used in conjunction with Basic Writing instruction in community colleges, with a focus on California Community Colleges. DLAs are designed to offer students the opportunity to improve and reinforce targeted course-related skills. Typically, DLAs are offered through a tutoring center to supplement in-class instruction.

Each DLA focuses on a specific skill or concept, ideally one identified as a core competency. It includes an independent learning component and requires a follow-up review session with a tutor or instructor. The independent learning component generally encompasses instructional materials and practice materials. The tutor review session provides timely feedback for the student and allows for immediate assessment of student mastery of a concept, with an opportunity for on-the-spot follow-up intervention if needed.

When designed with input from departmental faculty, DLAs can promote consistency of instruction and help to foster consensus on foundational skills. To begin my project, I solicited feedback from El Camino College Basic Writing instructors on what skills they felt needed to be addressed beyond the classroom. Because of the tutorial component involved in every DLA, I also asked the El Camino College Writing Center tutors and Writing Center Director to identify areas of need they saw in the essays of English B students using the Writing Center. Additionally, I examined the materials currently available in the El Camino College Writing Center to supplement tutor/student conferences to address these needs.

I then studied both the design and implementation of DLAs at other community college campuses. I focused specifically on three items: models for implementation, activity templates, and targeted skills. In completing my study, I visited the Writing and Reading Success Center at Long Beach City College to observe students and tutors/instructors actually using the DLAs, and to interview the Instructional Specialist in charge of the Center. I also had extensive phone conferences with Instructional Specialists overseeing DLAs at Cerritos College, Chaffey College, and Santa Barbara City College to discuss not only the DLA materials and processes in use, but also to get a sense of faculty involvement, student response, effectiveness, and financing issues. In addition, I obtained and studied numerous examples of DLAs currently in use and in development at a range of colleges.

IMPLEMENTATION MODELS OBSERVED:

Models of implementation varied at the different institutions, but 3 distinct models emerged.

Chaffey College Institutional Model:

This model reflects Chaffey College's college-wide adoption of Student Success Centers as a primary structure for the support of student learning. Success Centers are not part of one department/division. Funding is obtained through apportionment (1/2) and district funds (1/2). These funds are committed to student success and completion on the theory that student support services are a key component to success. Basic Skills Initiative funds are not being used to support Success Centers. Curriculum has been revised to include a 4-hour supplemental learning requirement. One option for students to fulfill this requirement is to attend a center workshop led by an adjunct faculty member on a focused topic; the other is to complete a DLA in a Center.

Chaffey College DLA Design - Writing Center DLAs are broken down by course and level. At each level, there are two types of DLA. One consists of various exercises based on general concepts related to the writing process: getting started, purpose/audience/tone, paragraph and essay structure, etc. The second type, sentence-level DLAS, requires students to bring a piece of their own writing, review a grammar concept either online, in a PowerPoint, or on a handout, and then apply the concept to their own written work. In all cases, the independent student work is followed up by a review with a Center tutor. DLAs are tied into specific Student Learning Outcomes (SLOs).

Chaffey College Process/Method – Activities are developed through a partnership of the Success Center staff and the faculty. Students access English DLAs online in the Writing Center, which is located in the library. No appointment is needed for activities, but students must see a tutor upon completion. With the exception of a diagnostic DLA, tutor review sessions for DLAs are 15 minutes long. Students must pay for any printing, so few students opt to print out materials. Faculty responsibility for oversight is minimal; a stamp sheet records student participation.

Advantages:

- Creation of DLAs has led to meaningful faculty dialogue about what's essential to teaching a particular concept.
- The Writing Center becomes a partner with the faculty.
- Student use of DLAs is easy for instructors to implement.
- An activity is not meant to be a worksheet that's corrected, but a starting point for discussion/interaction with individual students.
- The DLA meets the Chancellor's Office requirement for "credit" activity whereas a 0-unit lab for capturing attendance at a Center does not.
- Requiring use of DLAs and attendance at workshops at the Basic Writing level creates motivated students who'll continue to use the Success Center after it's no longer required.

Challenges:

- Faculty need to make workshops and DLAs a meaningful part of classroom curriculum.
- A paradigm shift in the tutoring session model to focus on process rather than product needs to be infused in the Writing Center program.
- Assessment of effectiveness requires collection of data (course success correlation with completion of supplemental learning, survey of activities students completed in conjunction with an assignment).
- Limitations of size and staff of the Writing Center affect availability of computers and tutors.

Recommendations for Effective Use of DLAs Based on this Model:

- Tie-in DLA topics with SLOs.
- Use DLAs as part of the assessment/follow up process for SLOs.
- Use DLAs as entry points for discussion, rather than just as worksheets for correction.
- Keep activities small in scope for small increments of success.
- Loop activities to classroom essentials.
- Showcase DLAs at department meetings for feedback.
- Involve faculty in development of additional DLAs (what works well, how could it be made available for everyone, etc.).

Observations - The solicitation of faculty feedback on DLAs at the departmental level seems helpful in improving DLA quality and increasing faculty buy-in. Tie-in of DLAs to specific Student Learning Outcomes leads to alignment of DLAs with course content. In addition, it presents opportunities for developing DLAs as follow-up to SLO assessment where a need for further instruction on a particular concept is indicated. Dialog inspired by DLAs among faculty about key concepts and course content seems to have been an important outgrowth of DLA development.

Major Issue in Implementing at El Camino College - The funding model at Chaffey is not readily duplicated at other institutions. In order to justify credit-level funding for DLA implementation, it must be part of the course outline as a requirement. This would necessitate major departmental curriculum revision at El Camino College.

Cerritos College Pilot:

Cerritos College is currently piloting a Success Center model, under a designated Dean of Academic Success. The Cerritos College Student Success Center incorporates math, modern languages, ESL, reading, and writing support under one umbrella. Apportionment is not currently used for funding. Because the project is a pilot, alternative funding is being used though it is not Basic Skills Initiative funding.

The Cerritos College Student Success Center has four delivery methods: Faculty-led workshops, DLAs, one-on-one tutoring (led by faculty, peer tutors, staff tutors with BA or MA), and technology solutions (pilot of a learning pathway through Pearson's

MyFoundationsLab for students who test below the Accuplacer score to qualify for an English course).

The focus now is on workshops, with 100 workshops per semester in areas of modern languages, math, reading, ESL, and English essentials. The college is piloting interdisciplinary partnerships to create workshop series, such as a research writing workshop for political science students conducted in the Success Center by a librarian. DLAs are in the development stage for English, with more work having been done on DLAs by math. Foreign language is also involved. English DLAs are not targeted to specific levels at this point but may be in the future. The initial English DLAs correspond to the topics of existing workshops and are arranged in three sets: English Essentials, Starting Strategies, and Documentation.

At the time of this study, a 3-day faculty retreat and a future faculty survey were planned to provide further information and follow-up.

Cerritos College DLA Design - A standard template for DLAs is under development that includes the following components

1) Description – on flyer, website, what student will learn or be able to do after completion
2) Prior knowledge required (math driven)
3) Materials – for counter staff at the Success Center as well as for student
4) SLO

5) Feedback – mini feedback form for student, verification for instructor/Center

The emphasis in DLAs for writing students at Cerritos College is on metacognition, with students who are doing a typical exercise or activity being asked to explain why or how they have chosen a particular answer. These explanations form the basis of tutor and student interaction in reviewing the DLA rather than relying just on correctness of answers.

Cerritos College Process/Method - At this point, referral is optional. Faculty can require students to complete a certain number of DLAs during the semester (or not); some faculty offer extra credit for completion of DLAs. Still other faculty refer individual students as needed or issue a blanket referral on certain topics by dates that correspond to the class syllabus to reinforce class content. For example, prior to a class discussion of sentence fragments, students might be directed to attend a workshop or complete a DLA on that topic.

Advantages:

- By design, the DLA model couples skill and strategy acquisition with metacognitive and affective learning that transfers over to classroom.
- Students derive an element of self-efficacy from the independent activity portion.

Challenges:

- Because this is a pilot, it lacks the institutional mandate of Chaffey's program.

Currently, faculty can require student participation or not.

- Getting faculty buy-in to require three hours of student participation is difficult.
- Making students see participation as more than "a box to check off" is a challenge.
- Connecting DLAs to actual student writing assignments poses design issues.

Recommendations for Effective Use of DLAs Based on this Model:

- At least initially, opt for voluntary faculty referral rather than requiring faculty to include 3 hours of independent work to promote faculty buy in.
- Facilitate interdisciplinary development of DLAs to expand on the potential of this format to serve more than just the writing courses.

Observations - At this point, the DLA component of the Success Center is really only in the development stage, so it's difficult to assess its effectiveness. The most interesting aspect is the cooperative development of interdisciplinary DLAs targeted at specific skills, such as pairing language arts and science faculty to develop a DLA on how to write a lab report, or language arts with music faculty to develop a DLA for writing concert reviews.

Issues in Implementing at El Camino College - Implementing interdisciplinary DLAs at El Camino would require a higher level of coordination of the various Centers than currently exists (For example, where would they be housed? Learning Resource Center? Reading Center? Writing Center? All of the above?). It's not clear how the coordination

of faculty from various disciplines to design DLAs would be achieved. Perhaps this coordination could occur under the auspices of Faculty Development.

Long Beach City College "Activity" Model:

Adapted from the Chaffey model, the Long Beach City College Success Centers offer both workshops and DLAs under the title "Activity." The Reading and Writing Center is directed by an Instructional Specialist who's also an English faculty member. At the Center, students can fulfill a supplemental learning requirement for English courses by attending workshops led by adjunct faculty, by completing DLAs, or by participating in directed study groups.

Long Beach City College DLA Design - Students are offered a comprehensive menu of topics with 20 items. DLAs exist at each course level for all items. Once the student identifies the topic and course level, he/she is given a handout on the activity. There are two types of DLA: one is more skill and drill based, and the other is more holistic. The holistic DLAs require the student to work on an actual course assignment in areas such as prewriting or draft revision.

