

# MountainRise

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**Using a Web-Enhanced Approach for Internship  
Planning, Implementation, and Assessment**

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**Abstract**

Internships and other types of field placements have become a focal point of the senior year experience for students majoring in a wide variety of academic disciplines. The purpose of this paper is to describe some of the key challenges associated with the implementation of an experiential learning requirement and related technology-based solutions that have been implemented and field-tested within a university internship program. The paper also includes practical suggestions for using technology to enhance the supervision of internships and other field placements within the undergraduate curriculum.

## **Using a Web-Enhanced Approach for Internship Planning, Implementation, and Assessment**

Internships and other types of field placements have become a common focal point of the senior year experience for students majoring in a variety of academic disciplines. Experiential learning requirements afford students a number of important benefits as they continue the transition to post-college life. As with any alternative approach to teaching-learning, the inclusion of an off-campus internship within the curriculum provides a distinct set of instructional challenges for the involved faculty. The purpose of this paper is to describe some of the key challenges associated with the implementation of an experiential learning requirement and related technology-based solutions that have been implemented and field-tested within a university internship program.

### **Experiential Learning: Benefits & Challenges**

The senior year experience represents a critical developmental period as undergraduate students prepare to make the difficult transition from college to the world of work (Gardner & Van der Veer, 1997). In many academic programs, transitional issues are frequently addressed during senior seminar or capstone courses (e.g., Catalano, 2004; Sasser, 2005; Shoaf, 2000; Todd & Magleby, 2005). These types of capstone courses have been found to incorporate a broad range of instructional formats including portfolio development, alumni networking, leadership training, service learning, educational travel, oral presentations, major individual or small group projects, comprehensive exams, and so forth (Henscheid, 2000).

Field-based capstone experiences offer a number of distinct advantages for the participating student, employer, and academic program. Perhaps most importantly, an internship or other type of field placement provides undergraduate students with the opportunity to apply everything that they have learned in an authentic work setting. Experiential learning requirements afford students a number of additional benefits that are unlikely to occur in more traditional teaching-learning environments (see Table 1). For the participating employer or supervisor, an internship program represents an excellent opportunity to: incorporate new ideas or best practices being taught at the university level; recruit and observe new talent; and train prospective employees at lower cost (Grantham, Patton, York & Winick, 1998). Academic programs benefit through more direct contact with practitioners working in the field for

the purpose of graduate job placement, curricular evaluation, community advisory boards, collaborative service or research projects, and external funding through private and/or non-profit groups.

**Table 1. Advantages Associated with Undergraduate Internships**

Advantage	Description
Career exploration	Students get the opportunity to explore the job market within their major or academic discipline.
Resume building	Students earn academic credit while simultaneously enhancing their marketability.
Transitional issues	Students complete a more gradual transition to their first full-time employment opportunities.
Professional networking	Students begin to establish a network of working professionals in the field.
Practical application	Students apply the theoretical concepts learned in the classroom within an applied instructional context.
Knowledge integration	Students enjoy a more balanced college experience including academics, extracurricular activities, and work.

Some of the more significant transitional challenges associated with experientially-based capstone courses relate to the student's ability to: (a) connect disciplinary theory to practice; (b) meet performance standards in the workplace regarding professionalism; (c) continue learning in a highly independent and self-directed manner; and (d) appreciate the value of a liberal education as it relates to their continued personal and professional development. Ideally, the senior year internship or field placement serves as the defining moment of a student's undergraduate education. In some instances, however, students gain practical experience during their internship placement but learn very little. A number of factors can contribute to this undesirable outcome including inadequate academic preparation, lack of accountability, ineffective university supervision, and inappropriate site placement (Campbell & Kovar, 1994).

Furthermore, it is not uncommon for student interns to experience some degree of isolation from their peers and university faculty while engaged in off-campus field placements (Mayer, 2002). In situations where logistical constraints restrict on-site visits from university personnel (e.g., lack of support for travel, student placement at remote locations, multiple interns assigned to a single supervisor), the student intern may experience an even greater sense of isolation and disconnection. Casey, Bloom & Moan (1994) described this common problem in the following statement:

When the supervisee leaves the campus for internship, communication with the supervisor is often limited to phone calls or voice mail messages, periodic supervision meetings held weekly or monthly, and anxiety-filled onsite visits. It can be hours, days, or even weeks before a message is returned. (Internship: Electronic Connectivity section, ¶ 1).

### **Web-based Technology & Internship Supervision**

In response to a number of the previously described challenges associated with internship supervision, faculty members at a regional public university developed a web-enhanced approach for supervising off-campus internships. The primary intent of this curricular innovation was to enhance student learning during the internship placement and facilitate increased communication among student interns and the university internship coordinator. To accomplish these important curricular goals an online learning community was established using Desire2Learn (D2L), a campus management system for web-based and web-enhanced instruction. The D2L operating platform affords course designers the use of a wide range of instructional and communication tools including e-mail, discussion boards, chat groups, electronic drop-boxes, online surveys/quizzes, electronic grade book, and so forth. The following sections of this paper describe the course learning outcomes, teaching-learning activities, assessment strategies, and course evaluation data associated with this web-enhanced approach to internship supervision.

### **Course Learning Outcomes**

All academic programs attempt to instill in their students a passion and capacity for learning that persists long after graduation. Faculty members share the common ambition of producing program graduates who are highly motivated and self-directed lifelong learners. Experiential learning is an instructional approach that has been endorsed as a means for encouraging students to self-reflect and assume increased responsibility for their own learning (Washbourn, 1996). Experiential learning is

perhaps best addressed from an interdisciplinary perspective in which students are required to make meaningful connections regarding content learned in previous academic courses while solving real-world problems (Ryan, 1999; Ryan & Cassidy, 1996). Ryan and Cassidy described that:

Frequently, there is a disconnection between the learning that takes place in the classroom and the knowledge that is needed in a knowledge-based society. The contrast between what is taught in the classroom and what is expected in the professional world is often astonishing, but the goal of experiential education is to make active learning relevant for students in and beyond the classroom and to create lifelong learners. (Introduction section, ¶ 2)

In light of these legitimate concerns, curriculum developers adopted the following learning objectives for the web-based course described in this paper: (a) to help integrate and bring successful closure to the undergraduate experience; (b) to provide regular opportunities for self-reflection regarding one's professional readiness; and (c) to facilitate the students' transition to post-college life (Cuseo, 1997). Faculty members were also concerned with integrating the broader goals of a liberal or general education (e.g., problem solving, self-reflection, communication, ethical behavior) with the more specific technical competencies that are most directly addressed within the internship placement (Carlson, 2001). These important learning outcomes serve as the basis for a course assessment plan that requires students to actively describe and apply what they are learning at their internship placements (Ryan, 1999).

### **Teaching-Learning Activities & Assessment**

A number of instructional approaches have been recommended for facilitating and assessing student learning during internships (e.g., learning contracts, journals entries, portfolios, reading and writing assignments). While the appropriateness of the selected teaching-learning activities and assessment strategies depend on the particular instructional context, students must play a significant role in determining the specific direction of the internship and reflect regularly on the meaning of their own experiences (Ryan & Cassidy, 1996). Ryan and Cassidy suggested that internship programs require students to:

1. Maintain an active role in choosing an internship site;
2. Receive an orientation that focuses on transitional issues;

3. Write a learning plan that identifies goals and assessment strategies;
4. Engage in small group discussions regarding personal learning goals;
5. Invest a sufficient amount of time in the placement; and
6. Maintain a self-reflective journal that promotes critical thinking.

In accordance with this basic set of guidelines, the involved faculty members used individual learning plans, self-reflective journals, electronic bulletin board discussions, and formal performance assessments as the methods for measuring student learning related to the previously described course learning outcomes of integration and closure, self-reflection, and transition to post-college life.

**Integration & Closure.** In its various forms, the senior year capstone course is regarded as an important curricular component that can be used to bring some measure of coherence and closure to the undergraduate experience (Cuseo, 1997). Capstone courses afford faculty members the opportunity to make interdisciplinary connections that are often overlooked by students as they progress through the undergraduate curriculum. Furthermore, internships and other field placements represent an ideal instructional format for promoting and assessing knowledge integration and synthesis.

Toohy and Ryan (1996) described five models for assessing student learning during an internship placement: the attendance model, the work history model, the broad abilities model, the specific competencies model, and the negotiated curriculum. While academic programs frequently use characteristics from several models of assessment, an emphasis is often placed on one approach over the others. In the interest of accommodating the widest range of individual student interests, course designers in this particular example adopted the negotiated curriculum model in which the internship coordinator, site supervisor, and student intern collaborate to determine the specific learning outcomes and associated responsibilities. Toohy and Ryan described the generalized process of negotiation in the following passage:

Aspects which must be agreed include the learning objectives the student will pursue, the activities to be undertaken, the people from the workplace and the educational institutions who can be called upon to provide instruction or support, the kinds of evidence of achievement that the student will produce, the person/s who will assess the work and often the criteria which will be used as the basis for assessment. (Negotiated Curriculum Model section, ¶ 1)



This process of negotiation is documented in the form of an individual learning plan. Individual learning plans are a form of instructional contract in which the student intern identifies a series of measurable learning outcomes that he or she intends to accomplish during an internship placement. The individual learning plan requires student interns to:

1. Reflect on the knowledge, skills, and abilities that they intend to further develop during the internship;
2. Meet with their internship supervisor for the purpose of setting individual goals and determining how progress toward those goals will be evaluated;
3. Meet with their internship supervisor at the mid-semester point to discuss progress regarding the previously determined goals;
4. Meet with their internship supervisor at the end of the semester to review the internship experience and progress regarding personal goals; and
5. Submit an internship portfolio to the university internship coordinator as evidence of personal achievement.

The student completes the individual learning plan using an online form and receives corrective feedback from the internship coordinator via e-mail. Students must occasionally modify the individual learning plan, with the university internship coordinator's and site supervisor's consent, during the placement if unexpected situations or circumstances prohibit progress toward a previously agreed upon goal.

The internship portfolio is an organized collection of artifacts or documents that summarizes student accomplishment during the internship placement. The students use the internship portfolio to provide evidence that they have made substantial progress toward the individualized goals that were established in consultation with the university internship coordinator and site supervisor at the start of the semester. For each goal in the individual learning plan, the student interns are required to include a section in the portfolio containing a description of the goal, a self-reflective narrative, and a series of artifacts supporting personal progress toward that goal. A student who set a goal of increasing proficiency during an exercise science internship, for example, might include sample physical activity programs developed and the pre- and post- fitness test results for the clients who used them. The individual learning plan and internship portfolio are graded using a scoring rubric (see Appendix A). The student

interns are also required to include a cover letter, resume, letter of reference, and professional development plan. The course website includes an electronic job search and selection handbook that students can use as a resource when preparing these required elements of the internship portfolio.

The internship portfolio is submitted for final grading in hardcopy but future plans include a shift to an electronic portfolio which would enable students to incorporate alternative forms of media (e.g., video clips, PowerPoint slide shows, audio clips) in a more highly integrated manner (Brock, 2004). This movement toward an electronic format will necessitate that the portfolio development process begin at an earlier point in the undergraduate curriculum so that students are more familiar with the available technological resources prior to the start of the internship experience. A portfolio developed in this manner would serve several complimentary purposes: (a) meet curricular objectives related to technology, (b) provide greater flexibility in documenting student performance, (c) be used during the job search process, and (d) allow for ease of dissemination.

**Self-reflection.** An internship may be of limited educational value if students are not challenged to think about what they learned as a result of their experience. Journaling has received support as an instructional approach for encouraging students to reflect more thoroughly about their experiences during an internship placement (Campbell & Kovar, 1994; Ryan & Cassidy, 1996; Young & Baker, 2004). Students can make self-reflective journal entries daily, weekly, or more infrequently depending on the specific context. The format of the journal entry can also vary considerably. A more structured approach to journaling would require students to respond to a specific set of questions designed to guide self-reflection. A less structured journal would afford students greater flexibility in responding to a general set of self-reflective prompts. Irrespective of the particular journal format selected, it is imperative that student interns “learn the difference between an account of what they did at work on a given day and observation and analysis of their work that sharpens their skills in observing accurately and thinking critically” (Ryan & Cassidy, 1996, Other Options section, ¶ 1).

