Student-Centered Learning: A Personal Journal

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ECAR

The notion of learner-centered models in higher education has been around at least since the mid-1980s.[1] The 1987 article "Seven Principles for Good Practice in Undergraduate Education"[2] placed an essential emphasis on student engagement. By the mid-1990s, claims for a "paradigm shift" were omnipresent. Robert B. Barr and John Tagg proclaimed the change in academia:

> A paradigm shift is taking hold of American higher education. In its briefest form, the paradigm that has governed our colleges is this: A college is an institution that exists *to provide instruction*. Subtly but profoundly we are shifting to a new paradigm: A college is an institution that exists *to produce learning*. This shift changes everything. It is both needed and wanted.[3]

Stephen C. Ehrmann carried the discussion forward to the use of technology.[4] More recently, Donald P. Buckley stated, "Our generation has the first opportunity to enable an educational transition from a reliance on metaphors about how people learn to an emphasis on pedagogies founded on an understanding of the cognitive development of learning."[5]

Colleen Carmean and Jeremy Haefner, 2002 EDUCAUSE National Learning Infrastructure Initiative (NLII) Fellows, provided an excellent synthesis of the various ways in which student-centered learning has been defined, calling it "deeper learning." Using five key principles, they maintained that a deeper learning experience occurs when learning is *social, active, contextual, engaging,* and *student-owned*.[6] Their primary project was to find ways to use course management systems to create "effective learning environments." While there is great promise in transforming the ways in which students learn with technology, that transformation still is very much in progress. For all the talk of transforming the "sage on the stage" into a "guide on the side," we still have a long way to go.

The purpose of this research bulletin is to illustrate some of the ways in which technology can be used to de-center a variety of literature courses in order to facilitate more active student learning in writing-intensive courses, where the goal is to use writing to further instruction and where process is more important than product.

Highlights of Student-Centered Learning

Achievement of student-centered learning was accelerated by introducing technology into the classroom. Indeed, one might say that certain technologies drove the "center" of the classroom from the professor's podium to the students' desktops. Early technologies such as listservs introduced convenience because comments could be typed online by students, read by everyone in the class, and copied and pasted into documents used in class. But the real revolution came with the introduction of the computer-based classroom. Even though software applications in early computer classrooms were

primitive (mostly e-mail and discussion lists), students found themselves actively involved in classroom learning in brand new ways.

My own teaching changed most profoundly once I set up a Web site for my course. Suddenly, student essays could be archived, and they could be "brought into the classroom" for peer review by projecting them on a screen or having students view them at their desktops in computer classrooms. While they sat next to each other, students could discuss their writing, and students became an integral part of not only the learning experience but the teaching experience. The center of the classroom had truly begun to shift to the student.

The most recent technological advance that affected my teaching is the course management system (CMS). With a CMS, all of the "tools" of the classroom, from document archives to assignments and session notes to gradebooks and rosters, are integrated through a single platform. For the first time, students understand that the distinct elements of their coursework form a complete learning experience because they see the interrelationships through the window of the CMS. Students appreciate the convenience of being able to check their class notes, assignments, and grades from any Web browser on campus or remotely, and, according to some student evaluations, they wish more courses would go "paperless." Student satisfaction with the CMS runs very high.

Evaluating the quality of student writing is difficult. Writing is a "practice sport"—the more students write, the better their writing becomes. Technology, combined with curricular changes, helps students take responsibility for their own work and usually leads to significantly more writing. Students stop asking instructors the tired old question, "What do *you* want?" and begin telling *each other*, "In my next essay, the problem I plan to address is…." When students assume ownership, they see peer reviewing not as busy work but as an essential component of the kind of collaborative thinking that leads to informed writing.

Creating a Sense of Community to Foster Collaboration

As John Seely Brown reminded us, "Learning is a remarkably social process."[7] But how exactly, and for whom, is learning a social process? Many students are reluctant to participate in class discussion. Some students experience great terror in small classes. On the other hand, many students find comfort in being part of a large lecture class where they can maintain their anonymity. In face-to-face classes, there is no easy way to either encourage or insist on student participation. Simple tools such as e-mail and discussion lists provide an easy remedy to this situation.