Long Beach City College Process/Method - Students are given a Supplemental Learning Assistance Verification Sheet the first time they check in at the front desk of the Center. Hard copies of DLAs are filed in boxes behind the front desk, and distributed by the front desk staff, who also track student usage for accountability purposes. The verification

sheet is stamped each time a student completes an activity. Upon completion, the student signs up to meet with a tutor for a review session. If a student fails to master a concept, the tutor contacts the instructor instead of signing off a competency.

Advantages:

- DLAs menus are available on the college website.
- A comprehensive set of DLAs at each level for each topic gives continuity and accommodates students' intellectual growth as they progress.
- Tutors are specifically trained for DLA work by experiencing 3-4 DLAs as "students" and creating their own response sheets.
- Full-time and adjunct instructors are all involved in creation of DLAs, thus promoting collegiality as well as continuity among all course sections.
- Use of DLAs frees up class time, provides an extra voice, and allows for focus on specific skills.
- DLA creation gets faculty dialoguing to identify topics (originally done as a flex activity).
- The practice of notifying instructors if a student completes the DLA but fails to master the concept enhances the loop from instructor to Center and back to instructor.

Challenges:

- Labor intensiveness of requiring students to complete 3 activities requires additional staff, including a classified Lab Coordinator and additional front desk

staff.

- Some faculty members balk at the extra work to promote DLAs and keep a record of their students' DLA completion (though this may be changing over time as faculty get used to the process).
- The faculty are not always aligned on texts and materials appropriate to a particular writing course, which poses a challenge for establishing DLA levels.
- The process can be mind-numbing for tutors when large numbers of students come in at the same time to do the same DLA near a due date (e.g. the middle or end of the semester).

Recommendations for Effective Use of DLAs Based on This Model:

- Develop DLAs on each topic for different levels—Basic Writing, Pre-Collegiate Writing, Transfer-Level Writing—to give continuity to tutor/student interaction and recognize student development and growth. For example, a presentation of "Coherence" at the Basic Writing level might focus on logical order and transition words whereas the same topic at the Transfer-Level might discuss parallel structure and more sophisticated transitional devices.
- Post an "Activity Menu" to publicize the availability of DLA topics, perhaps on the Writing Center website.
- Have a consistent Activity Menu across levels to reinforce the idea that the elements of good writing are consistent.
- Offer Flex credit for faculty to create and review DLAs to enhance faculty participation.

Observations - The wide variety of topics covered, each topic adapted for three different levels of student writers, reflects a great deal of work on the part of faculty and Center staff. This system requires a rather high level of faculty and institutional commitment as well as a revision of curriculum. Center staff must also be available at the front desk to distribute DLAs and to stamp verification sheets, and staff must be coordinated and trained.

Issues in Implementing at El Camino College – Because Long Beach City College instructors are requiring 3 hours of an activity per semester, some glitches arise, such as students overwhelming the Center just before due dates. Accommodating large numbers of students who are required to complete these activities is a logistical and funding challenge. The development of 3 levels of DLA for each topic requires a high level of departmental and institutional support for supplemental learning in general and DLAs in particular.

OUTCOME OF PROJECT:

Application of DLA Models to El Camino College Writing Courses:

In the successful models of DLA implementation at other colleges, these activities (alone or as part of a menu of activities including workshops and computer-aided instruction) have been written into the course outlines as a requirement, so as to incorporate the tutorial element into the writing course loop and to ensure ongoing funding.

El Camino, in contrast, has developed a distinctive course design that incorporates the tutorial element directly into the classroom environment. El Camino College's Basic Writing and Pre-Collegiate Writing courses (English B and English A) already incorporate one-on-one tutoring , following a course design of 2 hours of lab (one-on-one tutoring provided to the students in the classroom by the course instructor and a class tutor) and 2 hours of lecture for the 3 unit course. This alternative set-up poses a challenge in adapting any of the current DLA models for requirement of DLAs. Additionally, the use of DLAs requiring students to get help in the writing process (prewriting, drafting, documenting) via the Writing Center seems to be superseded, in large part, by the in-class labs for English A and B.

What the El Camino College system doesn't provide currently is a well-defined link between the Writing Center and the Writing courses in specifically targeted areas of need. DLAs initiated and approved by the writing instructors as representative of their course content and designed in conjunction with the Writing Center Director and tutorial staff would provide such a link.

Designing DLAS for Basic Writing Courses at El Camino College:

My project focuses specifically on DLAs for Basic Writing (English B). The desired outcome of my completed project is to introduce the concept of DLAs to El Camino College's English faculty and to provide models to demonstrate how DLAs might address needs of Basic Writing students as identified by English faculty and Writing Center staff.

The DLAs can form a jumping off point for further discussion of this learning methodology, provide models for revision, and, optimally, form the basis of a pilot program at El Camino College.

In completing my project, I created a model for a DLA template and designed a set of 10 DLAS for presentation to the English faculty and to my project director, Barbara Budrovich.

- **El Camino College DLA Template:**

  In examining the templates from the various colleges, I developed a template that's easily adaptable to a variety of topics. Including SLOs on each activity also allows for use of DLAs to address areas identified as needing more work during SLO assessment. The template includes the following features:

  - ECC Directed Learning Activity Logo for easy identification
  - Topic and Course (level)
  - Student Learning Outcome (SLO) addressed by DLA
  - DLA Objective/Purpose
  - Time needed to complete DLA
  - Instructions for completing DLA
  - Independent Activity for student (review concept via handout or online exercise, video, slideshow)
  - Review with Tutor (ascertain mastery of concept, apply to student's written

work if applicable)

- Sign off box that can be returned to instructor for verification of completion

- **DLA Set for English B:**

  As part of my project, based on input received from the El Camino College Writing Center staff and Basic Writing instructors, I created the following set of DLAs for English B, for presentation to the Writing Center Director in fulfillment of my sabbatical project and to the English faculty for revision, approval, and implementation. These DLAs are posted on the Basic Writing page of the Basic Skills Website under the heading "Proposed English B Directed Learning Activities Presented in Fulfillment of 2011 Sabbatical Project by Sara Blake, English Department": http://www.elcamino.edu/academics/basicskills/basicwriting.asp

  - ✓ *DLA: Apostrophe*
  - ✓ *DLA: Fragments*
  - ✓ *DLA: MLA Format*
  - ✓ *DLA: Past Participle*
  - ✓ *DLA: Past Tense*
  - ✓ *DLA: Run-Ons and Comma Splices*
  - ✓ *DLA: Support*
  - ✓ *DLA: Subject-Verb Agreement*
  - ✓ *DLA: Topic Sentences*
  - ✓ *DLA: Transitions*

Possible Options for Initiating DLA Use for Basic Writing Courses (one or a combination):

- One option is to make DLAs available in the Writing Center so that students with a particular need can be referred by their instructors, perhaps when a paper is returned. For example, a student whose writing exhibits a need for further practice in forming the past perfect tense might be referred to the Writing Center to complete a DLA on that topic.
- Another option is to make DLAs available to instructors for in-class use in the Basic Writing classroom lab to assist students with particular writing needs, with the tutorial follow-up element to take place there.
- Still another option is for Basic Writing instructors to collaborate in creating a set of writing process-specific DLAs designed specifically for use in the lab portions of the Basic Writing courses with drafts of student essays. These DLAs could provide a template and structured lab approach to topics like prewriting, annotation, and revising to add consistency to the in-class labs.
- The DLA model might be adaptable for incorporating optional supplemental instruction for Basic Writing Courses as is done in Basic Math courses at El Camino College currently.

Reflections:

In completing my project, I found that the use of DLAs in current practice is not as successful as I thought it would be based on the attention it's received at conferences and

presentations. In addition, DLA quality and commitment to DLAs varies widely.

Several factors at various institutions seem to reduce the success of DLAs:

- design that's specific only to the class taught by the designing faculty member
- stipends to create DLAs that resulted in mass production initially and then DLAs languished
- lack of faculty buy-in and student motivation to use DLAs in a meaningful way
- when given options to fulfill an "activity" requirement, students tending to opt for workshops
- while great for stimulating faculty dialogue, consensus and design of a DLA itself presenting a big challenge

Positive Aspects of DLAs:

- Everyone interviewed mentioned the potential for metacognitive reflection offered by the interaction of the tutor and the student brought about as a result of the DLA process. Having the student explain his/her thought processes in completing the activity often identified an issue of understanding or process that the tutor could then address. This seemed in all instances more valuable than the mere completion of an exercise.
- Strengthening the relationship between the tutoring Center and the classroom instructor was a major benefit that occurred when DLAs were well coordinated in terms of level, topic, and appropriate content with course curriculum and actual instruction. In these cases, tutoring intervention enhanced student learning of in-

class material—both as a previewing activity for an upcoming lesson or as a remediating activity to follow up an in-class lesson or assignment.

- The opportunity for interdisciplinary faculty collaboration (as described in the Cerritos model) seems a promising way to combine Writing Across the Curriculum with current efforts to enhance student success.

Personal Benefit and Benefit to the Institution:

- Having the DLAs I created in fulfilling my project available in the Writing Center for my Basic Writing students will allow me to offer them an additional resource to supplement in-class instruction and thus improve my effectiveness as an instructor. I also intend to adapt them for use in the lab portion of the course.
- Because Basic Writers vary widely in their mastery of grammar and writing, being able to focus on the specific needs of each individual student via the DLAs should improve the outcomes of my Basic Writing students. No student needs to leave my course without having a core writing competency addressed even though it might not be addressed extensively or even at all in the lecture portion of the class.
- The creation of the DLA template and sample DLAs caused me to examine and improve my own pedagogy in the area of Basic Skills in terms of imparting information in a meaningful way to today's basic writers. It also caused me to focus on how specific objectives relate to the course SLOs.
- Finally, meeting the challenge of designing a learning experience beyond the classroom was an invigorating intellectual exercise that brings me back to

teaching writing with a renewed enthusiasm and with new tools to promote active learning for my students. I look forward to sharing this enthusiasm and these tools with my colleagues.

Sabbatical Leave Report -- Donald I. Brown, 2012

It is my pleasure to report to the Sabbatical Leave Committee my successful completion of proposed educational projects during El Camino College's Spring semester of 2012. I successfully completed ten (10) quarter units of study at UCLA's Graduate School of Education & Information Studies; nine (9) units were required under my proposal. The grade received across the board for all studies was "A".