The most recent iteration of the self-reflective journal, used in the web-based course being described here, requires students to complete electronic journals entries via the course website. An electronic journal format allows for the provision of more immediate feedback from the university internship coordinator in the form of an e-mail response. In order to facilitate more meaningful student self-reflection,

the course instructor provides a weekly behavioral-based question regarding experiences that are both work-related and closely aligned with the goals of a liberal education (see Table 2). Many employers use behavioral-based questioning during the job interview process because past performance is perceived to be the best predictor of future performance and interviewees are required to provide a more objective set of facts regarding their professional qualifications (Society for Human Resource Management, 2006). In responding to behavioral-based questions, the students reflect on and respond to how they handled specific situations in the past. Exemplary journal responses include a detailed description of the situation or problem, the actions taken, and the resulting outcome (see Appendix B). From a transitional perspective, it is critical that students are able to discuss the knowledge, skills, and abilities that they have acquired and their related practical experiences.

**Table 2. Sample Behavioral-Based Questions for Self-Reflective Journal**

Topic	Journal question
Liberal education	As you complete the transition from student to professional during this internship, the personal characteristics and skill sets developed as a result of the Baccalaureate experience should prove extremely beneficial. How has your transition to this internship placement gone so far? What skills or techniques have you learned in school that made your transition easier?
Evidence-based practice	Describe a situation where you have worked independently or collaboratively with a group of other professionals to enable a client to reach a predetermined goal. What type of data was collected and how was it used in evidence-based practice?
Developmental perspective	Our faculty members believe very strongly in the need for professionals to maintain a developmental perspective. This means that you have the ability to accommodate for individual differences in program design and demonstrate sensitivity toward human diversity issues or problems. By providing specific examples, convince me that you can adapt to a wide variety of people, situations, and environments.

In the future, the author plans to experiment with blogging as a potential format for the internship journal requirement. Over the past decade, blogging has increased in popularity and influence (Wikipedia, n.d.). Blogs are now widely used to communicate ideas about a range of topics including personal, cultural, business, science, education, politics, news media, and so forth. In Wikipedia (n.d.), a free online encyclopedia, blogging is defined as:

A website in which items are posted on a regular basis and displayed in reverse chronological order. Like other media, blogs often focus on a particular subject, such as food politics, or local

news. Some blogs function as online diaries. A typical blog combines text, images, and links to other blogs, web pages, and other media related to its topic. Since its appearance in 1995, blogging has emerged as a popular means of communication, affecting public opinion and mass media around the world.

As a format for an educational journal, blogging offers a number of potential advantages:

1. Used by many college students as a type of online diary already;
2. Represents a form of communication that is likely to persist and evolve;
3. Enables students to keep up to date with their peers' experiences at distant or remote locations in a non-intrusive manner;
4. Allows for the convenient and asynchronous exchange of information among group members; and
5. Updated and maintained easily.

There are a number of limitations or concerns that need to be addressed, however, when using blogging within an educational setting. These potentially problematic issues include student confidentiality regarding their personal reflections, technological training and support for faculty and students, appropriateness of the website content, and criteria for assessing student learning.

**Transition to Post-college Life.** During the senior year experience, undergraduate students are confronted by a number of significant transitional challenges (e.g., engaging in the job search and selection process, relocating to a new city or geographic region, preparing to enter the work force). In the interest of facilitating positive relationships with graduating seniors, colleges and universities should assume a proactive role in supporting and assisting students as they prepare to meet these transitional challenges (Gardner & Van der Veer, 1997). When conducted on campus, senior seminar or capstone courses can effectively be used to engage students in guest lectures and group discussions about a variety of transitional issues including:

Deciding where to live, and work; buy or rent a home, automobile and insurance; alumni involvement and responsibilities; adapting to the first year on the job; traveling for business and pleasure; managing wellness; and how best to adapt to new relationships and lifestyles. (Walls, 2002, p. 118)

The use of field placements or internships as a component of the senior year experience, however, presents some logistical challenges related to the establishment of a supportive learning community in which students are free to exchange ideas regarding their individual transitional concerns. In describing the challenges commonly associated with practicum placements in teacher education, Mayer (2002) indicated that “preservice teachers are often isolated from any type of continuous communication with university lecturers and other preservice teachers, and construct their professional selves in relative isolation of the on-campus components of their programmes (Shlagel et al., 1996; Cohen, 1999)” (p. 181).

In an effort to address this concern, electronic discussion boards were added to the internship requirements in this web-based internship course to promote more frequent interactions among peers, enable students to maintain connections to the university community, and establish a mechanism for exchanging strategies or ideas among placement sites (Mayer, 2002). Formal performance assessments were also used to focus student attention on a number of key work performance issues that occasionally represent a problem for new college graduates (e.g., professional appearance, promptness, written and verbal communication skills, problem-solving ability).

From an administrative standpoint, the student interns enrolled in the course are required to intermittently participate in five electronic discussion groups available through the course website. The student interns are divided into small groups based on their specific internship start date and remain in those groups for the duration of the course. The university internship coordinator provides the discussion topics but otherwise assumes an observational role in each group. The topics focus on the common transitional issues or challenges that students encounter during internship placements (see Table 3). Participation in the discussion groups is asynchronous and the students are required to contribute multiple responses to each discussion forum using proper etiquette (see Appendix C). As an alternative form of assessment, the employed web-based management system allows for the tracking of student participation in the form of messages posted and read.

**Table 3. Sample Electronic Discussion Board Topics**

Topic	Discussion question
Introduction	Introduce yourself and provide a brief description of your internship facility and your primary daily responsibilities. Explain what motivated you to apply for and accept an internship with this organization.
Self-assessment	Now that you are past the mid-point of your internship, you have a number of new experiences to reflect on. You probably have a much better idea of what it takes to build a successful career in this field. If you were hiring a student to replace you in this internship, what personal characteristics or qualifications would you look for?
Curriculum evaluation	Faculty members frequently make curricular changes based on student comments and feedback. How well did your education prepare you for this internship experience? If you could do so, how would you plan your academic study differently?

In addition to its primary purpose, the discussion board participation enhances student familiarity with technologies like listserv mailing lists and chat rooms that “can assist the professional in connecting with individuals who have similar interests” (Graves, 2000, p. 55). Other discussion boards are established on the course website for student interns to exchange ideas in a less structured manner about a wider range of topics (e.g., social plans, travel stories, questions and answers). Participation in these discussion groups is optional and the intent is to minimize the number of off-topic postings in the main discussion areas.

As an outcome measure of student learning, the internship supervisor and student intern are also afforded multiple opportunities to contribute feedback regarding the internship process. This type of 360 degree feedback is essential because it provides the university internship coordinator with valuable information regarding student performance, course competency attainment, curricular areas in need of

improvement, inherent dangers at the internship site, and quality of supervision or mentorship afforded at the placement (Abar, 1994; Campbell & Kovar, 1994; Foster & Moorman, 2001). The internship supervisor completes a mid-semester and final performance assessment using a form provided by the university internship coordinator that focuses on the key employability skills (e.g., professionalism, self-confidence, ability to learn, written and verbal communication). In order to enhance response rate, the internship supervisors are presented with the option of completing a web-based or hard copy version of the student performance assessment. While the internship supervisor performance assessment does contribute to course grading, "the final grade determination is an academic function that must be retained and made by the university faculty advisor identified as the student's instructor of record" (Miller, Anderson & Ayres, 2002, Internship Evaluation section, ¶ 1).

The student interns complete two site evaluations for which they receive academic credit at the end-of-the-semester. The initial post-work survey provides descriptive information regarding the placement site including general demographic information, hours worked, wages earned, and work-related diversity issues. This data is entered into a career services database that profiles all university affiliates. The second site evaluation allows the student to provide qualitative feedback regarding the strengths and limitations of the internship placement. The university internship coordinator can then use this feedback to make more informed recommendations to future interns regarding the merits and liabilities of possible placements. That data can also be employed to provide both positive and corrective feedback to the site supervisors at the various internship placements.

### **Course Evaluation Data**

Initial attempts to systematically evaluate the web-enhanced approach to internship supervision described in this paper have proved positive and the involved student interns valued their educational experience (Bulger, 2006). After several experimental semesters, this web-enhanced internship course was delivered to 23 undergraduate students completing senior internships. During the final weeks of the semester, students were invited to participate in the program evaluation study by completing an electronic questionnaire that was developed to evaluate the online course component. The questionnaire included 20 closed-ended questions in which the participants were asked to evaluate the instructional design



component of the course and their own learning using a five-point Likert scale with response categories ranging from Strongly Disagree (1) to Agree (3) to Strongly Agree (5). The electronic questionnaire also included three open-ended questions in which students were asked to describe the positives, limitations, and suggested improvements associated with the online component of the course.

The 18 students who responded (response rate of 78.26%) reported little difficulty using the course website and reasonably high levels of engagement regarding the course content. More importantly, students were in almost uniform agreement about their positive progress toward the designated course learning outcomes (integration, self-reflection, and transition). Specific feedback indicated that the students who completed the course appreciated the opportunity to reflect on their internship experience, communicate with peers on a regular basis and progress through required assignments in a self-paced manner. The most prominent limitations related to instructional design included inadequate access to the required technology at certain internship sites, limited interaction with the course instructor when compared to on-campus courses, and assignment specific concerns (e.g., amount of paperwork required, clarity of instructions). See Bulger (2006) for a more complete description of the results of this study.

It should be noted that this initial attempt at course evaluation was based on student perceptions rather than actual student learning or achievement data which would provide more valuable insight regarding the effectiveness of this instructional approach. Rhodes and Agre-Kippenhan (2004) provided a framework for assessing a university-wide capstone initiative in a more comprehensive manner: Conduct student focus group; engage students in a common writing assignment summarizing their progress toward university goals; require students to complete written course evaluations at the end of the term; and conduct external study of the capstone courses' impact on students. Future research in the area of capstone course development could focus on comparing students who have completed capstone courses with those who have not. There is also a clear need for follow-up surveys with program graduates who have finished capstone courses and/or their employers concerning the transition to full-time employment.

### **Conclusion**

An internship experience or field placement represents an important capstone experience for undergraduate students studying in a variety of academic fields. While internships offer a considerable

number of benefits to the participating student, academic program, and employer, they also pose distinct challenges related to course development, implementation, and assessment. These challenges are more pronounced when the internship is conducted away from campus in a remote location that affords limited opportunity for direct student interaction with faculty and peers. Web-based technology offers great promise in actively engaging students outside of traditional teaching-learning environments. This paper was intended to provide an example of a web-enhanced protocol for internship supervision that could be implemented in part or in its entirety to mediate these logistical concerns and help facilitate student transition to post-college life.

While the instructional approach described in this paper will not meet the needs of every internship program (Bulger, 2006), it is likely that faculty members at many institutions will be held accountable for finding similar ways to incorporate online technology into traditional and non-traditional courses. Online education continues to penetrate institutions of higher education and has evolved into a widely recognized component of many school's long-term strategic plans (Allen & Seamen, 2005). Some faculty members view technology integration positively and value it as a resource for interacting with students, extending the classroom, creating learning communities, enhancing student engagement, addressing multiple intelligences, and so forth. According to chief academic officers, however, other faculty members have been more reluctant to accept the value of online education (Allen & Seamen, 2005). Furthermore, Allen and Seamen reported that administrative concerns associated with the use of technology relate to the increased faculty time and effort required to effectively deliver an online course and the perception that students need to be more disciplined to succeed in an online course than in a face-to-face course. These very legitimate concerns can be addressed through a combination of approaches including increased technical support on campus, frequent continuing education opportunities for faculty and academic staff related to instructional technology, increased internal/external funding opportunities for quality online course development, and provision of faculty release time for technology development, implementation, and assessment. Perhaps most importantly, faculty members must continue to experiment with innovative instructional technologies and disseminate the resultant ideas or strategies to colleagues through peer-reviewed publications and conference presentations.

It is the author's experience that these administrative concerns are very legitimate. The initial process of online course development can be labor intensive and the previously described approach to internship supervision increased the amount of time the instructor invested communicating with student interns and assessing their progress. While the distribution of faculty time and effort in the direction of enhanced student-teacher interaction can be considered a definite positive, provisions must be made to maintain the delicate balance among all faculty responsibilities (e.g., teaching, research, service, advising). To that end, a combination of approaches including increased technical support on campus, frequent continuing education opportunities for faculty and academic staff related to instructional technology, increased internal/external funding opportunities for quality online course development, and provision of faculty release time for technology development, implementation, and assessment. Perhaps most importantly, faculty members must continue to experiment with innovative instructional technologies and disseminate the resultant ideas or strategies to colleagues through peer-reviewed publications and conference presentations.

