

*Learning from Experience:
Developing Portraits of Practice
Part I*

A. Learning Community (LC) Title

Course Transformation of Chemistry 161

B. Community Curator(s). Who has prepared Part I of this Portrait on behalf of your LC? What date was it completed?

Mike Substelny, March 7, 2008

C. Abstract (75 Words or less) *if it has changed*

No changes

D. Learning Community Members, Units, Roles. List your community members, their units or disciplines and roles, *if they have changed*. Who has been added, deleted?

Core members	Unit/Discipline	Contributions
Mike Substelny	Faculty, Distance Learning	
Dr. Terrence Green	Associate Prof., Science and Mathematics	
Dr. John Crooks	Associate Provost of the Univ Partnership and Distance Learning	
Mary Jane Pasky	Coordinator of Distance Learning	
Dr. James Beil	Asst. Prof. Science and Mathematics	
Dr. Celesia Lau	Asst. Prof. Science and Mathematics	

Associate Members	Unit/Discipline	Contributions
Joseph Querin	Computer Resource Specialist	

E. Background & Context. Briefly describe your Learning Community Project and the context within which you undertake it. What do you intend to achieve? What technologies are you using and how? What desired ending(s) would you like for the story of your LC and its project? What types of institutional support do you have? What types of support would you like?

Lorain County Community College (LCCC) plans to redesign Chemistry 161, a General, Organic and Biochemistry course that is a key component of the curriculum for several Allied Health and Nursing degree programs as well as the Fire Science degree program. Chemistry 161 has traditionally had a large number of unsuccessful students, averaging a 28% DFW rate in the past two years. The course includes topics that are frequently challenging to students and it is often difficult for faculty to respond to different student learning styles. The team's goal is to reduce the DFW rate by at least 50% while expanding capacity and saving money.

Simulations will be incorporated into all sections, enabling students to explore and understand concepts. The existing online sections already feature ongoing assessment and prompt, automated feedback. This feature will be moved into all sections of the redesigned course.

The institution has put its support behind the effort, with cooperation of all Chemistry faculty and LCCC administration.

We would like assistance in creating more of the interactive, scenario based simulations and other learning objects.

F. Description of Your Early Work, Planning and Preparations. Describe the preliminary work of the learning community as you prepare for

your community project and for attending your Region's Learning Institute (March 14, 2008). What were the key components in your planning and preparation for your LC (Roles? Methods? Timelines? Coordinating schedules?)? What were key issues and concerns, and how did you sort them out? What were the key successes and what impacts have they had? Are there any vignettes that illustrate these?

It is important to realize that the Chemistry 161 course has gone through three phases that have aspects of course redesign. The phases are:
Phase 1 - Lectures paired with specific lab sections (led to better connection and communication for lecture sections with associated lab sections). It demonstrated the benefits of consistency and where specific learning outcomes would be addressed. Prior to this students could be in any lecture and/or lab and there was a limited match on topics covered. Students would complain excessively in student evaluations of the difficulty of matching lecture and lab;
Phase 2 - Development of technology based lab and elimination of the use of toxic chemicals. It also allowed the online students to have the same laboratory experience as the on campus students. The labs were also designed to be more engaging for the students. It reduced the cost associated with each lab performed by the students. Students were able to move between lab sections and online students could come to campus to complete labs;
Phase 3 - Course Redesign Project using NCAT's Buffet model. The buffet model adopted to allow students the opportunity to attend and float between any lecture or lab section. Course material for online students is available to all students. Greater consistency of lecture presentation is communicated to all instructors teaching every section of the course. Common exam questions are made available and utilized by adjuncts.

G. Community Building and Project Development. Describe early phases of building your community and developing your collaborative project. What key challenges and problems do you face and how do you handle them? What did they - or will they - lead to? What successes have you enjoyed to date? Are there any vignettes of potential consequence or impacts that you can share? What resources are you using to support community building and how are they making a difference?

The idea of common exam questions shared by all instructors was revolutionary on our campus. Nevertheless, after much healthy discussion the idea was accepted by entire Learning Community.

The success will likely lead to greater cooperation and integration within the Chemistry program, and has even lead to discussions of collaboratively developing wiki style textbooks in the future. This might, perhaps, become one or more future Learning Communities.

H. **Planning Your Assessment Strategies.** How will you evaluate your work/successes? How will you assess member learning, (including technology learning)? your community's growth over the year? student learning or change connected with your project? Both formative (this Portrait is part of this) and summative methods should be used.

As more sections are opened without the constructions of additional laboratory space we can easily measure the increase in capacity. Financial savings will be estimated by comparing the cost of comparable facilities to handle hazardous chemicals. For student assessment we will measure student grades. Because the project encompasses Common exam questions are made available and utilized by adjuncts.

This is the end of Part I
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[Submit Part I to nwlccenter@bgsu.edu]