An overarching goal of my sabbatical studies was intended to hone my personal knowledge of trends in digital preservation, the digitization process, and the best practices surrounding online access of digital formats. To be further exposed to these matters I enrolled in the graduate seminar INFSTD XLC 289 – Museum Informatics (Dr. Jonathan Furner of the GSEIS), where major components of the class involved theoretical and practical study of digitization methodologies, philosophies, and research regarding the access and usage of such information by users of cultural institutions.

One of my particular projects for this seminar involved the construction of a database (providing full digital imaging, coding, descriptors, and authorities) of objects d'art, such as those that would be found in a museum or other cultural institution. To accomplish this, class members utilized a shareware software package called **"Collective Access"**. The final form of the project was evaluated as being one of the best among my fellow students.

I wrote a major research paper for the XLC 289 seminar entitled: **"Cultural institution website evaluation: Developing a framework and an evaluative tool based upon Herzberg's motivational/success theories"**. The paper is more than 30 pages in length and includes 4 pages of detailed bibliography. Within the context

of current research and research conducted within the past few decades, I developed a specific website evaluation tool in the form of a checklist of characteristics, which itself is based upon the significant behavioral/motivational research conducted by Herzberg's Harvard-based research on behavioral motivation in 1987. Examples of crucial evaluative questions are ones that ask how the online presentation of an institution's collections compares with its actual, in-house displays and holdings and that ask how a website promotes the mission of an institution and serves its user groups.

Using the tool that I developed, I made detailed evaluations of two cultural institution websites, along with several site visits to each institution, which, as mentioned above, are essential to completing valid website evaluations for cultural institutions: The Autry National Center of the American West in Los Angeles (Griffith Park) and The Fitzwilliam Museum, the principal art and antiquities museum for the University of Cambridge, Cambridge, UK. Each of these was thoroughly evaluated using the tool I developed, providing a concrete, valid, and comprehensive evaluation of the website's effectiveness at the end of the process.

This research paper is currently under peer-based consideration for publication by two different, principally web-based, international forums. The specific evaluation skills and knowledge gained regarding overall website evolution for cultural institutions will allow me to make a significant contribution to El Camino College students and staff.

Another of the graduate classes INFSTD XLC 461 (Prof. Luiz Mendez of the GSEIS) I enrolled in was intended to provide for me a professional-level update on the current and future trends in the world of descriptive cataloging. For decades, librarians have been basing their cataloging of all types of materials on the Anglo-American

Cataloging Rules, 2nd ed.(AACR2) , but the librarian world is at the cusp of adopting a new and broadly different set of standards, which are meant to accommodate the global environment: Resource Description and Access (RDA). The new guidelines allow such activities as automated, computerized cataloging of materials and, internationally, they accommodate libraries in non-English-speaking countries by allowing more latitude in creating non-English-based records for their users in the international bibliographic database: OCLC. My goal of getting an update on professional-level national and international cataloging trends was achieved.

I also took two quarter units of independent study (INFSTD XLC 596) with Dr. Jonathan Furner of the GSEIS specifically to create a presentation project which effectively summarizes the most significant differences between cataloging records based on AACR2 and those based on RDA (see above). I produced a colorful and fascinating (at least to librarians) 75-slide power point presentation entitled: **"RDA cataloging in 2012: selected examples illustrating changes from AACR2 to RDA, including examples of uniform titles & music cataloging."**

The extensive information contained within this presentation can be harvested for different, targeted audiences, including students, staff, faculty, and general library users to help them understand the implications of RDA guidelines upon online searching, presentation, and results.

I appreciate the opportunities that were extended to me for professional development during my Spring 2012 Sabbatical. This leave allowed me to expand my technological horizons, and the entire experience has been rewarding and will ultimately benefit our students and our institution.

Chemistry Laboratory Safety

Sabbatical Report for Dr. Amy Grant, Department of Chemistry

March 19, 2012

I chose to do my sabbatical project on chemistry laboratory safety. The chemistry department faculty have some concerns about our current safety policies. Specifically, the safety videos that we show are decades old (with poor-quality VHS copies). We have no safety resources online available for students. And we do not use a safety quiz or laboratory safety activity at the beginning of each semester to familiarize students with lab equipment and safety procedures.

To investigate these issues, I toured the chemistry labs of eight local institutions. A table of results of these visits is shown below.

College	Video	Safety Materials Online	Safety Quiz	Notes
El Camino College	Both ACS and UCLA videos	No	No	
Rio Hondo Allen Leung 9/15/11	ACS Starting With Safety	No	20-Q T/F quiz, based on the video. 70% correct is passing.	The quiz is not difficult. Very few students fail. Those students always pass the second time.
Cerritos College Linda Waldman 9/28/11	ACS Starting With Safety	Yes	50-q multiple choice quiz, based on 70 sample qs online (90% needed to	Dr. Waldman reports 6-7 fail on the first try, and 0-1 fails on the second try (students who fail the second time are

			pass).	barred from lab).
Santa Monica College Jennifer Merlic 10/6/11	Both ACS and UCLA videos	Yes	No standard quiz, but some individual instructors administer their own safety quiz.	A paid, outside consultant performs annual safety training of faculty and staff.
Fullerton College Samuel Foster 10/12/11	UCLA video	Yes	Students take a laboratory safety quiz and do a 'scavenger hunt' for safety equipment in the lab. Students who miss the safety video can see it online.	Some classes require students to buy a packet of materials entirely devoted to safety.
Mt. San Antonio College Jody Williams-Tyler 10/20/11	In-House Video	No	Organic students take a designated safety quiz. They can retake the quiz if they fail, but a second failure bars them from working in lab. General Chemistry students perform a laboratory safety activity.	The in-house video is catchy and engaging, featuring both laboratory procedures and safety. It was created via a grant, in conjunction with their AV department. A separate safety video just for organic chemistry students is currently in the works.

Saddleback College Scott Fier and Jim Zoval 10/24/11	ACS Starting With Safety, available on their website	Yes	Introductory chemistry students get a laboratory safety quiz on the first day. Pre-nursing students are given homework on the safety video.	General and Organic students must bring in signed safety forms they print online.
UC Irvine Kim Edwards 10-26-11	ACS Starting With Safety	Yes	Lower division students take an online safety quiz through WebWorks.	Upper division students do extensive safety training with hands-on modules for two hours. They answer safety questions online.
UCLA Arlene Russell 11-9-11	UCLA Video	Yes	A quiz is given (soon to be online). If students score less than 100%, they must review safety rules with the TA and sign a form indicating they have reviewed.	Labs contain Standard Operating Procedures which are reviewed and signed by all faculty and TAs who use the lab every semester. Students must wear cotton lab coats. Safety info is repeated both before and during the lab procedure presentation.

Summary of Findings

For the safety video, ECC uses both the American Chemical Society (Starting With Safety) and UCLA safety videos (both decades old). Seven of the eight institutions I visited use the ACS video and/or the UCLA video. Only one school, Mt. San Antonio College, created their own safety video. The video was funded through a grant, and filmed and edited by their audio-visual department. It features students enrolled in a course similar to our Chemistry 99 (Independent Study) course. Overall, creating the video was an enormous undertaking. I don't believe ECC can create such a video in the immediate future. Mt. SAC is unwilling to distribute their safety video to other colleges due to liability issues.

Seven of the eight schools have students perform a safety quiz or laboratory safety activity. At the eighth school, SMC, some individual instructors administer their own safety quiz. At some schools, students are barred from working in lab if they fail the safety quiz.

I did not originally plan on visiting UCLA, but colleagues at several other schools encouraged me to meet with Arlene Russell. UCLA had a fatality caused by an accident in the undergraduate organic lab a few years ago, and has since made safety a supreme priority. UCLA had the toughest, most thorough safety policies of any institution I visited.

Conclusions

It is clear from my visits to other institutions that ECC needs some improvements to our laboratory safety program. The first change I have made is to create an El Camino

College Safety Website (currently at www.elcamino.edu/faculty/agrant/safety). This website contains photos of safety equipment, information about waste disposal, and a copy of the safety rules which every ECC chemistry student must sign. I hope this will be a valuable resource for our students. After the website is reviewed by the chemistry faculty, it will be moved to the department webpage.

My investigation into safety videos was not as fruitful as I would have hoped. Most schools continue to use the aging safety videos from UCLA and from the ACS. As Arlene Russell of UCLA put it, "The videos are old, but the information is still correct." As there are currently no great alternatives to these videos, ECC should get reliable copies (other than VHS tapes). Also, we should continue to look into having a third party create a safety video.

Nearly every school had a quiz or safety activity for students. I believe it is time for ECC to implement a safety activity or safety quiz at the beginning of every semester. I have discussed this issue with the Chemistry Department faculty this semester during our weekly brown-bag meetings, and we are in the process of creating a safety quiz/activity for all chemistry students.

I'm grateful that my sabbatical gave me a chance to investigate safety at several other institutions. This has been a great opportunity to improve the way we handle Chemistry laboratory safety here at El Camino College.

October 3, 2012
Sabbatical Report
Submitted by Christine Jeffries
Sabbatical taken Spring 2012

First off, I would like to thank the Sabbatical Committee for awarding me a sabbatical for the Spring 2012 semester. As I mentioned in my sabbatical application, I was somewhat skeptical about taking a sabbatical even though I had over 18 years of service to the college, mostly because of the nature of my area of expertise. As the athletic counselor on campus, and for 18 years the only athletic counselor on campus, I was afraid that leaving for an entire semester would severely impact the academic progress of the student athletes. I only felt confident enough to leave after having trained our newest athletic counselor, Kelsey Iino, on the intricacies of athletic counseling for approximately one and a half years. I am happy to report that Kelsey did an outstanding job in my absence and our athletic academic support program ran very successfully while I was away. Of course I still got the occasional calls and texts from both coaches and students and just a few times by Kelsey. All and all, everyone was very respectful of my time off and let me enjoy my much needed rest which is what sabbatical actually stands for; like the Sabbath, it is a day or should I say 20 weeks of much needed rest!