Before I started using electronic discussions lists in 1993, I used to ask Modern Drama students to come to class with a written question or comment about the assigned play. Those comments formed the basis for class discussion and engaged some students. At the end of class, students were given time to write a response to the discussion or to propose a topic they might be interested in developing for an essay. When I taught an interdisciplinary senior seminar in which students used an electronic list for journaling, all 15 students became very engaged. The topic of the seminar was gender studies—

controversial ground for many students—and discussions often became heated. When the problem of "flaming" came up, student online discussions turned to "netiquette" as a way of dealing with the issue. In this way, students helped each other discover the value of electronic communication.

One day, after a very heated discussion in class, many students continued to express very strong feelings online. Just before midnight, one student took the time to analyze his experience with e-mail and the electronic list:

> Funny how the words fly when we get on E-Mail. We have not been taught in class to speak our minds. We listen, we nod, we shake our head, we zone out. In this format we feel liberated to say what we want, edited text which we can shape and refine (or not) before we release it for mass consumption. No one interrupts us while we talk. We can't see other people grimace in pain at our words. I have often stopped mid-sentence to address an expression on someone's face, only to lose my original train of thought afterwards. This medium allows me to precisely spit out my half-baked ideas and to be certain that everyone gets a chance to read my thoughts, and a chance for me to read other's.[8]

At the next class meeting, the students took over. Some apologized; some explained what they really meant to say. By the end of the semester these students had posted 358 notes to the discussion list over 102 days, an average of nearly 24 notes for each of the 15 students.

New Assignments, Changes to Process

Moving on from these early experiments, I asked students to submit their essays electronically. As part of the "Writing with Computers" project, begun at the University of Missouri in 1994 to enhance courses in freshman composition, I offered a literature course. The central computing organization agreed to purchase a site license for Eudora, which allowed for formatted e-mail messages. Students could keep their "Eudora Folder" on a floppy disk that would launch the program on designated computers.

In fall 1995, I set up a course Web site with links to the discussion list, assignments, lecture notes, and archives for everything students wrote. Turbo Gopher allowed access to discussion archives. Later, when we dropped our LISTSERV license and shifted to ListProc, we turned to MHonArc for archiving. Student volunteers turned Eudora essays into Web pages that could be archived and accessed from the course home page. Having essays as well as peer reviews available online, students discovered how much they could learn from each other. This patchwork of technology prompted curricular changes and development of new assignments. Faculty members often complain that using technology to support teaching consumes too much time. In fact, student volunteers can help the faculty use technology very efficiently, freeing faculty to address pedagogical concerns.

To make the most of course management systems or any instructional technologies, it is important to think first about what you want to achieve, what your goals are, what and how you want your students to learn, and which technologies will help you achieve your goals. Faculty colleagues already using instructional technologies can be of great help in thinking through these issues, and many institutions have wonderful faculty resource centers staffed with people whose sole job is to help the faculty learn and use instructional technologies. Many of these centers are run and/or staffed by faculty members themselves or by people with a deep understanding of both pedagogy and technology.

Course management systems have the potential to enhance teaching and learning while effectively organizing some of the processes that support teaching. Course management systems that seamlessly integrate necessary technology into one package can transform classes, making them more truly student-centered than many faculty imagine possible. Having e-mail, a bulletin board, and collaborative workspaces all in the same "place," accessible with any Web browser, gives students 24 x 7 access to all course materials. Students can post their work to a common "course" space and engage in peer review and revision. When communication is internal to the CMS, students are not as tempted to send frivolous e-mail. Essays easily can be archived within a presentation space. Much of the responsibility for learning shifts from the instructor to the students, and class time can be spent on pedagogical rather than administrative issues.

Posting grades is among the more onerous tasks in which faculty members engage. Course management systems that can populate course rosters, provide easy-to-use grade books, and transfer grades to the registrar automate this task. Even in this regard, course management systems encourage students to take ownership of their learning. Instructors are relieved of the need to send grades to students because the students can check their grades *whenever they want to*.

Table 1 illustrates a typical set of learner tools[9] that are integral parts of instruction and various technologies that can be used to enhance those tools. Column 2 lists the technologies I used prior to 1995; column 3 lists the technologies I used as part of my course Web site; and column 4 describes the features that are integrated in a CMS.