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### Author Note

The internship course described in this paper was developed while the author was with the Department of Kinesiology at the University of Wisconsin-Eau Claire.

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## Appendix A

## Senior Year Internship Scoring Rubric for Individual Learning Plan

**Course Outcome:** To promote conceptual integration and bring closure to the undergraduate experience (Cuseo, 1997). Student performance will be assessed through the completion of an individual learning plan and internship portfolio.

Points	Scoring Criteria
4	<ul style="list-style-type: none"> <li>① Evidence of <b>exceptional accomplishment</b></li> <li>① Goal is <b>specific, measurable, attainable, realistic, and time-limited</b></li> <li>① Materials submitted in support of goal achievement are of <b>high quality and include a self-reflective component<sup>1</sup></b></li> </ul>
3	<ul style="list-style-type: none"> <li>① Evidence of <b>satisfactory accomplishment</b></li> <li>① Goal is <b>specific, measurable, attainable, realistic, and time-limited</b></li> <li>① Materials submitted in support of goal achievement are of <b>average quality and include a self-reflective component</b></li> </ul>
2	<ul style="list-style-type: none"> <li>① Evidence of <b>limited accomplishment</b></li> <li>① Goal is <b>appropriate but not fully developed</b></li> <li>① Materials submitted in support of goal achievement are of <b>low quality and/or fail to include a self-reflective component</b></li> </ul>
1	<ul style="list-style-type: none"> <li>① Evidence of accomplishment <b>does not meet expectations</b></li> <li>① Goal is <b>inappropriate or not fully developed</b></li> <li>① Materials submitted in support of goal achievement are <b>unacceptable</b></li> </ul>
0	<ul style="list-style-type: none"> <li>① Degree of accomplishment is <b>not observable</b></li> </ul>

Individual Learning Plan Grading Summary									
Goal 1	/4	Goal 2	/4	Goal 3	/4	Goal 4	/4	Goal 5	/4














Total Points Earned: \_\_\_\_\_/20 points

<sup>1</sup> The **self-reflective component** should include a written statement describing (a) the student's rationale for selecting the specific materials submitted in support of goal achievement and (b) the student's self-evaluation of his/her progress regarding each specific goal.

## Appendix B

## Senior Year Internship Scoring Rubric for Internship Journal Entries

**Course Outcome:** To provide students with the opportunity to reflect on their own learning and the meaning of their college experience (Cuseo, 1997). Student performance will be assessed through the completion of weekly self-reflective journal entries.

Points	Scoring Criteria
<b>3</b>	<ul style="list-style-type: none"> <li> Journal entry is of <b>exceptional quality</b></li> <li> Student provides a <b>specific situation or assigned task</b> that needed to be addressed</li> <li> Student describes the <b>action(s) taken in response</b> to the situation or assigned task</li> <li> Student response includes a thorough explanation of the <b>results that were achieved and what was learned from the experience</b></li> </ul>
<b>2</b>	<ul style="list-style-type: none"> <li> Journal entry is of <b>satisfactory quality</b></li> <li> Student provides a specific situation or assigned task but <b>lacks adequate detail</b></li> <li> Student describes the action(s) taken in response but <b>fails to focus on their own efforts</b></li> <li> Student response includes a <b>limited explanation</b> of the results that were achieved and what was learned from the experience</li> </ul>
<b>1</b>	<ul style="list-style-type: none"> <li> Journal entry <b>does not meet expectations</b></li> <li> Student provides a <b>generalized description</b> of what they have done in the past</li> <li> Student describes <b>what they might do</b> rather than actual actions taken</li> <li> Student response includes <b>no explanation</b> of the results that were achieved or what was learned from the experience</li> </ul>
<b>0</b>	<ul style="list-style-type: none"> <li> Journal entry is <b>late and/or incomplete</b></li> </ul>

Internship Journal Grading Summary											
<b>Week 1</b>	/3	<b>Week 2</b>	/3	<b>Week 3</b>	/3	<b>Week 4</b>	/3	<b>Week 5</b>	/3	<b>Week 6</b>	/3
<b>Week 7</b>	/3	<b>Week 8</b>	/3	<b>Week 9</b>	/3	<b>Week 10</b>	/3	<b>Week 11</b>	/3	<b>Week 12</b>	/3














Total Points Earned: \_\_\_\_\_/36 points



**Appendix C**

## Senior Year Internship Scoring Rubric for Electronic Bulletin Boards

**Course Outcome:** To facilitate the transition of graduating seniors to post-college life by preparing them for the personal and professional challenges they can expect to encounter in the immediate future (Cuseo, 1997). Student performance will be assessed through participation in periodic bulletin board discussions and formal performance assessments.

Points	Scoring Criteria
<b>3</b>	<ul style="list-style-type: none"> <li> Student contributes <b><i>an original posting and multiple responses to peers</i></b></li> <li> Bulletin board postings are <b><i>fully developed</i></b></li> <li> Bulletin board postings provide <b><i>unique insight and extend other's comments</i></b></li> <li> Student assumes <b><i>leadership role in discussion and understands alternative viewpoints</i></b></li> </ul>
<b>2</b>	<ul style="list-style-type: none"> <li> Student contributes at least <b><i>one original posting and one response to a peer</i></b></li> <li> Bulletin board postings are <b><i>fully developed but lack clarity</i></b></li> <li> Bulletin board postings provide <b><i>unique insight but fail to extend other's comments</i></b></li> <li> Student assumes <b><i>active role in discussion and respects alternative viewpoints</i></b></li> </ul>
<b>1</b>	<ul style="list-style-type: none"> <li> Student contributes <b><i>one original posting or one response to a peer</i></b></li> <li> Bulletin board postings are <b><i>not fully developed</i></b></li> <li> Bulletin board postings provide <b><i>limited unique insight</i></b></li> <li> Student does <b><i>not respect alternative viewpoints</i></b></li> </ul>
<b>0</b>	<ul style="list-style-type: none"> <li> Assignment is <b><i>not completed</i></b></li> </ul>

Electronic Bulletin Board Grading Summary									
<b>Discuss 1</b>	/3	<b>Discuss 2</b>	/3	<b>Discuss 3</b>	/3	<b>Discuss 4</b>	/3	<b>Discuss 5</b>	/3

Total Points Earned: \_\_\_\_\_/15 points

**“I just want to help people, why do I need research methods?”:**

**Community-based Research with Human Service Majors**

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**Abstract**

Universities are increasingly using community-based research as a means to reconnect academic institutions with surrounding communities. The argument is made that human service programs, along with other service-oriented disciplines such as psychology and sociology, are well qualified to incorporate community needs into research courses due to existing relationships developed while students are in field-based courses. Human service programs are representative of a trend in higher education which emphasizes community/school partnerships. Community-based research allows students to make clear linkages between the relevance of research to practice and communities; an important outcome of research methods courses since students often struggle to make sense of research as it relates to helping others. This article describes the integration of a community-based research project into a human service research course. Effects on student learning and the participating community agency are included. Lessons drawn from the project of interest are generalized to other disciplines.

Over the past several years, institutions of higher learning have demonstrated growing support for community-based research (CBR) (Polyani & Cockburn, 2003; Sclove, 1997). This is based, in part, on the concern that college graduates were not civically engaged with their communities or interested in social change (Willis, Peresie, Waldref, & Stockmann, 2003). CBR provides an opportunity for community and university partnering focused on addressing a community-identified problem thereby creating a structured interaction between students and the community. Stoecker (2003) emphasizes the importance of collaboration when engaging in CBR. Contrary to traditional research models, the academic institution does not impose its research agenda on the community. Rather, the community is an equal partner in identifying the problem. Another distinguishing feature of CBR is the focus on social action, not simply knowledge for the sake of knowledge (Strand, Marullo, Cutforth, Stoecker, & Donahue, 2003).

CBR is a form of service-learning with the parallel goals of extending learning beyond the classroom so that students understand the context of community concerns. CBR and service-learning also involve reflection and integration of academic content (Kiser, 2007). In general, service-learning aligns the educational activities of students with those that concentrate on community needs (Kahne & Westmeier, 1996). Human service programs are well versed in the pedagogy of service-learning. The human services major prepares students to understand human problems and to intervene effectively in them by offering a multidisciplinary approach to helping grounded in the social sciences. Students are required to take practice courses which expose them to increasing levels of responsibility in community agencies over the course of their major (Kiser, 2007). Human service majors have experience in the community and are interested in helping others. It follows that integrating CBR into a research methods course would be a natural fit and help students better understand the relevance of research to the field of human service. This article describes the elements of a CBR project integrated into a research methods course for human service majors and the project's influence on student learning.

Research dedicated to the outcomes of students who participate in CBR is limited. However, Chapdelaine and Chapman (1999) report that psychology majors who participated in a CBR project associated with their research methods course had a better understanding of research ethics, found research to be enjoyable, and noted an increased awareness of social issues. Markus, Howard, and King (1993) report that students who participate in more generic applied research experiences demonstrate

better understanding of course material. Similarly, students who participate in faculty-mentored undergraduate research are more likely to attend graduate school (Bauer & Bennett, 2003; Hathaway, Nagda, & Gregerman, 2002; Kremer & Bringle, 1990).

Students are not the only benefactors of CBR. Community agencies can certainly benefit when local academic institutions focus their research resources on a problem. The academic institutions themselves can also benefit from improved partnerships with the surrounding community (Polyani & Cockburn, 2003). Strand and colleagues (2003) argue that it is not uncommon for communities to view the intellectual work of the academy as divorced from real social concerns. CBR is a tool to address the view that academic institutions are elitist and wish to separate campus from community.

There are advantages and disadvantages associated with the integration of CBR into a research methods course. First, CBR requires extensive amounts of faculty time. It is far simpler and less time consuming to teach a standard research methods course that remains in the classroom. Faculty must establish a relationship with community agencies and then nurture that relationship over the course of the project and into the future. Second, CBR requires that universities reconsider the definition of scholarship. The academics' quest for rigor may be at odds with the needs of the community partner (Polyani & Cockburn, 2003). Additionally, partnering with community agency may lengthen a project and delay dissemination of findings. Finally, the consequences of a failed CBR project can have long lasting effects far beyond the end of an academic semester.

Despite the potential pitfalls, the benefits of CBR outweigh the obstacles, especially in the context of service-oriented disciplines such as human services. First, the nature of the curriculum in human service programs is well suited to explore existing relationships with community agencies in order to find suitable research partners. Indeed, it has been my experience that community agencies are eager to embark upon collaborative research, due in part, to the previously established contacts through student internships. Second, CBR offers the opportunity to integrate concepts of social justice into research methods classes that students typically view as a class disconnected to improving someone's life (Stoecker, 2003). Third, as Keyton (2001) notes, students often approach research methods with fear and apprehension, assuming that research methods courses require extensive mathematical calculations. Human service majors are especially wary indicating higher levels of anxiety regarding research methods

than other social science majors (Fair & Langston, 2002). Finally, human service majors are asked to make linkages between field-based experiences with academic content due to other service-learning courses. However, some students find the application of research to service difficult as they fail to see the relevance of research methods to the field of human services. Indeed, Schaffer and Peterson (1998) note that students in service-oriented majors may not view conducting research as part of their professional identity.

### **Project Selection**

The project chosen for the research methods class developed after local school administrators asked me to develop a survey designed to assess perceptions of diversity. The mission of the kindergarten through eighth grade school includes a commitment to diversity and the administration was interested in whether that mission was embraced by different school stakeholders.

Fortunately, the project related to the research methods course goals and provided an essential service to the community. Both criteria are necessary for the accomplishment of a community-based research project (Mettetal & Bryant, 1996). It is also important for the chosen agency to be well organized and willing to provide students with the support required to complete research tasks (Chapdelaine, & Chapman, 1999). A critical component of project success is the agency's willingness to respect timelines imposed by semester long courses. Communication between instructor and agency personnel must occur long before the course starts. Indeed, I began discussions with school administrators during the late summer and the research methods course was not taught until the following spring.

The specific community-based research project described in this paper developed because a human service major had just completed her internship at the school, opening the door for further communication. Identifying potential research projects could stem from conversations during site visits thereby placing departments which use internships in a unique position of easily integrating community-based research into research methods classes. Additionally, many colleges and universities have offices designated to coordinate student volunteer or service-learning experiences ([www.compact.org](http://www.compact.org)). Staff in such offices may have the "ear" of the community and help connect interested community agencies with research faculty.