I had hoped to complete a 12-unit certificate program in Sports Counseling from California University of Pennsylvania, but unfortunately the program wasn't available during the spring semester. Therefore, I chose to complete two on-line courses through the University of La Verne for a total of six

graduate units. The first course was called Motivating Athletes and the second course was entitled Eating Disorders and the Psychology of Eating and Exercise.

Motivating Athletes required me to read two textbooks, listen to an audio interview by Brian Gimmillaro who is an expert on the subject of motivation and finally come up with my own motivation plan. As I feared when I first started thumbing through the textbooks, the class was somewhat more geared towards coaches and techniques needed to coach and motivate athletes in their given sport rather than focusing on academics. I was still able to walk away with some applicable skills and ideas that I can use on my student athletes as I motivate them towards academic excellence.

The first book, In Pursuit of Excellence, focused on psychological barriers as being the greatest barriers to winning in sport. Techniques on the use of mental imagery were discussed. I often use mental imagery in my counseling when working with student athletes who are experiencing test anxiety. I make them focus on sitting down to the test, knowing the material because they had properly prepared, and seeing themselves answering all the questions correctly. This is the same type of technique coaches may use before a game to get the team focused on winning. The book also talked about the need to have a strong commitment to your sport and the importance of goal setting. These ideas can obviously be transferred to the classroom and academics where it is proven that students perform better when they have a clear, concrete goal in place. This is something I always strive for my athletes to achieve because I warn them that

they have a higher chance of being struck by lightning in their lives than going professional, so they must work hard towards acquiring that bachelor's degree!

The second book, What Makes Winners Win, was definitely more geared towards the training of athletes and started off describing what is a winner; someone who is dedicated, committed, and driven. Next, the author talked about what gives athletes "The Edge" and mostly looked at staying healthy and fueling ones body. Lastly, the book talked about "The Zone" and what one must do to get into the zone and how to stay there once that has been achieved. I can definitely use the concepts of dedication and commitment with my students because they must understand they have to be just as dedicated and committed in the classroom as on the field, court, or pool. With all the recent changes in academics within the NCAA and the increased transfer requirements, these concepts are more important that ever.

I walked away from listening to the interview by Mr. Gimmillaro with the understanding that my job is to help these young men and women understand their true potential, which is something I strive for everyday. Coaching is teaching and what I am doing is also teaching them to excel in all areas of their lives. This can be both frustrating and rewarding at the same time, but something I feel I excel at in my job.

Finally, my motivation plan included three-steps towards helping motivate my student athletes and these include: 1) Self-esteem and creating an environment that allows for challenge, recognition, appreciation, and quality. I believe the Scholar Baller program that we instituted at El Camino a few years

back is an excellent example of how we are building the academic self-esteem within our student athletes. 2) Giving athletes a reason to want to play hard or more importantly, giving them a reason to excel academically in pursuit of that athletic scholarship. My athletes know that I have high expectations of them and that I expect honesty and integrity from them in the academic arena. My favorite thing to say to them is "I can be your best friend or your worst enemy, you choose!" What I mean by this is if they try hard and show integrity in their schoolwork that I will go to the ends of the world for them, but if they try to skate by or cheat their way thru school, I will not condone those actions and therefore not give favorable reports to recruiters when they come to visit. I feel that over the years, the athletes know this on our campus and most will work hard to achieve that academic success in order to gain my good graces!

The second course, Eating Disorders and the Psychology of Eating and Exercise was much more clinical in nature and really covered the physical, psychological, and emotional components of eating disorders. The course required me to read two textbooks, watch a DVD on eating disorders, research a website on eating disorders and write my own intervention plan for someone with an eating disorder.

The first book, Fasting Girls, gave more of a history of eating disorders and went all the way back to the 18th century and the stories of fasting girls that can be found in medical journals and even spiritual writings. The nature of what caused girls to starve them to death was discussed and how later, as the disease became more common in the 1980's, how it was finally recognized as a medical

disease. The book covered the progression of various types of treatments that have been used from early times to more modern times and the current use of possible psychosomatic drugs that can aid in the treatment of the disease. It was not as clinical as the next book I read, but more historical in nature which as a former history major, I found fairly interesting. The assignment involved answering fill in the blank questions on each chapter, which I found somewhat tedious, and very time consuming!

The second book was entitled The Eating Disorder Sourcebook, and was a comprehensive guide to the causes, treatments and prevention of eating disorders. The book really went in depth into all the various kinds of eating disorders such as anorexia nervosa, bulimia, and binge eating. Many types of treatment plans were discussed along with how to prevent someone from acquiring an eating disorder. I wrote a seven page paper using the book and the DVD Dying to be Thin, to answer such questions as how does one know when a diet has turned into a disorder; what are successful techniques for therapy; what is the latest medical management and the use of psychotrophic medications in treating eating disorders; how can someone who has an eating disorder be helped; can eating disorders be prevented; and what insights did I gain about eating disorders. I feel the text and DVD really addressed all areas of eating disorders and give me insight into how I can determine if one of my student athletes may have an eating disorder and possible steps I can use to help guide that student towards a full and long-term recovery.

My internet website search was on a very informative site called Something Fishy on Eating Disorders (SFWED) and can be found at www.something-fish.org. It is a site dedicated to raising awareness and providing support to people with eating disorder, and their families. The site was started in 1995 by a man and his wife, who had suffered from bulimia for 9 years, and was taken over in 2006 by CRC Health. This is a company that focuses on providing recovery resources for those suffering with addictions and eating disorders. The site was a very comprehensive and thorough site that offers something for everyone from the sufferer to their friends and families to the professionals treating the eating disorder. It is definitely a site that I would recommend to one of my students if I felt she or he was suffering from an eating disorder.

Finally, the last assignment was developing my own intervention for a hypothetical student athlete I called Sally. I went thru how Sally showed signs of an eating disorder by her frail weight, but mostly by the concerns of her instructors and even her coach since she was excessively exercising beyond what the coach was requiring. We find out that Sally has had a troubled past with her parents divorcing at a young age, her brother going to live with their father, and her mother bringing in a boyfriend into the home who abused her. Sally's life had spun out of control and the only thing she was in control of was her eating. After talking with her, I made a referral to the psychologist at the health center. Sally's treatment entailed weekly counseling appointments, nutritional counseling, and the prescribing of an anti-depressant. Finally with a

mixture of interpersonal psychotherapy and family-based therapy where even her dad and brother participated, Sally began to let her healthy self take over her eating disorder self. Even though this was just a hypothetical student, I have had students in the past that I had suspected had an eating disorder and now with the knowledge and awareness that I have received from taking this course, I feel that I can be more instrumental in the recovery of one of my students from an eating disorder.

In conclusion, I cannot tell you how much I enjoyed my sabbatical and really feel I benefitted from the information that I received from taking these two courses. More importantly, the time off renewed my enthusiasm for my job especially after coming off some rather unpleasant negotiations for counselors. I realized that even in spite of my recent salary cut and reduction of my contract which I feel will be of detriment to my students, I still love my job and especially love working with the student athletes on campus and could not imagine myself being anyplace else then with my "family" and my "kids" at El Camino College.

Jennifer Montgomery
Sabbatical Fall 2011

I conducted my sabbatical work with the office of Head Start National Center on Cultural and Linguistic Responsiveness (NCCLR). NCCLR is a partnership between Bank Street College and Education Development Center, Inc. The mission of the NCCLR is to provide the Head Start community with materials and resources that are evidence-based and user friendly.

Major task of my sabbatical work included:

- Create research-to-practice materials such as checklist, training tools, and other electronic and hard copy resources that support early childhood practitioners to offer high quality services to diverse children and families
- Review and revise existing resources and research for dual language learners (DLLs) to ensure they appropriately address the needs of DLLs and their families
- Share information and tools with the field on topics which include language preservation, supporting English and home language development, engaging families from diverse cultures, and emerging issues around immigrant populations

"Making it Work"

The majority of my work with NCCLR consisted of developing a training tool for Head Start teachers entitled *"Making it Work"*. Making it work is a process for cultural curriculum planning that focuses on language preservation and revitalization. The curriculum plan includes developmental skills, curriculum lesson planning, and developmental assessment of preschool age children within the Head Start program. The target group for *"Making it Work"* is the American Indian/Alaska Native (AIAN) tribal Head Start programs.

The training tool assists Head Start teachers in incorporating language and culture into the early childhood education curriculum. Teachers are encouraged to learn more about the children's culture, to incorporate aspects of the family's culture into the daily activities and to honor cultural traditions. Language is a large part of the curriculum. Teachers are expected to use the child's language on a daily basis to support the children's language development and literacy skills. I worked with a small group to develop the training tool *"Making it Work"* to support teachers in their efforts to be more culturally responsive.

"Making It Work" is a tool that connects cultural, traditional skills, values, beliefs, and lifeways to school readiness and progress on the Head Start Child Development and Early Learning Framework (CDELF). My work included developing the training tool for the AIAN teachers, analyzing data from a pilot study, presenting the work and the findings at the National Head Start Conference and developing a handbook

for future trainings. I have included a copy of the power point presented at the National Head Start Conference.

Part of my sabbatical work included analyzing data from a pilot study. Teachers from AIAN programs were asked to use the *"Making It Work"* guideline in developing culturally responsive curriculum. Teacher developed curriculum that reflected the cultural practices of the children in their care. Some of the curriculum themes included drumming, gardening, basket weaving and dancing. Teachers were instructed to incorporate native words into their lessons, and to invite elders from the children's community to share cultural practices and lifeways. The pilot schools included the following programs:

- *Pilot Programs*
  - Cherokee Nation Early Childhood Unit Head Start
  - Grand Traverse Band of Ottawa and Chippewa Indians Head Start
  - Inter-Tribal Council of MI, Inc. Head Start
  - Rincon Band of Luiseño Indians Head Start
  - Sisseton Wahpeton Oyate of the Lake Traverse Reservation Head Start
  - Walatowa Head Start

Representatives from these programs were present at the Office of Head Start Birth to Age Five conference in Washington, DC held in October 2011. The findings from the pilot study as well as suggestions for future research were presented at this conference.