Table 1. Pedagogical Tools Used for UM–Columbia Writing-Intensive Courses

Learner Tools	Technologies Used Prior to Launch of Course Web Site (Pre-1995)	Technologies Integrated in Course Web Site	Features Integrated in CMS
Communication Tools			
Discussion forums	LISTSERV/Usenet	Link to ListProc	√
File exchange	FTP	Eudora	√
Internal e-mail	Host-based system	Link from Web page	√
Online journal/notes	[Not used]	[Not used]	√
Real-time chat	"Tell" commands	Link to MOOs/MUDs	√
Video services	[Not used]	[Not used]	√
Whiteboard	[Not used]	[Not used]	√
Productivity Tools			
Bookmarks	[Not used]	[Not used]	√
Calendar/progress review	Paper handout	Hyperlinked calendar	√
Orientation/help	[Not used]	Browser-specific	√
Searching within course	[Not used]	Dependent upon Web site navigation	√
Work offline/synchronize	No synchronization	No posting capability for students	√
Student Involvement Tools			
Group work	Paper-based	E-mail exchange	√
Self-assessment	[Not used]	[Not used]	√
Community building	Online discussion	Link to discussion	√
Portfolios	Paper-based	Paper-based	√

Technology Influences on the Evolution of Writing-Intensive Courses

Teaching Technologies Prior to the Web. When I began teaching Modern Drama in fall 1971, students were asked to write two essays and complete midterm and final examinations. When Modern Drama became a writing-intensive course—one designed to encourage students to see individual essays as part of their total learning experience—we eliminated the midterm and added a third essay. Ultimately, all exams were dropped in favor of a final take-home essay. Students exchanged paper drafts for peer review and engaged in substantial revision as a result of those reviews. Early technologies made it easier to effect change, and the use of a Web site capitalized on many of the technology investments made in support of student learning.

A Course Web Site Puts Students in the Center. Through the course Web site, students finally realized how they might use writing as a central learning experience.

Early in each semester, students were asked to write two short essays, the first on the "Conventions of Modern Drama" and the second on "Character Construction in Early Modern Drama." For the first essay, students got their assignment from the "Assignments" page of the Web site. The assignment asked them to write about conventions, gave them a choice of plays to write about, and documented a set of rubrics for grading. Students were invited to think of this essay, and the others assigned during the semester, as a problem to be solved rather than as an interpretation to be discovered.

These two essay assignments were followed by three more-extensive explorations:

- Defining Modernism

- Defining Postmodernism

- Getting a Fix on Modern Drama and What It Means to You

Each assignment posed a problem, gave students a choice of plays, required peer reviews of rough drafts, and required that students quote and discuss a written comment posted by one of their classmates. They were asked to draw the comments from the discussion list, a peer review, or a previous essay. Students began to see their work in the course as a whole rather than as discrete projects. This led to an even more extensive overhaul of the writing requirements for the course. By choosing carefully, students could incorporate work from several essays, with appropriate revision, in each subsequent essay.

For their last essay, students were asked to choose one play from the last five or six assigned and compare it with two plays, one they had earlier defined as modernist and another they had defined as postmodernist. Additionally, they were to discuss their own response to the play and how it is conditioned by their entire experience in the course. While not all students took advantage of this opportunity to use their earlier work in the course, a great many did.

The process changes that resulted from the introduction of technology into the course led to discussions that were more carefully focused to support the assignments. Table 2 reveals how this fine-tuning led to a substantial increase in the number of messages posted over several years.

Table 2. Participation in Online Discussion for Modern Drama Course

Semester	Number of Students	Total Messages Posted	Average Messages per Student
Winter 1995	17	122	7.18
Fall 1996	29	469	16.17
Fall 1998	35	735	21.00

Using these same techniques for other Web-supported courses produced similar results. The typical survey course, often conducted over two semesters, attempts to "cover" the tradition of British literature from its earliest beginnings to the present. Students are asked to read a tremendous amount of material, from snippets to complete texts. Instructors do most of the talking, while students passively listen. For "Survey of British Literature: Beginnings to 1784," two preliminary essays were assigned, followed by three longer ones. Table 3 shows how these changes impacted participation in online discussion.