### **Project Goals**

The goals for this project focused on student learning and service to the community. First, I wanted to help students gain mastery over the course content. I also wanted to improve student attitudes toward research. Students in previous research classes arrived with great fear and trepidation about their ability to successfully complete a methods course. They often failed to see the relevance of research to their educational goals. My hope was that participating in a CBR project would decrease anxiety and increase their appreciation for the importance of research in the field of human services.

My second set of goals was centered on service to the community. I wanted the class to make an authentic contribution to a community agency. Primary schools, public or private, do not typically have funds or staff to conduct in depth surveys about issues such as diversity. I was impressed the community school was willing to tackle such a potentially divisive topic and I wanted the school to have a positive experience with outside collaboration. Positive community and university collaborations can lead to future projects or internship sites. For example, a local sexual assault response agency which often hosts human service, psychology, and sociology interns recently approached our institution about an assessment of adult services. A psychology major developed a research proposal and is now completing a funded CBR project.

### **Project Planning and Design**

During the fall semester, I met frequently with school administrators to determine the kind of information desired. School personnel expressed an interest in “taking the pulse” of the school in terms of diversity. They were specifically interested in how diversity is perceived among students, staff, teachers, parents, trustees, and alumni. Several initial questions included: Do families from different ethnic, socio-economic, or religious backgrounds feel welcome on campus? How can curriculum support an appreciation of diversity? How can the middle school become more tolerant of differences? Which traditions celebrate diversity and which do not?

Initially, the research students (18 in total) viewed a video about the school and visited the school's website in order to better understand the culture of the school. The principal and director of

diversity visited the class to describe their vision and to answer questions. The entire class also visited the school which helped students realize that their research was for “real people” in the “real world.”

### **Instrument Development**

One of the first tasks in a research project is to identify an interesting question. The general question, in essence, was handed to the students. However, the specifics of operationalizing the terms were left to the class. The next task was to develop surveys for the different audiences which included middle school students, parents, faculty/staff, student alumni, and trustees designed to assess perceptions of diversity. Students formed groups based upon their personal interests and began the process of reviewing the literature for information related to diversity assessment. They quickly found that extant literature focused on diversity in lower and middle schools is limited. Students then turned to diversity literature in higher education and the work place. These activities taught students the importance of careful literature searching skills, the challenge of easily developing a survey based upon existing information, and the need to be flexible and creative.

Students also had to apply concepts from their textbook regarding sound research methods by developing appropriate forms of survey distribution. With some outside technical assistance, students developed web-based surveys for the middle school students, faculty/staff, student alumni, and trustees. It was known that each of those groups had daily access to computers. The students surveying parents developed a paper and pencil survey since they were concerned that all parents may not have access to a computer.

### **Data Collection**

The project was approved by our university Institutional Review Board (IRB). Parents of middle school children provided consent prior to their child’s participation in the survey. Collected data were stored in a locked cabinet and individual responses were not identifiable.

Data collection was facilitated by the community school. The school administration sent group emails to the students, alumni, faculty/staff and trustees with a web-link that contained the anonymous survey. Middle school students completed the survey during their regularly scheduled computer class. The school also mailed the parents’ survey and provided boxes at school for their return.

Despite the ease of data collection, the reality of community research was heightened since the college students were unable to control when the surveys were administered. Due to school-based activities, the surveys were administered relatively late in the spring semester, adding a real world concern over how to complete the project in a timely manner.

### **Data Entry and Analysis**

Students applied analytical skills during data entry and analysis. Those groups with web-based surveys had data directly downloaded into a statistical computer program. These groups spent time cleaning the data and looking for miscoded variables. The parent group entered the data in pairs to assure accuracy. Each group then ran univariate and bivariate analyses. Groups also coded responses to open-ended questions applying qualitative analytical skills.

### **Final Reports and Presentations to Stakeholders**

Each group of students wrote a final report that included a review of relevant literature, methodology, results, discussion and recommendations for school based upon the findings from their specific participants.

The final aspect of this project involved the presentation of findings to school administrators. Students prepared professional level presentations and shared their results and recommendations with the school's principal and director of diversity.

### **Project Evaluation and Impact**

The CBR project described in this article was assessed at the college student and community level. First, seventeen out of eighteen students completed a survey designed to elicit student feedback in a quantitative and qualitative manner (one student was absent the day the survey was administered). Overall, student feedback suggested that working within a real community setting helped students better understand material from the textbook. Specifically, students rated how useful participation in the diversity project was in applying a variety of concepts from the textbook on a scale from 1 (not helpful at all) to 5 (very helpful). Ratings indicated students found the experience useful when applying the concepts of methodology (M=4.05), survey development (M= 4.3), data collection (M=4.2), and data analysis (M=4.0). All students either strongly agreed or agreed that research was more meaningful since



the class had a relationship with the school. They also unanimously agreed that future human service research methods should incorporate a community-based research project.

A comparison of grades between the non-CBR method classes taught the previous semester and the current class also lends weight to the argument that participating in a CBR helped students master the course material (see Table 1). The only statistically significant difference in scores was associated with Test 1. However, each measure indicated improvement in the class that used community-based research methods.

Table 1. Means and Standard Deviations of Class Assessments in a non-CBR and CBR Methods Class

	Without CBR n= 22		With CBR n= 18		Mean difference (CBR minus non-CBR)
	Mean	Std. Dev.	Mean	Std. Dev.	
Test 1	64.1	15.6	73.5	10.8	9.4 **
Test 2	69.1	15.7	73.7	13.5	4.6
Presentation	81.8	22.6	89.4	5.5	7.6
Final report	76.8	21.6	84.3	6.8	7.5
Class absences	1.8	4.25	.96	2.7	-.84

\*\*p<.01

A loose thematic content analysis of responses to open-ended questions further supported the argument that students valued their CBR experience. The most frequently noted theme among the benefits of participating in a community-based research project included the sense of “making a difference.” One student commented, “Actually visiting the school and having school staff come to class made this project more meaningful. We weren’t simply completing another assignment for the sake of fulfilling a course requirement. We were making a difference to a school that, otherwise, would not have been able to complete this project.” Another student wrote, “I felt like I was contributing to the community in some way rather than making up a project that would never have any impact.” The second most common theme revolved around the relevance of the textbook concepts. One student noted, “When we studied issues of sampling in the book it just made more sense when we applied sampling to our school project.”

Drawbacks to the project focused on the time pressures including the challenges faced when coordinating with another agency as well as the increased time to complete the actual work. The primary theme noted under drawbacks to CBR focused on the issues of time including the additional amount of

time associated with the project and the challenges of working with someone else's timeframe. One student stated, "It was a little more time consuming because we had to go to the school." Another commented, "Data collection was slowed because of bad timing between our breaks and their breaks, but it ended up working out in the end."

Students also appeared to take their work more seriously than in previous research methods courses based upon a decrease in absenteeism, improved grades, and overall quality of class discussions. The class understood that full and active participation in their group was required in order to deliver a quality product to the school. These findings support Strand's (2000) observation that students put extra care into work when they are invested in a CBR project.

The second level of project evaluation is reflected in the school's reaction to partnering with an academic institution as well as the implementation of recommendations made by the students. Parents and faculty were particularly impressed with the professional nature of the survey. One parent wrote on his survey, "I think it's great that college students have the opportunity to participate in such a real world experience. I don't remember doing anything this fun when I was in college! They've done a great job with these questions." Additionally, the community school chose to implement some of the recommendations made by students. The theme for the following academic year at the K-8 school was "Celebrating Community". The school administrators and faculty chose a common reading for middle school students and all parents focused on the trials and tribulations of a high school student who was different from others. Several opportunities were provided for parents to come together and discuss the book and concerns related to how differences in the school are addressed. Multiple events were held with the focus that "there's room for everyone at the table". In this sense, the goal of CBR as facilitator of social change was accomplished.

### **Limitations and Conclusions**

Overall, the integration of community-based research into a research methods course for human service majors was a success. Students were better able to apply course content and were highly motivated to turn in quality work. However, there are several drawbacks to this community-based research project. First, this type of pedagogy is labor intensive for faculty. Partnering with a community agency requires far more work before the class even begins than the traditional classroom-based

research course. Communication began well in advance of the first day of class and expectations must be clarified before moving forward. Second, student projects were disrupted due to school issues and conflicts. For example, parent surveys did not get distributed until late in the spring semester. Students who developed the parent survey had less time to analyze and prepare their final reports/presentations than did other groups. The “real world” nature of community-based research can be an asset as well as a liability. The fact is that most agencies (even local schools) do not operate on an undergraduate academic calendar. Staffing concerns and client crises will take precedence over the timely implementation of a research project. Finally, the non-CBR class did not complete the same feedback survey as did the CBR class. Other indications of student learning (tests, presentations, final reports, and absences) suggest that the participation in CBR was associated with better demonstrated learning of course content. However, the survey information is not available from both classes.

Despite the challenges associated with community-based research, it is an approach to teaching research methods that fits well within the human service model of integrating practice and coursework. Human service majors are typically more interested in helping others than engaging in research (Fair, King, Vandermass-Peeler, 2004). However, human service majors are not the only group of students who prefer direct contact with others over research (Schaffer & Peterson, 1998).

Community-based research provides an opportunity for students to make real connections between the importance of research, practice, and communities. Opportunities for community-based research can emerge from faculty and student relationships with intern supervisors, and student volunteer and service-learning sites. The successes and challenges experienced by the human service majors enrolled in the CBR methods course are not unique to the discipline of human services. Faculty from any area within the academy will need to make contacts with community agencies, develop a reasonable time line for project completion, help students negotiate barriers, and communicate findings to appropriate stakeholders. CBR appears to hold particularly powerful meaning to those students focused on the professional provision of service, but all can benefit.

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**The Effects of Instructor and Student Immediacy Behaviors in Writing Improvement and  
Course Satisfaction in a Web-based Undergraduate Course**

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**Abstract**

A major challenge in Web-based courses is developing an effective learning environment where both instructor and students feel connected and responsible for learning. The literature reveals that one of the most important factors of student motivation and success online is contact with the instructor and interaction with peers. This case study examines the effects of both instructor and student verbal and nonverbal immediacy behaviors in an online undergraduate technical writing course at a medium-sized university. Using both qualitative and quantitative data, results indicated that chronemics (temporal immediacy) and social presence were contributing factors in student achievement and satisfaction in an online learning environment.

## Introduction

The “new students” entering higher education, known as the Millennials, gravitate toward group activity and are comfortable with technology (Oblinger, 2003). For the past decade, the number of distance learning courses has grown rapidly, and the need to improve the effectiveness of teaching with technology continues to be imperative (Horton, 1997). Skeptics remain concerned about instructional quality of online classes and question whether students in such a learning environment achieve as much as in a traditional classroom (Cooper, 2001). The benefits from instructor immediacy behaviors in the face-to-face classroom seem to be highly positive in student achievement and course satisfaction (Ellis, 2000). However, there is less research on the role of student immediacy behaviors since traditional learning has been instructor-centered. For both instructor and student, the lack of face-to-face contact creates new challenges for connecting personally at a distance. Educators need to explore more ways of integrating and modeling a variety of immediacy behaviors with course material to create a highly participatory online learning environment (Hoyt, Thomas-Maddox, & Evans, 2001).

## Immediacy Behaviors

Immediacy behaviors can be defined as verbal and nonverbal actions that communicate warmth, closeness, and availability for communication. These behaviors signal approach rather than avoidance and social closeness rather than distance (Andersen, 1985). Holmberg’s broadened theory of distance education (guided didactic conversation) talked more specifically about the importance of personal relations, study pleasure, and empathy among students and between teacher and student in a virtual environment, emphasizing that these elements are central to effective distance learning (Holmberg, 1995). In an online environment, a key form of immediacy involves chronemics, (called *temporal immediacy* in this paper), which refers to a powerful immediacy behavior in the form of nonverbal communication—the way we structure and use time in a positive way in a Web-based environment. In this study, *temporal immediacy* refers to (1) instructor and student responding to email and editing writing assignments in a timely manner and (2) providing helpful feedback and supportive messages between instructor and student and among student peers within consistent guidelines (Hoyt, Thomas-Maddox & Evans, 2001).