I presented the *"Making It Work"* training tool to AIAN program administrators, and program teachers at the national conference. A preconference session was held specifically for AIAN Head Start Programs. The work developed by the pilot study group was presented and demonstrated for the conference participants. The participants received a copy of the *"Making it Work"* packet and a review of the curriculum development process. Samples of curriculum plans were developed and shared with the participants.

Dual Language Learners (DLLs)

The second aspect of my work focused on developing strategies for supporting all dual language learners. A strategies document was developed to support Head Start teachers in their work with dual language learners. I reviewed a small work group in the development of the document. The document is housed on the Early Childhood Learning and Knowledge Center (ECLKC) website. The DLL strategies developed are as follows:

- Create a welcoming classroom environment which reflects children's backgrounds. Include pictures, posters, toys and books which portray children's languages and cultures in a respectful and authentic way.
- Ask families to continuously share information over time about their children's interests and infuse the information into classroom activities and curriculum.

- Provide opportunities for families and community members to share stories and information in their home language with teacher, staff and children.
- Carry out your program's language policy to support children's continued development of the home language and facilitate English language learning.
- Provide opportunities for teachers and staff to develop knowledge of first second language development as well as culturally and linguistically responsive practices.
- Remember that dual language learners are individuals; there is no one size fits all strategy. Use information from families and observations of children in the classroom to individualize services. Strategies should be used on a long term basis and in line with the programs language policy.

To prepare for my work with DDLs I read current research and the following book:

- Tabors, P. (2011). *One child, two languages: A guide for preschool educators of children learning English as a second language.* Baltimore, MD: Brookes Publishing Company.

Toward the end of my sabbatical a small team traveled to Seattle Washington to video tape Head Start teachers implementing DLL strategies. I was able to review the videos, and code them for training purposes. The videos will be edited and housed on the ECLKC website as samples of appropriate DLL strategies.

I was very inspired by the work conducted with the NCCLR. It was a wonderful positive learning experience. I have a better understanding of the mission and goals of the Head Start Program. I developed knowledge on the importance and valve of preserving a child's native and heritage language. Participating in the national conference showed me the vast nature of the field of early childhood education. Meeting the director of the Office of Head Start and other administrators was a highlight of the conference. Having the opportunity to present my work at such a venue was a great professional development opportunity.

I have already incorporated much of work I developed during sabbatical into my courses at El Camino College. I have enhanced the topics of Dual Language Learners and Early Language and Literacy in my Child Development 112 (Child in a Diverse Society) and Child Development 107 (Infant Toddler Development) courses. I have a better understanding of cultural responsiveness and I am able to share that understanding with my students.

Reading the latest research on Dual Language Learners has enhanced my knowledge on the topic and has influenced my lecture of the topic in my courses. I have included information on developmental levels of DLLs as wells as strategies to support DLLs. My students are encouraged to have more in-class discussions on how they are supporting DLLs in their classrooms. We discuss why it is important for a young child to maintain their home language and how that supports early literacy skills. We talk about how to incorporate families into the child's education and how to honor the family's culture in an early childhood education setting.

Working with a national evidence and research based agency has opened my eyes to the importance of research in the field of early childhood education. My sabbatical experience has encouraged me to

apply for an Educational Doctorate program. I want to learn more about culture and language development in young children and pass that knowledge to my students. This experience has encouraged me to be a life- long learner.

June 15, 2012

SABBATICAL REPORT

Susana Prieto

INTRODUCTION

As I stated in my sabbatical application, I'm interested in learning to assess the different methods of teaching and under which circumstances and in which ways they can be implemented in order to have the best possible outcome for our students. I also stated that I am interested in better understanding how research in science education is conducted and how to use the results of this research in the classroom. In particular, I wanted to develop a more critical eye for evaluating educational software. We very rarely make use of interactive software or the Internet to demonstrate physics phenomena. Integrating information and communication technologies in the classroom may be an effective, efficient and interesting way for students to learn content. I also believe that learning to use student centered cooperative learning activities and knowing how to develop these activities may enhance learning in my classes.

My sabbatical took place under the guidance of Dr. Vazquez-Abad at the Université de Montréal. At the suggestion of Dr. Vazquez-Abad one of the first things I did upon arrival to the Université de Montréal was to familiarize myself with the Université de Montréal's secondary school science teacher training program for pre and in service teachers in science. The program makes use of the results of recent research in the pedagogy of science education and emphasizes students centered cooperative learning activities.

The typical student that registers to become a secondary school teacher at the Université de Montréal is different from the typical student in the Physics department at ECC. The educational system in Quebec

is different from the one in the US. In the Province of Quebec (Montreal is part of this province) compulsory basic education consists of one year of preschool, six years of elementary school and five years of secondary school (corresponding to grades 7 to 11 in the US). Québec has a college system, offering both general and 3-year professional education programs; while the latter confers technical degrees, the former is meant to prepare students who will go to the university and corresponds to grades 12 and 13. The undergraduate degree is therefore normally a 3-year program, but the pre-service teacher-training is a 4-year program. In particular, 100-level introductory courses in areas such as chemistry, physics, biology and mathematics, normally taken in universities in the US, are taken by students in pre-university college programs; students applying to a university Science teacher-training program must have taken the college courses required to enter a Science undergraduate program. The 4-year pre-service teacher-training programs for secondary school Science at Université de Montréal, while offered in a Faculty of Education, comprises all the courses of both a regular major and a minor from the physics, chemistry and biology departments. Students entering the Science teacher-training program must take certain courses in a single minor in order to complete the program.

THE SCIENCE TEACHER TRAINING PROGRAM

The Science teacher training program aims at providing the students with the know-how, and the culture that are required to function in a knowledge-based society and also to develop science-related cognitive capacities and attitudes in everyone. Curriculum includes: experimental discovery and problem-solving. To these principles, and following the same trend that ECC is following, new major interests were recently added to the curriculum. These include the development of competencies, both disciplinary (such as finding answers to scientific and technological questions, using S&T knowledge in everyday life, and communicating in a scientific language) and, in general (such as collaborative work in

the classroom, and communication skills). In this program some 50% of credits are in the science departments and 50% of credits are in Educational courses.

I reviewed in detail several science courses as well as courses in didactics and courses in pedagogy. I also visited as many classes as I could. Most science courses include a lecture followed by a practice session or a lab, the structure and methodology of these courses is similar to the ones we use at ECC. The courses in the school of education include many courses similar to ECC's Physical Science 25 which is an inquiry based course; in a three-hour class the professor lectures for about an hour and the students work in small groups for two hours. I was particularly interested in courses designed to prepare future science teachers to teach courses in which more than one science is involved since the methodology, as well as the content of such courses, is different from what we consider the norm at ECC, and, in general in the US. These courses are called integrated science and technology courses. The Canadian curriculum requires, since 2005, that all teachers at the basic level (primary and secondary) use integrated science technology to teach science to students. The Université de Montréal requires that all future science teachers take a sequence of three integrated science and technology courses of which the first includes more physics than the other two. I will include a more detailed description of the first course of the sequence:

DESCRIPTION AND OBSERVATIONS OF THE FIRST OF A SERIES OF INTEGRATED SCIENCE AND TECHNOLOGY COURSES

The course that I describe, and that I observed, is called Integrated Projects in Science and Technology. Beginning in 2003, this course is compulsory for second year students enrolled in the secondary school science teacher training program. To enroll in this course students must have taken several courses in their desired minor (physics, chemistry or biology); they must have also taken a course in didactics and have had student teaching practice at a secondary school. In this course students design, plan and build

a project that involves two or more sciences. Students must obtain data which must be interpreted using error analysis. Four professors are in charge of guiding students in the realization of their projects; a physics professor, a chemistry professor, a biology professor and a professor of didactics that also acts as the coordinator of the course. A theme for the Project is chosen by the professors, for example, in the course I visited students were asked to study aspects of an aquarium in which fish and plants can coexist. Students work in groups of three and have the semester to study whatever aspects they would like to focus on the aquarium. Some students may focus their study on the effectiveness of different wavelengths of light to produce photosynthesis in certain aquatic plants, or the effect of acidity of the medium on photosynthesis, or the concentration of dissolved oxygen as a function of the number of aquatic plants introduced, or the effect of nitrogen cycle on the fish in the aquarium, or the investigation of the ideal temperature for life in the aquarium and power consumption and most efficient lighting, etc. Students present their proposed projects to the instructors and to the class and upon approval, they then have the rest of the semester to implement their project.

One of the groups that most impressed me constructed a spectroscope from scratch in order to make sure plastic filters they used let pass only specific range of colors of the visible spectrum. They then used different colors of visible light to determine which color was more efficient at producing photosynthesis in an aquatic plant called Canadian Elodea. They conclude that red and blue colors are most efficient at producing photosynthesis. Another group focused on the role and importance of nitrifying bacteria in the nitrogen cycle in an aquarium and the length of survival of fish in the presence with and without the bacteria. Yet another group studied the variation of rate of photosynthesis with the temperature of water.

In general I believe this course is beneficial to most students although many express frustration throughout the course. The reason for the frustration is probably that students are not used to courses of this sort. Also, students are generally not familiar with laboratory instruments and techniques. They

have difficulty calibrating instruments such as the spectrophotometer; they don't know how to prepare bacterial cultures, etc. One of the things that surprised me is that students made relatively little use of information that is readily available on the internet, but asked that the professors explain use of instruments, etc. . Even though students have taken courses in science they seem to be unable to analyze data and professors have to often instruct students on the techniques of error analysis. A particular problem arises in the use of sensors since students often don't think the readings have any errors. Students also require help writing the final report. Also, since students work in groups, conflicts may arise, more so than in other courses since there is no prescribed protocol to follow and students must try and solve many technical problems themselves. In the end, I like to believe that students appreciate having had the opportunity to participate in a course in which students have to integrate their knowledge in several subjects to complete a project.