Table 3. Participation in Online Discussion for British Survey Course

Semester	Number of Students	Total Messages Posted	Average Messages per Student
Fall 1995	36	754	20.94
Winter 1997	33	971	29.42

What these figures do not reveal is the degree to which the Web site provided an interactive environment where students engaged in peer group work and in-depth discussion of particular texts, with a much greater focus on issues of literary theory and canon formation than had been achieved prior to the use of technology. Student interaction here, as in other courses, facilitated a great deal of interdisciplinary discussion and synthesis on the part of the students. Students were eager to discuss insights from related courses—art history, anthropology, religious studies—as well as their own personal experience. In effect, they assumed ownership and contextualized their own learning.

Course Management Systems Integrate Pedagogical and Administrative Technologies. I taught the Modern Drama course twice using a CMS. Increases in the number of student postings to the discussion board, as illustrated in Table 4, were prompted as much by course reorganization as by the ease of using the technology. Peer review, for example, is much easier with a shared workspace; it no longer requires being in class. Setting topics within a threaded discussion board can also lead to more "conversation" among students, which supplements what occurs in face-to-face meetings.

Table 4. Participation in Online Discussion for Modern Drama Course Taught with CMS

Semester	Number of Students	Total Messages Posted	Average Messages per Student	Total Number of Words
Fall 2000	20	391	19.55	54,000+
Fall 2002	20	537	26.85	77,000+

Discussion can be more productive in virtual class sessions where students are asked to work online rather than come to class. The introduction of virtual classes allowed two days for students to post and respond to the comments of others, leading to more engagement. Many students exceeded the minimal requirements that they post an original statement and a response to what another student had written. Many posted three or four messages in the initial discussion. The next week, when they posted proposals, many students changed direction after reading responses. Over the course of an entire month, students were focused on writing while they were reading a great number of plays. By means of student tracking, the CMS made it easy to determine total word count for discussion board use.

Creating a Hybrid Course

As a result of the integrated tools that the CMS provides, I offered my first hybrid course in fall 2001. "Shakespeare and the New Movies" was designed to address the problems encountered in film courses. Typically, students met to watch the films and then had separate discussion sessions, often conducted by graduate teaching assistants. The course objectives were to examine a number of Shakespeare's plays along with recent films based on them, in relation to what we know of Shakespeare's life, the cultural contexts of the 16th and 17th centuries as well as our own times, and the nature of film adaptation. After students watched films and engaged in face-to-face discussion, they were required to participate in discussion "sessions" with a set topic. In addition to participating in online discussion groups, students were expected to do a substantial amount of formal writing, including three 250-word essays on individual plays and films, written early in the semester, and three 1,500–2,000-word essays spaced throughout the course. Table 5 indicates the amount of discussion they engaged in, but it does not begin to suggest the quality of the essays they wrote. Many essays were among the best I have received in any class.

Table 5. Participation in Online Discussion for Hybrid Course

Semester	Number of Students	Total Messages Posted	Messages per Student	Total Number of Words
Fall 2001	41	1,214	29.61	164,000+

While this course was a great success, I am not sure that hybrid courses are fully satisfying. In their course evaluations, many students said that while they really liked the course and the online support, they missed face-to-face contact with other students. That social aspect of education is still essential. Seeing the films as a group, and always running out of time for discussion, often left us wanting more contact time.

What It Means to Higher Education

De-centering the classroom means that academics must not only be willing to put students at the center; they must acknowledge student learning goals above disciplinary goals. Some faculty members are excited by the emerging landscape of new

instructional technologies and the opportunities they provide; others are not. Some faculty members are stimulated by the pedagogical challenges that accompany technology adoption; others are not. Some faculty appreciate the convenience of anytime/anyplace access to courses; others are burdened by it. Many faculty see technology as marking a significant shift from an emphasis on content to teaching students how to become lifelong learners. With this kind of engagement, there is a need to acknowledge "the validity and variety of their own experience"[10] that students bring with them. The economics of higher education—from the vantage point of students as well as faculty—also is a consideration. Student-centered learning is likely to necessitate more rather than less time for students and faculty. Students enrolled in several student-centered courses, given the number of students who work 30 hours or more while in college, are likely to feel overburdened. Faculty, especially at research universities, may find themselves similarly overburdened. On the other hand, course management systems can help instructors manage the administration of instruction so they can better focus on the task of mentoring students to become lifelong learners.