In creating a highly interactive virtual classroom environment, cooperative learning is also necessary and calls for dialogical communication and immediacy. This form of interaction according to Johannsen (1990), means talking *with* people in dialogues and not *at* them in monologue style, a mode of teaching that continues to dominate many traditional classrooms. Monologue is one-dimensional; dialogue is reciprocal, cooperative, flexible, supportive, and encouraging (1990).

### **Purpose of this Case Study**

The purpose of this case study was to determine the extent of student writing improvement and course satisfaction based on both instructor and student immediacy behaviors in a Web-based Technical Communications course. Twenty-four students (12 female and 12 male) participated in the course. All subjects agreed to be a part of this study by signing a consent form, giving permission for analysis of a student course survey, of online interactions between teacher-student and student-student, and of written assignments for the purpose of this research study. The instructor consistently modeled high immediacy behaviors throughout the semester. Student immediacy behaviors with the instructor through email communication and among peers in editing groups were examined and measured.

### **Research Questions**

The following questions guided this study:

1. What were the types and frequency of student immediacy behaviors with instructor and peers in a Web-based Technical Communications writing course?
2. To what extent did students improve their writing process in a Web-based Technical Communications writing class?
3. To what extent students were satisfied with the Web-based Technical Communications writing class?

### **Method**

Subjects in this study were enrolled in an undergraduate writing course, Technical Communications, in a virtual classroom with no face-to-face classes during the semester. Assignments were explained through the instructor's assignment schedule, the use of a technical writing handbook, explanatory Power-points, online material, course calendar, and emails. Subjects interacted in peer-editing groups throughout the entire semester, completed midterm and final self-evaluations of their



course progress and satisfaction, and kept an online class portfolio of all assignments (three drafts of each writing assignment, weekly quizzes, and a usage notebook).

*Social Presence Indicators Instrument.*

This research instrument (Gunawardena, C. N. & Zittle, F.J., 1997; Swan, Polhemus, Shih, & Rogers, 2001; Rourke, Anderson, Garrison, & Archer, 2001; Richardson & Swan, 2001) was used for content analysis of online interaction between students and instructor and among student peers (Table 1). Specifically, three categories of student immediacy behaviors-- *affective*, *interactive*, and *cohesive*—were observed through content analysis, an accepted method for analyzing textual data (Silverman, 2006). The *affective* category included expressions of emotion, value, paralanguage, humor, and self-disclosure. The *interactive* category included acknowledgment, agreement and disagreement, appreciation, and invitation. The *cohesive* category included vocatives, greetings and salutations, group reference, social sharing, personal advice, and course reflections. To ensure consistency in coding, three interraters were consulted. According to Creswell (2007), using intercoder agreement based on the use of multiple coders to analyze transcript data ensures “stability of responses.”

*Anonymous Survey.*

At the end of the semester, students completed an anonymous survey about writing improvement, instructor and student immediacy behaviors, and course satisfaction. Data were then analyzed and triangulated using descriptive statistics, ANCOVA, and naturalistic techniques in the form of thick description and excerpts from student written impressions of the course.

Table 1

Social Presence Categories and Indicators

<b>Category</b>	<b>Social Presence Indicators</b>
<i>Affective</i> language	Emotion, value, paralanguage, humor, self-disclosure
<i>Interactive</i> language	Acknowledgement, agreement, disagreement
<i>Cohesive</i> language	Vocatives, greetings, group reference, social sharing, advice, etc.

## Findings

### *Types and Frequency of Immediacy Behaviors*

The first research question of this case study focused on the interactions of students and asked about the types and frequency of student immediacy behaviors with the instructor and peers in a Web-based Technical Communications course. Data analysis suggested that students projected a strong or weak social presence, depending on the immediacy behaviors they used. Social presence indicators were tallied at beginning, middle, and end points of the semester from two sources of data—peer discussions in editing groups and email transcripts to the instructor. The three categories of social presence (*affective, interactive, and cohesive*) included a total of 15 immediacy behaviors from the Social Presence Indicators Instrument that guided this analysis of discussion forum and email transcripts.

### *Student immediacy with Peers*

The indicator that revealed the highest number of individual student immediacy behaviors in the peer discussion forum was that of *appreciation* ( $N = 439$ ) in the *interactive* category. This indicator denotes offering *praise, reinforcement, and encouragement* to others. Peer editors were positive about one another's writing efforts. Constructive criticism in the form of *personal advice* ( $N = 362$ ), the second most common indicator (*cohesive* category), was usually coupled with the *appreciation* indicator mentioned above. For example, students wrote the following types of comments of *advice/praise* to their peers:

- *(Your) resume was very eye-catching--very nice. Only thing again that I suggested was the placement of dates.*
- *This looks great. I like the looks of it and the use of the whole page... One thing that I did notice was the order that you placed the things. Take a look at that. Overall it looks very good. Thanks for your helpful comments on mine.*

Of the three major categories, the strongest student immediacy concentration of tallies was in the *cohesive* category ( $N = 642$ ) with *vocatives, greetings and salutations, and personal advice* the most prevalent. The *affective* category ( $N = 166$ ) was the least used—*emotional language, values and beliefs, humor, self-disclosure, and paralanguage*. Some individual students did use *affective* indicators often, however. For example, these two samples from the discussion forum show use of *self-disclosure and paralanguage*—repetitious punctuation and conspicuous capitalization—both of which convey emotion:

- *Your paper is very good. It sounded very professional and interesting. In fact, I now think that I did my paper wrong!! I should have used for an example and then written it!!!*
- *Hi guys. I am SOOOO sorry that this was not in to you before today. For some reason, I lost my mind and thought it wasn't due until after break.*

Throughout much of the semester, students used their peer-editing groups exclusively for editing each other's documents and did little *social sharing* ( $N = 64$ ) although in the last few weeks of the semester they exhibited richer communication when collaborating for a group grade than through their peer-editing of each other's individual assignments. When working on group assignments, they looked at themselves as a team. For example, peer-group #3 had these interactions:

- *Here's my editing, you guys. I'll try to look over yours right away so we can get the final (draft) posted before Thursday—I'm assuming you all are excited to get home for Easter.*

"You guys" is another *group reference* indicator. The mention of posting early is a chronemic factor, and the comment about Easter is a form of *social sharing*.

- *It looks really good, you guys. Thanks for all of your hard work. I know I haven't been the best group member – it's been a busy few weeks and I haven't been in town much. Thanks a lot!*

Above, the group member uses the indicators of *appreciation*, *group reference*, *self-disclosure*, and *social sharing*.

#### *Student Immediacy Behaviors with the Instructor*

Social presence indicators in email transcripts from students to the instructor were also tallied at beginning, middle, and end points of the semester. The highest indicator of student immediacy in these samples was that of *social sharing* ( $N = 94$ ) in the cohesive category (sharing information unrelated to the course content, yet with the purpose of enhancing communication). For instance,

- *The sooner the semester is over, the closer my wedding date gets! So much to do, and I think I will be gone for an entire month this summer (which I think my fiancée may want to kill me for.) Anyway, thanks for the info.*
- *Mississippi was wonderful!! I was able to visit Faulkner's home, so that was very exciting for me. I have seen the group assignment and posted some corrections for my group. I'm going to email our group leader, so he will know that I've posted. It's good to be home!*

The second highest student immediacy indicator with the instructor was that of *self-disclosure* ( $N = 62$ ) in the *affective* category (sharing personal information expressing vulnerability). Students were not reluctant to express concerns, worries, insecurities, or other personal information. For example:

- *I have a stress and anxiety problem, which leads me to get stressed and overwhelmed very easily.*
- *I am a perfectionist, so school really stresses me out!!!*

*Invitation* ( $N = 58$ ) in the *interactive* category (asking questions or making statements that invited response) was also often used by students with the instructor for clarification of assignments and procedures. For example,

- *Hello, again...I was just wondering why I got 9 points (out of 10) for participation on the Trip Report assignment – I'd like to know so I can avoid the same problem with upcoming assignments. Thanks again!*
- *I think I am still a little confused about this whole "passive voice" thing. I have a funny feeling I tend to use it a lot. Can you explain it a little more to me?*

Finally, students also often used *expressions of emotion* ( $N = 57$ ) in the *affective* category in communication with the instructor:

- *I am deeply sorry, but my usage notebook is going to be a little late. I have a huge test on Thursday and am extremely overwhelmed with everything that I have due up until then... I thought I'd let you know that it will be late. Sorry about this...I just need to learn to breathe before freaking out!!*

To summarize the use of student immediacy behaviors, students used *interactive* and *cohesive* categories with their peers, mostly in the form of editing advice and encouragement; however, different indicators were prevalent for interaction with the instructor. Social presence indicators used with the instructor were more personal, including the *affective* category.

Once these social presence indicators were tallied, students were then put into two categories—high and low levels of immediacy. The individual tallies of immediacy indicators ranged from a low of 35 to a high of 166 ( $N = 24$ ) in the samples coded. Those students whose immediacy counts ranged from 71-166 ( $N = 13$ ) were put into the *high immediacy* category; those between counts of 35-62 ( $N = 11$ ) were put into the *low immediacy* category. A high-immediate peer made these comments to a low-immediate peer:

- *You really worked hard on this, J. Thank you. I caught a few more thing and changed only one thing back. I also put the corrections in complete sentences. There were a couple of things that seemed strange to me, but I can't think of a specific way that they're wrong. I highlighted those in green. I'm really glad we can do this together—you picked up on I would have looked right over. Hopefully, the rest of you will find more.*

In this exchange, the group peer editor uses indicators of *appreciation*, *advice*, and *invitation*. High-immediate group members gave detailed *advice* and *praise*.

Four of the six peer groups had two high-immediate members and two low-immediate ones. Of the remaining two groups, one had three low-immediate members and one high; the remaining group had four high-immediate members. All six groups worked well together and met deadlines, but some groups were more *cohesive*.

### Writing Improvement

The second research question of the study asked to what extent students improved their writing process in a Web-based Technical Communications writing class. Two sources of data were used to evaluate writing improvement. First, the difference between scores of students' pre-post writing assessments were calculated and means reported. Second, items 1-4 about writing improvement in the student survey of 29 Likert-type items were analyzed and means reported.

For pre-post assessments, the instructor evaluated the first and last reports in the Web-based writing class based on a rubric that focused on four areas: format, content, mechanics, and wordiness. Each area was equally weighted to meet the goals of achieving *clear, concise, correct, complete, and considerate* writing. The differences between the pre-post assessments showed that 20 of the 24 students had gained between 5 and 17.5 points.

Minimum and maximum scores were reported with means and standard deviations of the pre-post written assessments (Table 2). Scores showed improvement between pre-post written assessments, with a range from 45.0% to 65.0% for students who scored lowest, and from 90.0% to 97.5% for those who scored highest. The difference in the mean score for the pre-post assessments was almost 10 points, 76.8% and 86.1%.

Minimum and maximum scores showed improvement between pre-post written assessments. The difference between the mean scores was approximately 10 points but was not statistically significant ( $p > 0.05$ ). Some students started out with high scores; therefore, their ceiling of improvement was not as high as those students who scored lower on the pre-assessment.

In analyzing the differences in points between pre-post written assessments, 20 of the 24 students showed improvement between the two written assignments; however, qualitative analysis indicated that all students felt they had improved in their writing and editing skills, overall, throughout the semester. The second source of data to analyze writing improvement included reported means from Likert-type items (5 = *strongly*

agree, 4 = agree, 3 = neutral, 2 = disagree, 1 = strongly disagree) in the anonymous student survey (Table 3). Students agreed strongly ( $M = 4.62$ ) that as a result of the class, they were able to create a variety of documents for the workplace since their weekly writing assignments included a variety of short reports. Students also agreed strongly ( $M = 4.54$ ) that they could better recognize grammar and usage errors.

Students made weekly entries in usage notebooks of most commonly misused words and most common grammatical errors. Furthermore, students agreed ( $M = 4.42$ ) that they were able to effectively edit peer documents. Finally, they agreed ( $M = 4.38$ ) they were able to write more clearly, correctly, and concisely.