RESEARCH

Dr. Vazquez-Abad suggested that I start research by reading some papers that have been written by the different professors in the education department as well as a report from PISA (Program for International Student Assessment) that rates the performance of fifteen year-old students from many countries around the world (Canada rates very high). I will briefly discuss some of the points that may be relevant to our teaching at ECC.

An article by Richard E. Clark in which he compares the different outcomes between inquiry based or unguided or partially guided instruction, and fully guided instruction for beginning students generated heated discussions among professors of education at the university . I was under the impression that research shows unequivocally that inquiry based learning is most effective. However, there is now a large body of evidence (for example: "The case fog Guided Methods of Instruction" American

Psychologist 2004 and many more references) that show that fully guided instruction is most effective. Guidance can be provided through media, lectures, computer-based presentations, etc.

A set of interesting articles deals with the need to teach students error analyses, since computer-based labs often show no errors or the errors are computed automatically. So even though using technologies has many positive aspects it also leads to problems because students often don't understand the significance of estimating uncertainties in a measurement. (For example "Utilisation des Technologies pour la Recherché Sur la Modelisation Algebrique de Phenomenes Scientifiques" by Georges Touma of the University of Ottawa).

Finally, Dr Vazquez – Dr. Vazuez-Abad is presently interested in students' understanding of scientific phenomena. I collaborated as much as I could with this study. My collaboration consisted mainly in statistical computation of results. The difficulty many teachers encounter is that students bring to science lesson certain ideas that are well established in their ways of thinking but are inconsistent with the ideas of teachers and scientists (misconceptions and misunderstanding). One of the best methods for identifying these misconceptions and misunderstandings, and that Dr. Vazquez-Abad and his group of graduate students pursues, is through the development of multiple choice questions. This method may be more effective than interviewing students since interviewing is not only time-consuming, it also requires substantial training. What is different about the multiple choice test used in this research is that all questions are followed by a related question that attempts to determine the reason for the misconception.

I thought the best questions were in the field of chemistry since for the most part Dr. Vazquez-Abad directs students whose minor is Chemistry. I give an example of the kind of questions used:

Question:

Water (H_2O) and hydrogen sulfide (H_2S) have similar chemical formulae and have V-shaped structure. At room temperature water is a liquid and hydrogen sulfide is a gas. The difference in state between water and hydrogen sulfide is due to the presence of strong intermolecular forces between

(1) Water molecules* (2) Hydrogen Sulfide molecules

* Correct

Reason:

(a) The difference in strength of the intermolecular forces is due to the difference in strength of the O-H and S-H covalent bonds

(b) The bonds in Hydrogen Sulfide are easily broken, whereas in water they are not.

(c) The difference in strength of the intermolecular forces is due to the difference in polarity of the molecules*

(d) The difference in strength of the intermolecular forces is due to the fact that water is a polar molecule, and hydrogen sulfide is not

*Correct

Results:

Most students got the first question right (90%), but only about 20% of the students chose the correct reason (c). About 15% answered (a); about 35% answered (b); about 25% answered (d).

I unfortunately didn't participate in developing questions, just analysis of data.

CONCLUSION:

(a) USE OF COMPUTERS IN THE CLASSROOM:

I observed some use of computer in the classroom, mostly in the use of simulations of physical phenomena. I too have used these simulations in the past, but possibly not as often as I should.

(b) OTHER USE OF TECHNOLOGY:

The possibility of using IPADs or Smart Phones as an aid in learning is being explored and in a few years may be used as an important learning tool.

COMMENT:

I found the experience of the sabbatical to be very rewarding since I observed other ways of teaching physics. I am very grateful to have had the opportunity to spend so much time in Montreal.

Report on Sabbatical Leave --- fall, 2011

Lijun Wang

Division of Mathematical Sciences

Observation and Studies of Teaching Online and Teaching Hybrid.

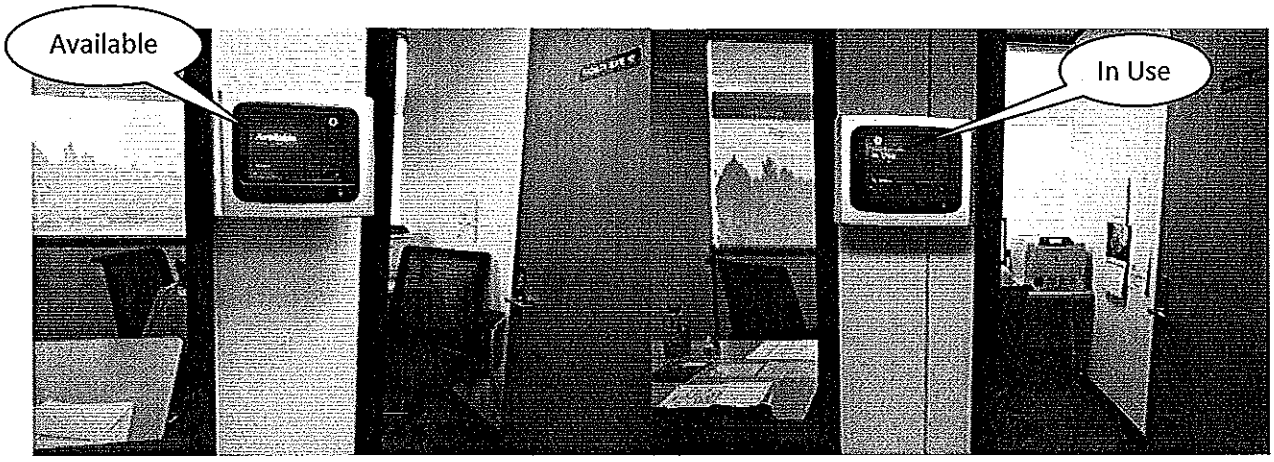
By Lijun Wang

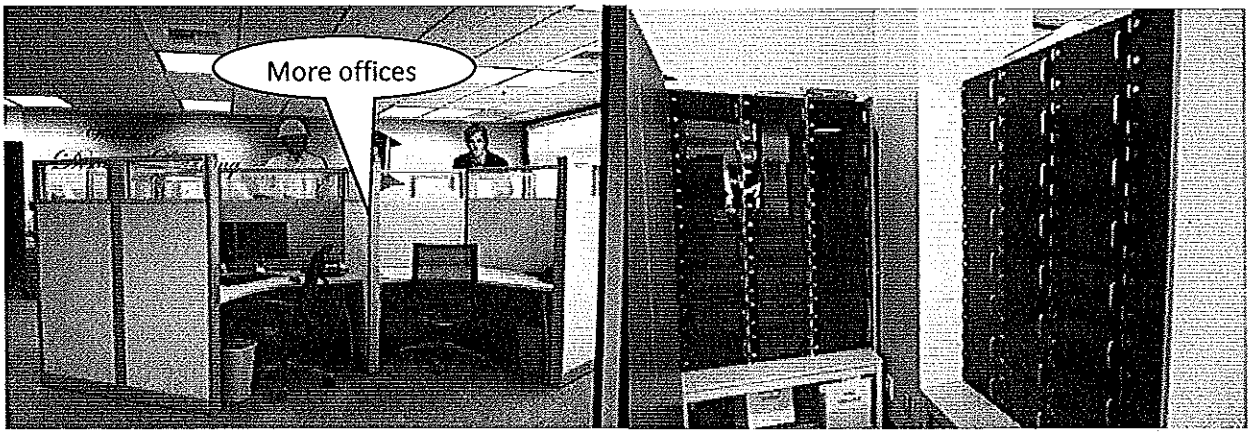
I wish to thank Dr. Arce, Dr. Rapp, Dean Goldberg, for your support of this project. Upon my return from sabbatical, one of my colleagues asked me if I still like to teach. My answer was, absolutely. I am looking forward to be back teaching again. After a semester of reflection, repose, and exchanges with colleagues from other colleges, I have positively affirmed my passion for teaching.

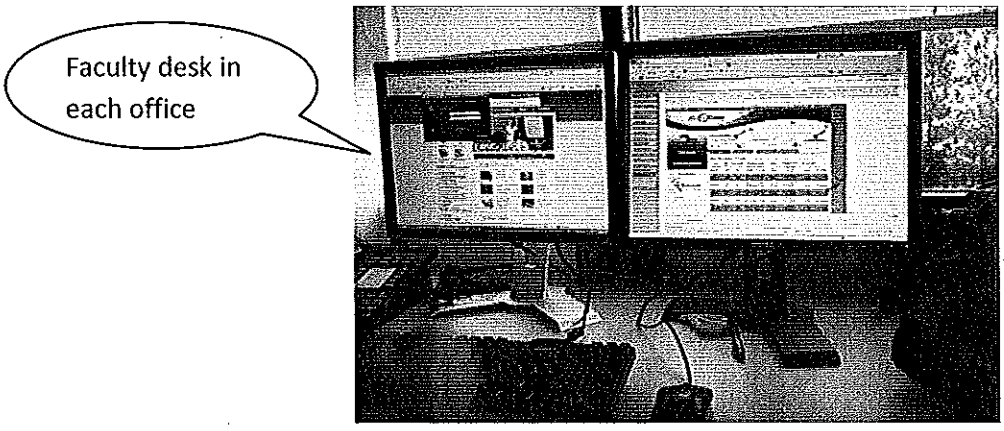
During my sabbatical leave, I have seen confirmation of the inevitable changes in teaching throughout the nation with the ever improving technologies. This report is only a brief summary of my studies.

During my visit to Coastline Community College, I had the opportunity to converse with the entire full time faculty, including the chair Professor Lisa Lee, former chair Professor Fred Feldon and Dr. Malinni Roeun and a few part time faculties. As part of the Coast Community College District, Coastline was established with a vision of developing distance education extensively. Since the first online class in 1999, 84% of classes are now taught online. Although hybrid format of classes were adopted for a while, but were abandoned due to the lack of regular attendance and the need of the student population. According to their program review for 2010, distance learning math course success and retention rates has been met with a 15% higher rate of retention and an almost 40% higher rate of success than the statewide averages for general math in the distance learning format. The report attributed the high rates of retention and success to their student population which is slightly older and perhaps more mature than the state-wide average but may also be the result of the department's culture of collaboration, the peer cross-training within the department and the amount of time they've spent with this method of instruction (the first math distance education online course was offered in 1999). Regarding the maturity of the students at Coastline Community College, I would like to add that there are a large number of students from the military.