Student-centered learning may not be for everyone, or it might not be a goal for every college or university course. For many students, higher education is more about accomplishing certification rather than learning. Large-scale deployment of truly student-centered learning may well change the very nature of higher education.

Key Questions to Ask

Colleges and universities interested in furthering student-centered learning experiences may find it useful to answer these key questions:

- For which courses are student-centered experiences appropriate? Are they appropriate for all courses?

- How can we assure that the workload is balanced for students and instructors?

- Can we develop incentives for both students and instructors that acknowledge the commitment necessary for student-centered learning to succeed?

- What are the appropriate technologies to support student-centered learning?

- With the use of technology, what is the relation between in-class and online activities?

Where to Learn More

- *Mapping the Learning Space: Learner-Centered Principles for Higher Education, An NLII Research Project* <http://www.west.asu.edu/nlii/> provides an excellent compendium of ongoing research on all aspects of student-centered learning.

- Robert (Bob) Bender, "Good and Ill Together: Interdisciplinary Teaching with Technology," in *Innovations in Interdisciplinary Teaching*, Carolyn Haynes, ed.

(Westport, Conn.: Oryx Press, 2002), pp. 94–121, discusses some of the courses described here in greater detail.

Many of the courses discussed in this research bulletin are being maintained on the Web as archives. Because students agreed to sign FERPA releases for their work in these courses, you may view their discussion as well as their drafts, peer reviews, and revised essays, along with the assignments and other course material. To access these courses, you will need to log in as a guest with the userid "demoguest" and the password "guest."

- Fall 2002... English 370: Genres—European and American Drama, 1890 to the Present, <https://courses.missouri.edu/SCRIPT/english_370_rb/scripts/serve_home>.

- Fall 2001... English 371: Comparative Approaches to Literature—Shakespeare and the New Movies, <https://courses.missouri.edu/SCRIPT/english_371/scripts/serve_home>.

- Fall 2000... English 370: Genres—European and American Drama, 1890 to the Present, <https://courses.missouri.edu/SCRIPT/english_370/scripts/serve_home>.

- Fall 1999... English 215: British Literature: Beginnings to 1784, <https://courses.missouri.edu/SCRIPT/english_215/scripts/serve_home>.

Endnotes

1. M. D. Svinicki, "New Directions in Learning and Motivation," in *Teaching and Learning on the Edge of the Millennium: Building on What We Have Learned*, M. D. Svinicki, ed. (San Francisco: Jossey-Bass, 1999), pp. 13–16.

2. A. W. Chickering and Z. F. Gamson, "Seven Principles for Good Practice in Undergraduate Education," *AAHE Bulletin*, March 1987, <http://aahebulletin.com/public/archive/sevenprinciples1987.asp>.

3. R. B. Barr and J. Tagg, "From Teaching to Learning—A New Paradigm for Undergraduate Education," *Change*, November/December 1995, p. 13.

4. A. W. Chickering and S. C. Ehrmann, "Implementing the Seven Principles: Technology as Lever," *AAHE Bulletin*, October 1996, <http://www.tltgroup.org/programs/seven.html>.

5. D. P. Buckley, "In Pursuit of the Learning Paradigm: Coupling Faculty Transformation and Institutional Change," *EDUCAUSE Review*, January/February 2002, p. 29, <http://www.educause.edu/ir/library/pdf/erm0202.pdf>.

6. C. Carmean and J. Haefner, "Mind over Matter: Transforming Course Management Systems into Effective Learning Environments," *EDUCAUSE Review*, November/December 2002, pp. 28–29, <http://www.educause.edu/ir/library/pdf/erm0261.pdf>.

7. J. S. Brown, "Learning in the Digital Age," in *The Internet and the University: 2001 Forum*, M. Devlin, R. Larson, and J. Meyerson, eds. (Boulder, Colo.: EDUCAUSE, 2002), p. 65.

8. Student post to Discussion List for Interdisciplinary Studies 290, GENRED-L@Mizzou1.Bitnet,>, Thu, 3 March 1994 21:33:04 CST [archive no longer maintained on the Internet].

9. The list of typical CMS learning tools is taken from EduTools. See <http://edutools.info/index.jsp>.

10. A. Rich, "Teaching Language in Open Admissions," in *On Lies, Secrets, and Silence: Selected Prose 1966–1978* (New York: W. W. Norton, 1979), p. 57.

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