#### *Instructor Immediacy Behaviors and Writing Improvement*

The final self-evaluations at the end of the semester indicated that all 24 students felt they had improved in their writing and connected one of the factors for their improvement to the instructor's detailed editing. The instructor indicated every writing error on each student's assignment by naming it, explaining it, and then correcting it. The chronemic factor (temporal immediacy) of sustained duration of time on each student assignment was a strong nonverbal cue indicating to students the importance of writing improvement. The students felt they learned to improve writing skills from this consistent weekly feedback from the instructor. For example:

- *I feel as though I am learning a great deal more through the detailed instructor edits...I am learning more about technical writing through this online course than others who are in the (traditional) classroom.*
- *I feel I am learning a lot more in this class than any other English class, even in high school when we had class every day...the instructor edits are really helpful.*
- *I have grown a lot from this course. I realize not only in my writing but in my speaking...from the beginning of the year, I have noticed definite improvement. I really enjoy this class and am excited about learning.*

#### *Peer Immediacy Behaviors and Writing Improvement*

In analyzing the role of peer immediacy behaviors and writing improvement, qualitative data showed that every student felt obligated and responsible to their peer groups and indicated that they helped each other improve in their writing skills. Students interacted with the same peer group throughout the semester and when asked what contributed most to their learning, over half of the class ( $N$

=15) responded that cooperative learning in the form of peer-editing groups was the major factor in their writing improvement. Students comment,

- *I like the way we interact within our group...I definitely like this way better than a traditional classroom because I think it is easier to be more candid with your responses.*
- *I personally feel that I interact more with my peers in an online setting because I am not concerned about appearances and worrying about what people will think of me. We are all on "equal ground," so to speak, and I feel it is easier to communicate more openly than in a traditional classroom.*
- *I feel I interact more being online. It is easier for me to communicate and gives me a chance to say more.*
- *I feel that my involvement in the peer editing process has been valuable for both myself and other students...I believe I interact more with the students in this class than in more traditional classes.*

Writing three drafts weekly—first draft, peer-edited draft, and student-corrected draft of the graded document—gave students opportunities to understand their writing problems and old habits they had developed over the years. Using the instructor's detailed editing style and the editing rubric as a model, students learned what to look for in peer documents in the editing groups and gradually learned how to correct a variety of errors in their own writing assignments. All postings had specific deadlines that students consistently met each week, overall. The instructor noted the impact of modeling specific editing behaviors that students emulated in their peer groups, resulting in writing improvement and engagement in the writing process.

Only two students felt minimal progress in their writing skills at midterm, yet by the end of the semester, they indicated improvement and credited the group editing process to their progress. They stated:

- *I feel that my technical writing has improved greatly...one key to these improvements is the group editing.*
- *I feel that I have become a lot better at editing other people's writing as well as my own. My writing is getting better, but there is always room for improvement.*

### **Course Satisfaction**

The third research question asked to what extent students were satisfied with the Web-based Technical Communications writing class. For this analysis, Likert-type items from the survey instrument were examined and group means reported (Table 4).

Students strongly agreed ( $M = 4.50$ ) that the course had met their expectations. They also strongly agreed ( $M = 4.83$ ) that they enjoyed the freedom allowed them by a Web-based course. They agreed ( $M = 4.46$ ) that they enjoyed collaborative learning in their peer-editing groups. Students also strongly agreed ( $M = 4.79$ ) that they would recommend taking this Web-based course to other students.

Students disagreed ( $M = 1.83$ ) with the statement, "The technology involved with a Web-based course frustrated me." They also disagreed ( $M = 2.21$ ) with the statement, "I miss the face-to-face classroom." Finally, they agreed ( $M = 4.46$ ) that they would take another Web-based course.

Qualitative analysis of the midterm and final self-evaluations revealed that students felt they had more interactions with their peers and the instructor than in their traditional classes. As shown in the survey, their self-evaluations also indicated they did not miss the face-to-face experience for this particular course and were not frustrated by the technology. Also, many of them mentioned how smoothly the course progressed because of few, if any, technical problems.

#### *Instructor Immediacy Behaviors and Course Satisfaction*

In analyzing student course satisfaction based on instructor immediacy behaviors, both quantitative and qualitative data triangulated to indicate that the high frequency of instructor emails and quick response to questions (temporal immediacy) were factors in their course satisfaction.

To evaluate instructor immediacy behavior, response data from the Likert-type items about instructor immediacy on the student survey were analyzed and means reported (Table 5). Also, comments from students' final self-evaluations about interactions with the instructor were reported.

Attention to chronemics or *temporal immediacy* (timely response to student emails, duration of response, and frequency of messaging) was a key to student course satisfaction. On the student survey, students agreed strongly ( $M = 4.92$ ) that the instructor answered student emails within a reasonable amount of time. They also agreed strongly ( $M = 4.67$ ) that the instructor offered specific advice on written documents and quizzes (duration of response).

Furthermore, in reference to frequent messaging, students agreed strongly ( $M = 4.75$ ) that the instructor communicated through email, the discussion forum, and chat. In addition to timely response to student emails, assignments were graded within 24 hours or less each week. For students to learn from



their errors in previous assignments before starting the next weekly assignment, prompt feedback was required.

The emergent theme that came through when triangulating results of the student survey with student self-evaluations was the instructor's management of the temporal aspects of the course. Students indicated in their self-evaluations that prompt feedback, frequency of interactions, and instructor availability affected them positively, leading to course satisfaction. For example:

- *I have had much interaction with the instructor. She is always available to answer questions and seems extremely enthusiastic about this course...I interact more with her than with traditional teachers.*
- *I definitely interact more with my online professor than I would in a traditional classroom situation. I love being able to email my professor about certain questions and getting a very quick response.*
- *One thing I like about asking questions is that the reply was so quick...I believe that I interact more with the instructor in this online class than I would (if) this same class (were) taught in a traditional classroom...my interaction with the instructor has been positive.*

Table 2

## Survey Responses about Course Satisfaction

Question	Mean Response	SD
This course met my expectations.	4.50	.590
I enjoyed the freedom allowed me by taking a Web-based course	4.83	.381
I enjoyed the collaborative learning (peer-editing groups).	4.46	.658
I would recommend taking this Web-based course to other students.	4.79	.415
I would recommend taking this Web-based course to other students.	4.79	.415
The technology involved with a Web-based course frustrated me.	1.83	1.007
I really missed the face-to-face contact in this course.	2.21	1.062
I would take another Web-based course.	4.46	.779

Note: 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree

Qualitative data from the study showed a high level of satisfaction with interaction in the peer groups. To triangulate this finding, quantitative data from the student survey gave information about specific peer immediacy behaviors in the form of social presence indicators. Students agreed ( $M=4.04$ ) that *greetings* and *closures* were factors in communication. They also agreed ( $M=4.08$ ) that *vocatives* were often used. Furthermore, students agreed they received *peer advice* ( $M=4.42$ ), and also agreed ( $M=4.17$ ) they collaborated with their peers. There was agreement that the *appreciation* ( $M=4.08$ ) social presence indicator (using *praise*, *encouragement*, *reinforcement*) was part of peer immediacy.

Table 3

Survey Responses to Course Satisfaction Based on Instructor Immediacy Behaviors

Question	Mean Responses	SD
For the most part, my instructor interacted with me online by:		
Using greetings and closures	4.46	.658
Addressing or referring to me by name	4.50	.511
Communicating through email discussion forum, or chat	4.75	.442
Answering my emails within a reasonable amount of time	4.92	.282
Offering specific advice to me on my written documents and quizzes	4.67	.482
Inviting me to ask questions	4.62	.495
Projecting enthusiasm	4.79	.415
Using features of language to convey emotions, such as all caps, emotions ☺, and repetitious punctuation !!!!!	4.54	.588
Offering praise, reinforcement, and encouragement	4.71	.464

Note: 1=Strongly Disagree, 2=Disagree, 3=Agree, 4=Strongly Agree, 5=Strongly Agree

Since 11 of the 24 students were in the low-immediacy category, *group reference* ( $M=3.83$ ) was a lower social presence indicator. Finally, *humor* ( $M=3.63$ ) and *social sharing* ( $M=3.08$ ) were not as high as some of the other social presence indicators since the peer groups were task-oriented and not social-emotional oriented. Just a few students consistently used paralinguistic language ( $M=3.42$ ).

Table 4

Survey Responses to Course Satisfaction Based on Peer Immediacy Behaviors

Question	Mean Responses	SD
For the most part, my peer group members Interacted with me online by:		
Using greetings and closures	4.04	.359
Addressing or referring to me by name	4.08	.504
Referring to the group as "we," "us"	3.83	.702
Sharing personal and non-course Information to enhance communication	3.08	.929
Offering specific advice to me on my written documents and quizzes	4.42	.654
Collaborating on assignments	4.17	.761
Using humor	3.63	.824
Using features of language to convey emotions, such as all caps, emoticons ☺, and repetitious punctuation !!!!!	3.42	.881
Offering praise, reinforcement, and encouragement	4.08	.584

Note: 1=Strongly Disagree, 2=Disagree, 3=Neutral, Agree=4, Strongly Agree=5

### Discussion and Conclusion

Most immediacy research has focused on teacher immediacy; however, in student-centered interactive Web-based learning, the role of peer immediacy behaviors is, also, key to a successful learning experience. Chickering & Ehrmann (1996) emphasize the importance of (1) contact between students and faculty, (2) prompt instructor feedback, and (3) cooperation among students when learning takes place online. These three factors were strengths of the Web-based writing class in this study. In addition to verbal immediacy (social presence indicators), the researcher found from qualitative and quantitative data that the nonverbal role of chronemics in the form of high *temporal immediacy* practiced by *both* instructor and students was the underlying cohesive key to learning in all three aspects

mentioned above. Student log-ins ranged from 127 and 836, with an average of 384 log-ins during the semester.

The instructor had a total of 2,919 log-ins to correct assignments and to answer emails. The duration of time the instructor spent on each document involved detailed editing, explanations, and examples for a total of 800 documents. Many times instructor-corrected drafts were posted before the deadline since all students had posted early. Furthermore, the instructor wrote all-class emails weekly and answered numerous individual student emails within the hour received or within minutes. Students appreciated (course satisfaction) this contact and attention online, and they felt motivated to meet the high expectations of the course.

Lui & Ginther (2001) considered the role of chronemics, in the form of prompt feedback in email messaging and correcting of documents, as very important non-verbal cues to build confidence in the course and the instructor, as well as reducing student frustrations. Both the instructor and the students in this course knew that they could depend on each other and, therefore, had mutual confidence in each other.

The second major factor in this study that led to writing improvement and course satisfaction involved the role of student immediacy in the form of peer cooperation and interaction. Van Dusen (1997) pointed out that active and cooperative learning are suited for any type of classroom but especially for the virtual classroom. He cited the activities of writing, small group discussion, and peer teaching as forms of active learning (1997). Instructor observations of interactions in peer-editing groups, recorded in a researcher's journal, showed that students learned well from each other by playing the role of peer teachers. They felt on "equal footing" with their peers and could be more honest in their editing comments.

The instructor also observed that students were responsible and dependable, meeting deadlines for writing drafts, for editing peer documents, and for posting edited drafts to the instructor. Usually two-thirds ( $N = 16$ ) of the students posted before the deadline, and one-third ( $N = 8$ ) right on time at the deadline. Occasionally, a few posted within an hour or two after the deadline, but this later posting was rare. Only one student needed an extension on a paper right at the end of the semester. It was also

observed that those with higher immediacy indicators brought more *cohesive* elements to the group, along with some *humor* and some emotion.

Other qualitative data showed that all students ( $N=24$ ) felt responsible for their peers' writing improvement and would post regularly because of a sense of "duty." If they had not met these deadlines, they would have not had the benefit of peer editing and would have forfeited participation points; therefore, the writing process and writing improvement would have been affected negatively. Also, peers depended on each member's feedback. They had four deadlines to meet each week: written assignment, quiz, posting of the first draft of the written assignment, and posting of their peer edits with discussion for each of their three fellow group members.

Studies have shown that an instructor's use of immediacy makes a direct impact on students' motivation to learn (Frymier, 1993; Pelletier, Sequin-Levesque, & Legault, 2002), and the quality of these social interactions directly influences students in the classroom (Wang, Haertel, & Walberg, 1993). Furthermore, students who observe frequent verbal and nonverbal immediacy behaviors in their instructors indicate course satisfaction and tend to give higher ratings in course evaluations to the overall quality of instruction (Moore, Masterson, Christophel, & Shea, 1996). Because students in this study received the benefits of consistent instructor feedback, they practiced the same high temporal immediacy in their peer groups, despite their varying ability to project their social presence online. Since high instructor immediacy in a traditional classroom is strongly correlated to student achievement (Ellis, 2000), projecting high immediacy online would seem to be even more crucial to influence student achievement in a Web-based course without direct face-to-face contact between instructor and student.