The faculty offices are set up in a very different format from all others we are familiar with, a communal format, without designated office for a particular faculty. Refer to the pictures.







In each office, there is a computer with double monitors on one desk and another desk for students. In each particular day, most faculties will choose to come to office for their office hours, despite the fact

they could work at home, according to Professor Feldon, former department chair that spearheaded the project for the current setup of the distance learning tutoring center.

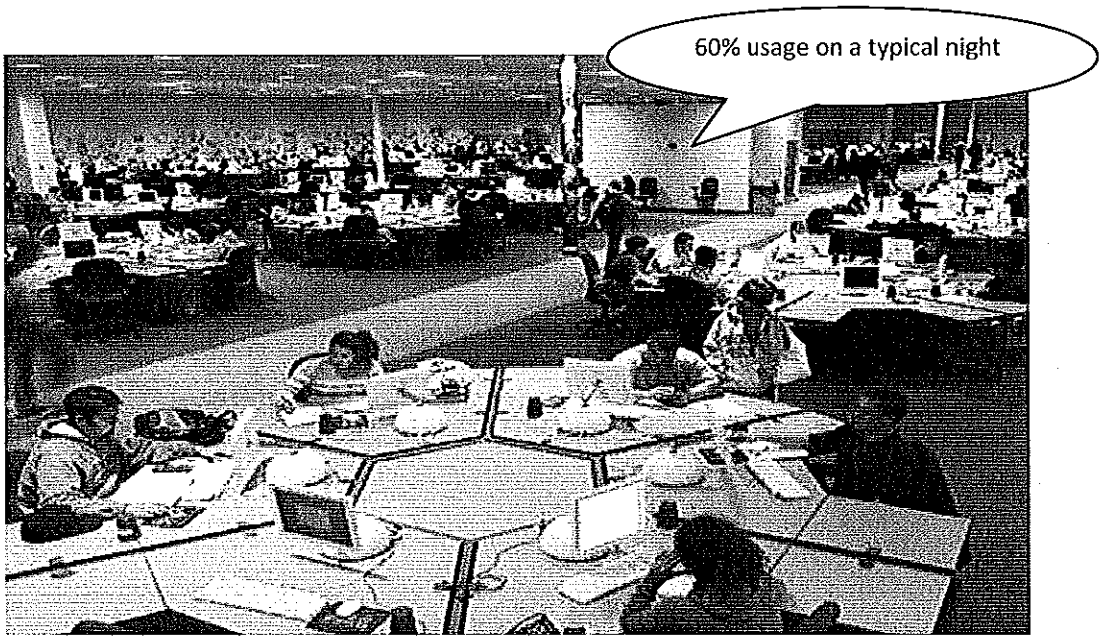
Among the faculty offices, there is an office for an *Educational Media Designer* who is onsite to support the needs of faculty with technical questions. There is a room set up for faculty to make video lectures. Adjacent to the offices, there is a conference room with a complete set up for training and presentations. Training sessions are conducted by peer faculty members or technical support from publishers. Across from the conference room, there is the lounge, set up with a table for lunch with the convenience of conversation. The entire establishment is to encourage faculty to interact among each other onsite and online. I am very impressed with their online network. Professor Feldon' s networks include not only all of his colleagues, but also contacts across the nation via e-mails, twitters, facebook, Linkedin, and newsletters to share ideas, how-to's. Usually, these contacts were established by attending conferences. During my visit, I learned a new way to embed pictures with screen shot into my discussion board and faculty website.

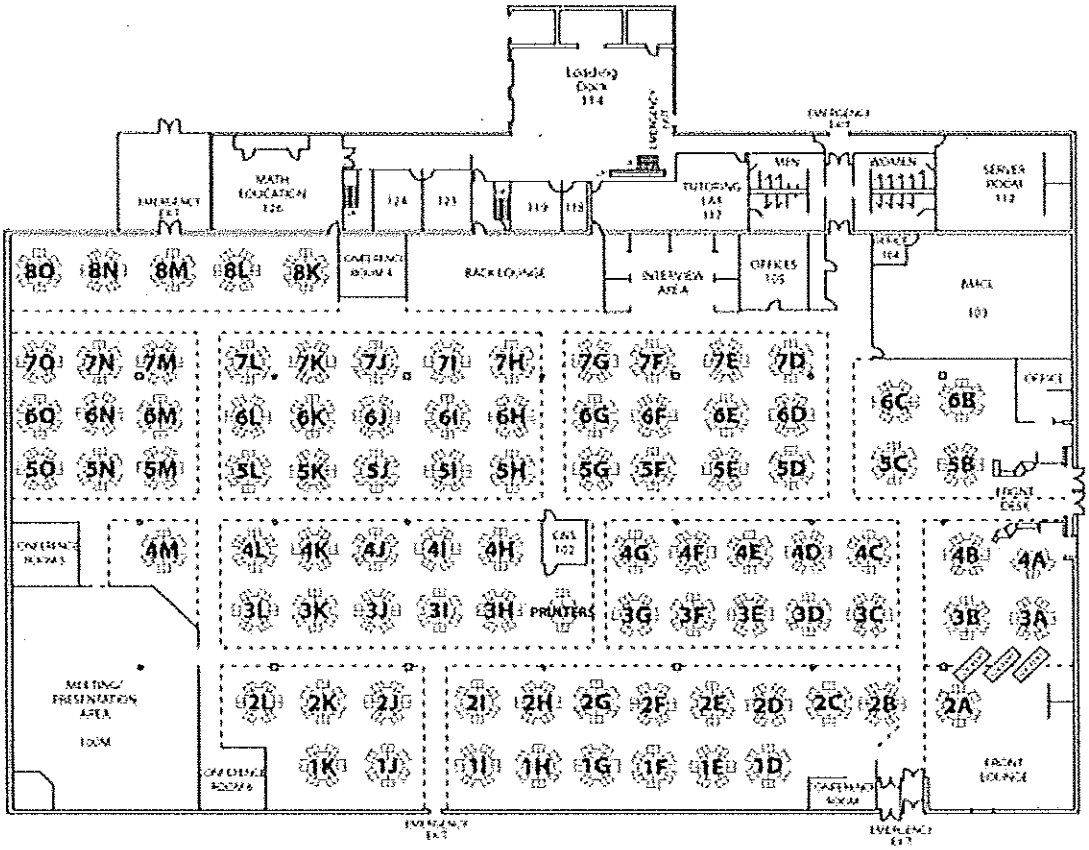
The arrangement in the department of mathematics at other colleges I visited is all similar to that of ours at El Camino College with the only differences in size of the faculty. Take East Los Angeles Community College, for example. Although online classes were offered, the retention and success rates are not as satisfactory. There is a small group of faculty who get together at lunch hours to discuss ways to improve the retention and success rate. Professor Rahim Faradineh, has voluntarily offered face to face class sessions, much similar to our hybrid classes. He reports a much better retention and success rate with his online class, he believes, as the result of his additional onsite sessions. Only about 10% of the faculty in the math department adopts the online homework system despite the trainings offered by the technical support from the publishers.

In Long Beach City College, both online and hybrid classes are offered. It is said that the retention and success rates are comparable to the traditional classes. Professor Mehdi Mirfattah has large collections of teaching sessions, including online office hours using CCCConfer, tablet and webcam.

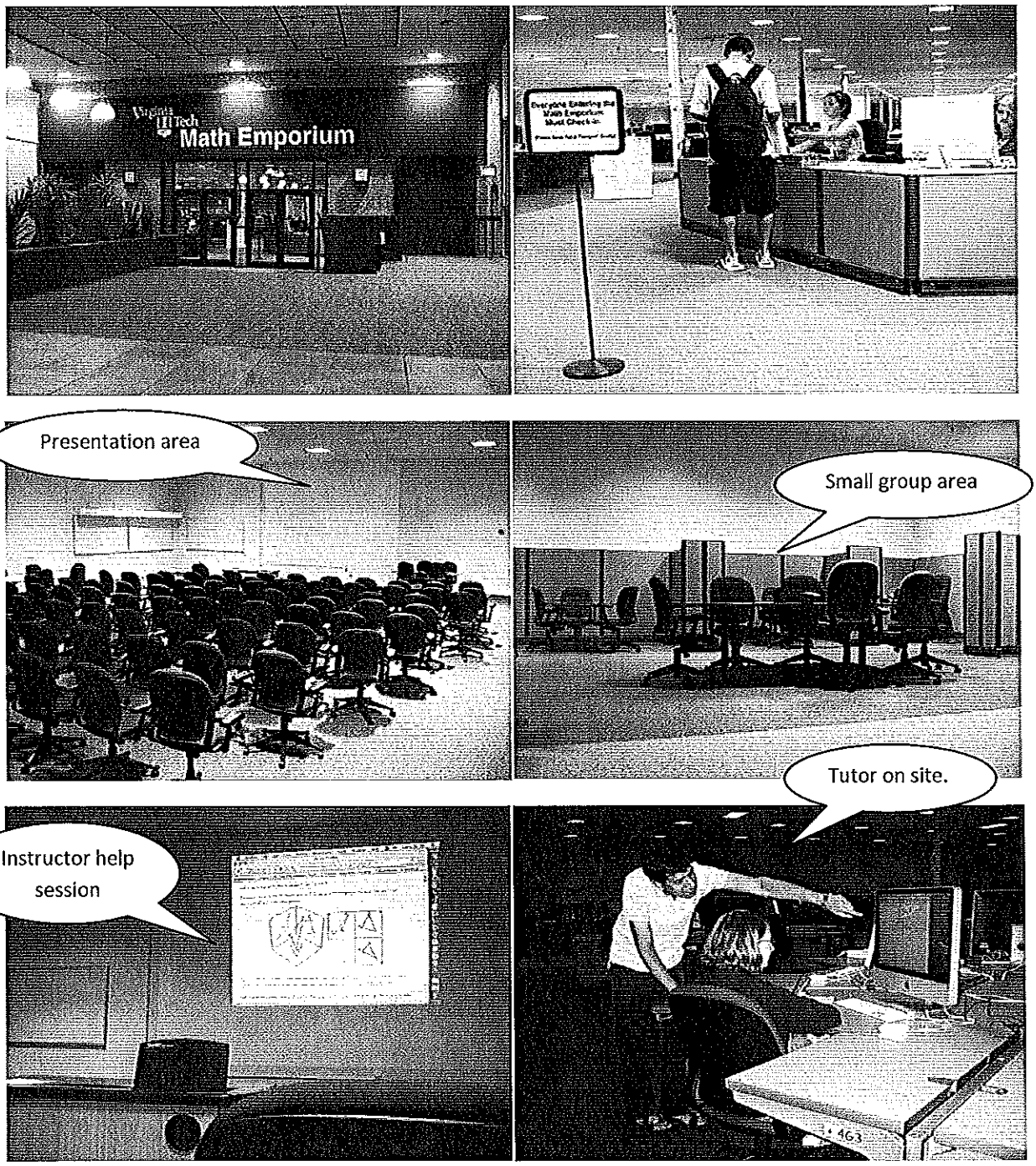
On the homepage of mathematics department at Lake Tahoe Community College, there is a list of math resources, available for any internet user to see: math resources. Besides course syllabi, there are math lecture notes and Larry Green's Java Applets. The sites are free of any advertisement and categorized according to the courses offered at the school, comprehensively from basic math to calculus and differential equations, with examples for viewers to practice. Some of the contents are available for iPod download. These contents could be coupled with lectures for students to use after classes as many times as possible.