In reflecting on this study, the researcher found that an online writing course involves an inordinate amount of time on the part of the instructor to ensure that students make tangible progress in developing better writing skills. Other courses that do not require detailed editing of numerous written drafts would be much more manageable for online instructors; they would be able to integrate high immediacy behaviors with content without the intense time commitment this study demanded.

The researcher of this case study was able to dedicate full-time to this course whereas most instructors would not have that option. This time factor brings up the question of reduced course load for those instructors who want to create an effective online course. Time management is central to teaching

online. The “new students” (Millennials) in this age of technology expect high *temporal immediacy* from their instructors; however, this study also revealed the importance of student immediacy behaviors and indicated that the responsibility for an effective online course does not rest just with the instructor but that the instructor has to model *temporal immediacy*.

Although the research in this case study showed that students can be just as satisfied with Web-based courses as with traditional face-to-face classes, similar studies should be replicated but with different types of courses (other than writing classes) using online cooperative learning. Furthermore, if instructor/student temporal immediacy skills are keys to effective online learning, another recommendation would be to develop a personality profile to predict compatibility with online teaching/learning that look at such factors.

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## **Teaching Self-Authorship and Self-Regulation:**

### **A Story of Resistance and Transformation**

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#### **Abstract**

Studies show that many learners feel resistant to or otherwise under-prepared for learning challenges due to underdeveloped ability to self-regulate or adapt thoughts, feelings, and actions to attain their own personal goals. This narrative account illustrates pathways and pitfalls in evoking such behavior and encouraging self-authorship—the internal defining of beliefs, identity and relationships. The author describes a project in which an initially resistant student generated creative, if short-lived, solutions to personal struggles. Helpful educational interventions included questioning behavioral patterns, establishing high expectations, and reinforcing belief in ability to change. Oversights and missed opportunities included unintentionally inviting mimicry and remaining ignorant of researched practices for fostering transformation.

In my first years of teaching college, I had a unique experience dealing with a student I initially considered “resistant.” As a personal account, of both my student’s development and my own, the story contributes to what Weimer (2006) has termed the “personal narrative” form of “wisdom-of-practice” scholarship on teaching and learning, wherein a teacher attempts to make meaning of personal experience. With the rise of qualitative research in recent decades (Denzin & Lincoln, 1994), narrative has been considered “both phenomenon and method” (Clandinin & Connelly, 1994, p. 416): a story is told—in this case my student’s tale of transformation—and inquiry into the story is pursued in the form of another meta-narrative, or my story about the student’s story.

If “imagination and feeling... makes possible the construction of new knowledge” (Ely, Vinz, Downing and Anzul, 1997, p. 78), as Bruner argued, then “in narrative thinking a writer needs to attend to two landscapes simultaneously: the outer landscape of action and the inner landscape of consciousness” (Ely, Vinz, Downing and Anzul, 1997, p. 78). As I examine my student’s actions and my own, I can not help but take a perspective on them, consciously or unconsciously. As McAdams (McAdams, 1993; McAdams, Josselson & Lieblich, 2001) found, people often tell themselves either narratives of “redemption,” where they see themselves overcoming barriers and triumphing in the end, or narratives of decline or “contamination,” where they see themselves suffering one or more traumas from which they never really recover. The below narrative derives its power from a student’s personal report of his struggles, and my attempt to account for the process without laying only one narrative or storyline on the events that transpired.

### **“I Don’t Know What To Do”**

It was late in the term and Colligan, a first-year accounting major in a class I was teaching on decision making, rushed into my office and collapsed into a chair. We had an appointment to confer about his making up late work and starting a term project. I said, “So, what are you thinking of working on?” He shrugged and slumped lower in the chair, “I dunno. That’s why I came to you. I don’t know what to do.” I asked, “Is there anything from class you can imagine using or working with in your life?” His leg bounced frenetically, and he muttered, “Ugh, like sayback or empathy or something?” referring to an active listening method I had taught. He and another student had argued that such techniques impede natural

talking. Recalling his persistent objections to the exercise, I said, “I remember you made some really good points the group didn’t get, about when sayback doesn’t help.” He visibly relaxed a degree.

As Colligan sat in my office, I sensed that my focus on the class was not exactly matching his current life concerns. I asked more generally, “Well, so, what about in your life right now—where are you at? What’s been going on? What’re you dealing with?” He launched into a litany of problems with his classes and his job. His overarching problem, he said, was, “I never have time to get things done.” He explained, “When I’m doing homework, the telephone rings, and I have to answer it. It’s what always happens,” he said. “Or my brother comes in and interrupts me. There’s always something.”

Ignorant at the time of research on managing such struggles, I leapt rather prematurely to try and change his behavior: “So what would you have to do differently?” He shrugged, “That’s just the way I’ve always been. I’ve *always* been that way.” I was concerned that he seemed almost satisfied with his conclusion, as if resigned that he would never be able to change. I persisted, “When you look back on the problem, what would you have to do differently to change things?” Eventually he said, “Well I could shut off the ringer... not answer the phone. But I know I wouldn’t do that. It would just be bugging me, and I’d be going ‘Wh-whoah who’s calling me?’ Or if I let the machine pick up, I’d immediately have to check or I’d call all my friends to find out who it was.” I wanted him to shift from “That’s just the way I’ve always been,” to instead become perhaps the way he had always wanted to be, by seeing his power to choose different behaviors. Such change, however, does not come easily.

### **Resistance Signifies Search for Relevance**

Colligan’s story matches that of other students who come to college under-prepared and needing developmental education—the special kind of support that aims to develop the “self-regulation” behaviors required for even moderately successful learning (Ley & Young, 1998; Wambach, Brothen, & Dikel, 2000; Young & Ley, 2003). “Self-regulation,” as Zimmerman (2000) describes, “refers to self-generated thoughts, feelings, and actions that are planned and cyclically adapted to the attainment of personal goals” (p. 14). My hope for Colligan, moreover, was not simply to inculcate self-regulation for its own sake, but to work towards the greater goal of promoting his “self-authorship” (Kegan, 1994), elaborated by Baxter Magolda (2001) to mean “the capacity [of learners] to internally define their own beliefs, identity, and relationships” (p. xvi).

Colligan was one of fifteen diverse undergraduates in an interdisciplinary Decision Making course that I taught at a mid-size private university in an urban setting, early in my teaching career. Course content was organized around interdisciplinary “connective concepts” (Lauer, 1996-97; Torosyan, 1999; 2001) such as locus of control, perceptual bias, empathy, systems thinking, interdependence, and cause and effect—each of which crossed disciplines and was applied to real world personal, work and civic life decisions. Decision making itself was considered part of a larger critical thinking process involving cycles of perception, evaluation, decision and action (see PEDA process in Lauer, 1996-97, pp. 375-76).

A particular difficulty for Colligan was self-managing procrastination and time management—a struggle many students encounter (Dembo, 2004; Eison & Holtschlag, 1989; Kachgal, Hanse, & Nutter, 2001). As the first generation of his working-class, Latino and Irish<sup>1</sup> family to attend college, he resembled many ethnically and socioeconomically diverse students who attend urban and exurban universities today. Aged 18, he was already working over 40 hours per week while attending classes. If “transformative learning” requires time-intensive critical reflection upon disorienting dilemmas (Kegan, 2000; Mezirow, 1975; 2000), then financial and other pressures facing Colligan would make realizing such personal transformation understandably difficult to achieve. His resistance to school work derived in part from a frustrated desire for relevance—for study that would matter in daily life.

To teach students like Colligan, who need help developing self-regulation, one should of course know how such students learn (Boylan, 1999; Smittle, 2003). Having taught for two years at the time, I was unfamiliar with some such research—despite my perception that about 5 to 10% of my freshmen came to college under-prepared to regulate their own performance. According to the National Center for Education Statistics (NCES), 28% of all freshmen in 4-year colleges and universities and 42% of community college freshmen require remedial education (NCES, 2004). While it is typically developmental educators—instructors of remedial or learning skills courses, learning assistance professionals and academic advisors/counselors—who address such needs, all of us who teach such students share the responsibility. Colligan’s story demonstrates, through my own teaching successes and oversights, distinct

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<sup>1</sup> A note on confidentiality: When asked in an informed consent form what pseudonym to use for him in my research, the student came up with “Colligan,” an Irish moniker. To further protect confidentiality, I have removed identifying features such as when the course was offered and where it was taught.

pathways and pitfalls in evoking behavioral change—transformation of thoughts, feelings and actions to attain personal goals.

### **A One-Hour Transformative Experiment**

At some point during my initial exchange with Colligan, I got an idea for how we could confront his struggle to regulate himself while learning about decision making. I said:

You want a project? I've got a project for you. We'll do a one-hour experiment.

You're going to be in control of one hour. You'll plan out beforehand what you'll do in that hour. I don't care what you plan to do. You can plan on the last half hour being just to have fun and do what you want, call friends, surf the net, whatever. But you stick to the plan.

My goal in suggesting something so dramatically different from the expected student project was less the particular outcome of whether or not he actually controlled his time, and more that he sees the benefits of reflecting on his thoughts and actions. Evidence shows that such a focus on a "process goal" or small step in changing behavior, more than a final outcome goal such as the changed result or outcome, "can become intrinsically motivating in its own right and can even outweigh attainment of superordinate outcome goals (Schunk & Schwartz, 1993; Zimmerman & Kitsantas, 1997)" (cited by Zimmerman, 2000, p. 18). A small step such as controlling one hour can not only demonstrate capacity to change, but possibly become more engaging in itself than a more intimidating challenge like managing all of one's time.

Research also supports the general usefulness of real-world projects in helping students learn to monitor their own progress and evaluate effectiveness of their own methods (Casazza, 1998; Young & Ley, 2004). Moreover, one study shows that the one piece of class design that matters most to learning—more than choice of tasks, variety of skills required, nature of a task, or feedback from a task itself—was the significance or importance of the task and the perceived relevance to students (Nordstrom, Williams, & Jarvis, 2003). While learning for its own sake might be admirable, students need to see connections to life if they are to achieve learning that lasts.

Dewey (1938/1963) argued similarly:

There is, I think, no point in the philosophy of progressive education which is sounder than its emphasis upon the importance of the participation of the learner in the formation of the *purposes which direct his activities* in the learning process, just as there is no defect in traditional education greater than its failure to secure the active co-operation of the pupil in construction of the purposes involved in his studying. (1938/1963, p. 67, emphasis mine)

The challenge, however, is to match students' purposes with our own when the two often seem diametrically opposed. Colligan's project, for example, arguably fails to engage a world of issues beyond his strictly personal concerns unless gaining control of his time better equips him to care about other things.

In my meeting with Colligan, I asked him what he heard the proposal to be. He said, curtly, "To try and control and plan one hour of my time." After a beat, he added, "If I can." I teased him, "If I can?" He replied, "Well you know, I can try, but I know myself, I know what'll happen." I said, "No, I'm not going to let you get away with 'If I can.' I want a commitment from you." He replied, with some understandable trepidation, "OK."

Unfortunately, unaware as I was of research on teaching for diversity, I neglected to give Colligan specific "anti-stereotype threat" messages. As Cohen, Steele & Ross (1999) have shown, minority students benefit best from critical feedback when it is preceded by explicit reminders that they are being held to high standards that challenge many others too. Furthermore, minorities need to hear that a teacher believes in their ability to do better based on the evidence of their work so far. Both such reminders, of *challenging standards* and *belief in ability*, help people who have often been socially conditioned to assume that there is something wrong with them and that they are not capable of improvement. Moreover, even majority students do better to attribute performance results less to inability or inadequacy and more to learning strategies that can be altered and tested (Zimmerman & Kitsantas, 1997).



### Giving Up Helping to Be the Greatest Help

Hearing Colligan's apprehension, I felt he might be more likely to change his behavior if I changed mine. In a related spirit, the Tao Te Ching offers an aphorism:

Nothing in the world / is as soft and yielding as water. / Yet for dissolving the hard and inflexible, / nothing can surpass it. / The soft overcomes the hard; / the gentle overcomes the rigid. / ... Because [the Master] has given up helping, / he is people's greatest help.  
(Mitchell, 1988, ch. 78)

Rather than push my agenda during this and future meetings, I might better "give up" helping and let him fail and falter as needed. Moreover, as another student had told me I sometimes gave mechanically "robotic" responses, I might better "soften" and describe my own struggles.