Math Emporium at Virginia Tech is an open, 60,000-square-foot laboratory with 550 Macintosh computers serving more than 8,000 math students each semester since 1997. As a new way to teach introductory mathematics; it also sets an acclaimed successful model for such programs across the country. On a typical evening, about 60% of the lab is in use by students who are in the program. Three courses-mostly for first- and second-year students are now online and are based at the emporium. Unlike the experience of taking courses entirely online, these students can meet with their teachers if they wish, and all graded work must be completed at the emporium, not on students' own computers. Please refer to the picture for the set of the Math Emporium.





Floor plan of Math Emporium at Virginia Tech in the University mall, Blacksburg, Virginia.



The Math Emporium has space for large orientation sessions, small conferences and tutoring, a math education lab, quiet study areas, and student lounges. The facility is open 24 x 7 and staffed days and evenings by math faculty, graduate students, and advanced undergraduate students who offer personal assistance when students request it. Peer group projects, collaboration, and tutoring are also encouraged.

According to National Center for Academic Transformation, the Emporium Model has consistently produced spectacular gains in student learning and impressive reductions in instructional costs. Courses taught in this format are:

- Precalculus;
- Elementary Calculus I ;
- Elementary Linear Algebra;
- Elementary Calculus with Matrices;
- Geometry and Mathematics of Design.

Polya Math Center at University of Idaho is a similar model with some different course offerings:

- Intermediate Algebra;
- College Algebra;
- Analytic Trigonometry;
- Calculus I;
- Calculus II.

In both Math Emporium at Virginia Tech and Polya Math Center at University of Idaho, it is required for a student to complete a hard copy guided study book. At the talk given by Dr. Kirk Trigsted, he showed the guide book, which has been part of the textbook package bundled with online access code.

It is worth noting that the communication between the instructors and the students have become inevitably digital. The interactions online between professor and his students can be as personal and helpful in many ways. On the one hand, questions and answers could be shared by all students in the virtual space, for example, discussion board. On the other hand, the Instructors could send private messages to individual student(s). Discussion board has come one of the favorite ways of online platform for a virtual classroom.

It is my hope to continue the expansion of teaching mathematics in hybrid format with consistent quality and enrollment. Currently, we offered hybrid classes for Beginning Algebra (Math 40), Intermediate Algebra (Math 73), and Elementary Statistics (Math 150). This semester, we are in the process to review proposals to offer Nature of Mathematics (Math 120) and College Algebra (Math 130). After these courses are offered, we will start the proceeding to offer hybrid for PreCalculus (Math 180), Calculus I (Math 190) and Calculus II (Math 191).

We, at the Distance Education subcommittee, continue to promote the use of online homework and discussion board. As we are looking forward to move into the new building, I am eager to get involved in the modernization of the mathematics tutoring center, so that we will have the capacity to offer students not only with individualized tutoring in person, but also individualized tutoring online.

The End

Spring Semester, 2012

Sabbatical Leave Report and Evaluation, Fall Semester 2011,

For the Sabbatical Leave Committee

Stephan L. Waterworth, Ph.D.

Professor of English

Humanities Division

El Camino College

Summary of Sabbatical Leave Project

Dear Sabbatical Committee Colleagues:

In undertaking my sabbatical leave project—an independent study under the direction of Dr. Thomas Cody, a dear friend of mine and a colleague in our Department of English, I sought to rectify, at least partially, an issue that besets all instructors of English, ESL, and Reading: The dearth of departmentally provided materials made available to our instructors to augment the various readings in their required classes or course textbooks—the best of which, because they are necessarily narrow in scope, are ultimately inadequate to address the entire range of needs for both the instructors and their students in the respective courses.

Therefore, I decided to undertake an individual, independent project to offset this lack of extra reading material by querying my department colleagues regarding the various issues and themes they addressed in their own course readings (See my attached questionnaire). After receiving the necessary feedback, I subsequently described my proposed individual project of gathering and annotating essays and of rendering the findings into a series of bibliographies to the Sabbatical Leave Committee, in order to explain the rationale for this enterprise, as well as to describe the methodology I would employ in coming to terms with augmenting course readings and with shaping the results of my findings.

My specific proposal to the committee was to create a series of annotated bibliographies, arranged both thematically and by class level, for our Instructors of English at El Camino—and to produce a hard copy of each individual article cited in the respective

bibliography. Further, upon completion of the entire project, I would have the bibliographies themselves reproduced—both hard copies and on line—and be made available to department members to use in their classes.

After receiving suggestions (of both the oral and written nature) regarding potential topics or themes from a number of my English Department colleagues, I selected the most frequently requested topic, and I determined that I would arrange the bibliographies themselves in the following manner: **ESL,** *The Dream Act,* **English A/84,** *Homelessness, Literacy, Poverty,* and *Volunteerism*, **English 1A,** *Body Art, Boomerangers (Adult Children returning home) Parenting,* and *Technology,* **English 1C,** *Corporate Greed and Corporate Responsibility, Education,* and *Immigration and Assimilation.*

My next step was to set about gleaning bibliographical materials for the respective topics and class levels. In doing so, and in the interest of time and efficiency, I limited my research to periodicals solely. I retrieved articles from various newspapers (including the five major papers appearing on the *ProQuest* web site) local newspapers, and articles from smaller newspapers with relatively modest circulation under the *Ethnic News Watch* heading. I also garnered articles from a wide array of popular magazines and articles and essays from academic journals as well, in order to provide the widest range of periodical literature and the greatest numbers of opinions on the selected issues themselves.

After completing my work, I did subsequently distribute copies of the individual bibliographies to those individuals who were interested in receiving them, and I also

placed a hard copy of each of the individual articles themselves in our English Department mail room for those instructors who wished to access any of these pieces. Moreover, the entire series of bibliographies, as well as the respective, individual articles, will eventually appear on the departmental web site for individual instructor's perusal and subsequent use.

At the conclusion of the project and my related efforts, I had culled some two-hundred and eighty six articles covering the three areas or branches of periodicals. I had each essay reproduced, and I appended the Works Cited information to each piece. In addition to reproducing the individual articles and essays, I had the individual bibliographies reproduced and made available for distribution to my colleagues in the Department of English. In total, twelve annotated bibliographies are now available for department members' perusal and possible use.

How the Sabbatical Benefited Faculty Member(s) and Students

Certainly, my students—given the prohibitive cost of textbooks—will benefit by having additional reading materials supplied to them gratis. And just as certainly, additional readings will offer them more in-depth knowledge of the topic and will afford them a greater opportunity to select additional topics for writing their required essays.

In addition to my students having a greater understanding of the issues that I explored (and my colleagues and their charges as well) in closely reading and analyzing each

piece, and in annotating two hundred and eighty-six articles and essays total, spanning the entire range of the topics I selected for research, I could not help but enhance my understanding of the issues falling under the heading of such things as "Volunteerism," "Education," "Poverty," and "Technology," not to mention the other topics or themes. I estimate that I read quite closely, carefully, and meticulously some two thousand-plus pages of prose: I learned a great deal about the selected issues after such careful scrutiny from my approximately six-month endeavor.

And as I mentioned above, in making the resources available to my peers, the entire department will profit as well as the students enrolled in our various reading and writing programs. I believe strongly that a wider range of readings cannot but help instructors stimulate their students' interests in their pursuit of knowledge regarding these particular issues, and I deem that the greater number of resources will provide a broader and infinitely richer opportunity to respond in essay form to the particular topic.

How the Sabbatical Increased Faculty Member's Proficiency

As I mentioned above, the whole process of gathering materials, reading them, annotating them, and putting them into a bibliographical format was a six month enterprise. As a technology "dinosaur," I certainly enhanced my computer, research skills for attaining materials on-line from credible sources. I can now function in this research area with relative ease and maximum proficiency.

Moreover, in annotating close to three hundred articles covering twelve topics, I had ample opportunity to practice careful, analytical reading and also to work considerably on my academic writing or prose. I reckon that I wrote, in total, approximately one hundred and eighty pages to two hundred pages (had the entire work been double spaced) of annotations. As we all know, the improvement of a writer results from a detailed and careful application of essay or writing principles.

Finally, regarding something that is not objectively measurable, but is, in fact, qualitative and not quantitative, I learned a great deal about the twelve topics that I selected for my research. I will, of course, be only too glad to pass on this information to both my Department of English colleagues and to my and to their students as well. I would like to think that I met my responsibilities in amassing and in annotating these materials both diligently, thoroughly, and honorably. I further believe that both I and others will be better off in the class room because of my individual project.