Continuing our initial conference, I felt moved to share and disclosed, "You know when I'm trying to write a paper or do some other work, the more imposing the task is, the more interesting every surrounding distraction looks. Especially the stuff that never looked interesting before—the stuff I've been avoiding like cleaning the bathroom, organizing my music collection, everything." Such self-disclosure, as appropriate, aims to model "confessional consciousness" (Torosyan, 2001, p. 318) or honest cogitation upon mistakes. At my remark, Colligan laughed and smiled, possibly recognizing himself in it. I added, "The neatest thing to try is planning to let myself do that stuff too, but after I do what I planned."

After discussing the project, I asked again, "Now what did you hear me say? Just so I know I was clear," calling for empathic "say back" to confirm understanding (Torosyan, 2004-2005, p. 28). Butler (2004) has similarly emphasized effective task interpretation, and has shown that students often "do not know how to... use instructions to self-direct learning" (Butler, 2002, p. 90). Colligan's first attempts to interpret the task were expressed minimally, "Well I'm going to plan out what I'm gonna do, then I'm gonna do it, then I'm gonna report on what I did." I pushed, "OK, the most important part is in planning it out. You really need to anticipate what will go wrong, knowing yourself and what you usually *tend* to do." By inviting such self-examination, I was avoiding having the student "be inadvertently excluded from the problem-solving process central to self-regulation" (Butler, 2002, p. 84). Change should ideally come from internal agency, for, "if it is the teacher or researcher who analyzes a task, anticipates problems, and

defines useful strategies, then students have little opportunity to problem solve strategies themselves” (Butler, 2002, p. 84).

I also had a validity concern: how would I know whether he fabricated a success story? In his self-reports to date, he appeared to honestly admit “failures.” He also felt free enough to object to the active listening exercise. Thus, the data indicated that I was avoiding coercing fabricated responses. But I would nevertheless need to vigilantly discourage mere parroting and instead actively recognize, affirm and welcome failures and successes alike.

### **From “It Worked” to “Everything Went Wrong” to “I Stuck To It Lovely”**

One week after we had conferenced, Colligan read a preliminary report of his one-hour experiment aloud to the class, and said, smiling, “I put the phone in the laundry machine, and I took the laptop out to the backyard to avoid hearing my brother and the answering machine.” After battling several other temptations, he completed his work successfully, he said. The group listened intently. Colligan smiled, “It really worked.” He was surprised that he really could control much of his life. When “each student determines his or her own self-study,” Dembo and Seli (2004) have found that he or she “appears to be less defensive about changing his or her behavior” (p. 8). Rather than me telling him what to change, he thought of specific interventions for himself—including creative segmenting of areas of his life.

As to what exactly “worked,” he went through each of the three recursive, cyclical phases of self-regulation formulated by Zimmerman (2000): 1) he used “forethought” to set goals for his hour and solidify belief in his “self-efficacy” (Bandura, 1977) or ability to do what he set his mind to, 2) he used “performance control” to imagine potential obstacles, alter his surroundings and focus his attention during his experiment, and 3) he used “self-reflection” to hone in on controllable causes such as interruptions, and to find satisfaction in even the modest outcome of a single controlled hour of time (pp. 16-24).

Sharing in class also provided Colligan with a social learning opportunity to celebrate success with others.

For Colligan, however, as for most who attempt change, the new behavior did not stick. The third week of the project, he wrote in his journal, “This week I took another one hour but this time everything went wrong... my hour was bad and I did not follow all of the things I should or wanted to [sic].” He again fell prey to extrinsic forces such as phone calls and invitations from friends. I should have pressed more

for him to articulate the reasons he did not follow his plan, to check whether, as Prochaska and others (Prochaska, DiClemente, & Norcross, 1992; Prochaska & Prochaska, 1999) suggest, a) he believed he could not change, b) he did not want to change enough, c) he did not know what to change exactly, or d) he did not know how to actually change.

When Colligan tried again in week four, he wrote, "This week I took one hour again and I really needed to stick to it." However, he concluded:

As the hour started everything went well until MY BESTEST FRIEND MIKE CAME OVER [emphasis in original] and told me that I HAD to go out with him right there and then because he had just gotten the car for the first time from his parents and it is a very expensive nice car we have been awaiting to drive in [sic]. Well I couldn't turn up this opportunity...

Feeling as if to "turn up" an "opportunity" would be too much to bear, he again lost control. This led to a disappointed end: "I was really behind in my work and I found myself going to bed at 3 in the morning instead of at 12 like I was hoping I would." In his journal, I commented, "Good you noticed consequences here. Observant!"—in order to at least credit the habit of self-reflection and help catch him getting that much right.

By the sixth week of his project, near end of term, he finally had some success again, but his realizations appear mixed with admissions of ambivalence. He wrote in his journal, "[I tried] 1 more hour this week! Well this week I decided to do things that I wanted to do because I have always been planning to do homework and I do need to do personal things on time also." Seeing what he "wanted" to do as not inclusive of school, he continued:

The hour started fine and everything went according to plan but what I think made it happen is because it was something I really wanted to do and therefore I stuck to it lovely [sic]. If it involves schoolwork or other boring things I don't really stick to them or something always happens to stop the flow. When I do my own personal stuff it always seems to go well and I really enjoy knowing when I have to do what I want to do everything goes well and when I have to do things on time or by a certain time it almost never happens because something always goes wrong.

By compartmentalizing “personal stuff” as his only source of pleasure, he had not identified what was valuable to him about “schoolwork,” seeing the latter only as “boring.”

I could have pushed Colligan more about how he framed the issues and asked “Can you find something you *want* in what appears to be only ‘boring’—connect ‘work’ to your own interests somehow?” Such a demand for high standards is recommended by Smittle (2003). Colligan’s language also indicated some circular reasoning; his words, “it almost never happens because something always goes wrong,” begged the question of why things “go wrong” in the first place—as well as the question of to what he attributed his failure. As Dembo & Seli (2004) summarize attribution research, “how students perceive the causes of their prior successes and failures is the most important factor determining how they will approach a particular task and how long they will persist at it” (p. 4).

Yet Colligan’s excitement—that he can “really enjoy” when “everything goes well”—could, if reframed towards other goals, motivate him to change further, on the principle that people pursue actions that bring satisfaction and avoid those that bring dissatisfaction (Bandura, 1997; Zimmerman, 2000). Colligan had, at the least, noticed not only his own pattern of repeated behavior (“something always goes wrong”), but some of the pleasure sustaining his addiction to frittering time away (in order to avoid “schoolwork or other boring things”). His expression, “I stuck to it lovely,” hinted that he found serene satisfaction in having his toils lead to success.

In his final journal entries, Colligan claimed: “I really would like to thank you again for helping me organize my time and for showing me this way of doing things because my life is much more organized and now I can finish all the things I would like to finish.” While he still had yet to make schoolwork his own, in the end he celebrated his own power to “finish things”—simply to get done what he planned to do. Although he would surely suffer setbacks again, he started a path of self-observation and changed action in response.

### **Limits: “It Is All Intertwined”—But Will the Change Last?**

At minimum, our conference, his subsequent journal writing, and the class discussion together had begun reinforcing for Colligan three of 14 self-regulatory behaviors (Young & Ley, 2003; Zimmerman & Martinez-Pons, 1986) encouraged by master developmental instructors: 1) he used “environmental

structuring” by arranging the physical setting to make learning easier, 2) he used “self-consequences” in giving himself free time during his trial hour, thus arranging rewards for success, and 3) he repeatedly used “self-evaluation,” assessing his own strategies and progress (Young & Ley, 2003, p. 4).

What seemed to help Colligan most was that my questions got him thinking through decisions for himself, encouraged him to study something directly relevant to him, and guided him in reflecting on the experience. His story illustrates what Rogers (Rogers, 1959; Rogers & Freiberg, 1994) described as a key pathway to overcome resistance, trigger change and initiate self-regulation:

The student in the regular university course, and particularly in the required course, is apt to view the course as an experience in which he expects to remain passive or resentful or both . . . When a regular university class does perceive the course as an experience they can use to resolve problems which *are* of concern to them, the sense of release, and the thrust of forward movement is astonishing (Rogers, 1959, p. 158).

As Colligan’s ideas began to coalesce, he thrust forward, albeit in a rocky fashion. By the end of term, he perceived some of the mutual interdependence of his learning, his own actions, and his environment.

To a degree, Colligan changed his attributions of what caused—or as he put it, “what allowed”—his overall success. As he wrote:

What I really noticed, is that this all happen [sic] or what allowed this to happen for me is that I made the RIGHT choices and this allowed me to have fun. I found myself sympathizing with people and actually taking time to think over the options and plan everything out like I did for my project with you Roben. Everything I have learned is just adding on and it is all intertwined.

While it was unclear what made choices “right,” he claimed at least to gain some mastery over aligning action with intention. By “actually taking time to think,” he located his sense of control more intrinsically, feeling less subject to extrinsic circumstances or “what always happens,” as he had earlier. In “sympathizing with people” he may have more mindfully connected with others and avoided feeling continually distracted by worries about time pressures. His awkward use of “sympathizing” could, however, suggest he was merely mimicking my emphasis on “empathizing.”

Colligan was likely helped by the fact that his experience was reinforced content-wise by the course concept of systems thinking—the idea that one can never do or decide just one thing (“the RIGHT choices”), but rather, decisions and actions always have multiple consequences (“everything... adding on”) requiring further processing (“actually taking time to think over the options”). Furthermore, his many new behaviors had a synergistic effect, with the whole of his transformation being more than the mere sum of the separate parts of reading, reflecting, taking action and writing. His use of the language of “intertwined” learning was more articulate than usual for him too, and suggested another moment of excited transformation—albeit a change that might not last.

Writing further, Colligan reminded himself, “I also want to do so much this summer and I think it will only happen if I plan everything out.” As he concluded in his final journal entry:

I must plan this alllllll [sic] out and I am repeating myself so it can sink into my head  
and so I CAN MAKE IT HAPPEN!!!!!!!!!!

[emphasis in original]

Aware that he “repeated” his strategy to himself, he engaged in inner talk, as if to talk himself into really changing patterns. At the same time, his emphatic tone hinted at a certain desperation, as if he knew too that he would inevitably slip back and falter. Such recursive iterations of progress and inevitable regress can, even with more life experience, discourage many an excited learner. As Cranton (2002) has theorized, transformative learning usually shows not linear but “spiral-like” progression (p.65).

Factors contributing to Colligan’s progress may include two of five actions Smittle (2003) recommends faculty take to help developmental students: 1) I adjusted to the “affective need” for help to “regain motivation” and to identify “everyday activities” (p. 12) by breaking down time management into small steps; 2) I created a relatively “open and responsive learning environment” for Colligan and other students, “recognizing them as individuals” (p. 12) by calling people by name and personalizing comments. I might have had greater success had I practiced what Smittle (2003) proposes as a first principle—that faculty should “commit to teaching under-prepared students... [by] gaining knowledge of [developmental] learning problems” (p. 11).

I was unaware of several other models for evoking behavioral change in developmental learners—each of which the story illustrates. Colligan’s process unintentionally matched the four steps of

the POME model (Young & Ley, 2004) for under-prepared students. He “Prepared” the environment by removing obstacles/distractions (such as phone calls); my course helped him “Organize” or transform decision making material (assignments allowed him and others to question and apply reading); he “Monitored” progress (logging in his journal what actually happened, not just reflective evaluations or impressions); and he “Evaluated” effectiveness (through his written conclusions). A similar lens on Colligan’s journey is provided in case studies by Dembo and Seli (2004), whose related cyclical four steps track Colligan’s path to transformation—from self-observation (through his journals), to goal setting (in conference with me), strategy implementation (his actually following through on plans) and strategic outcome monitoring (his reflections upon when things “worked” and when “everything went wrong”). Likewise Colligan in effect proceeded through Butler’s (2002) Strategic Content Learning activities of a) analyzing tasks (in our initial conversation), b) developing personalized strategies (his own creative tactics such as hiding the phone), and c) monitoring strategy effectiveness, revising aims or efforts adaptively (his renewing efforts after regressing).

Overall, Colligan’s turnaround towards self-reflection, relative to his dependent state at start of term, appeared significant and dramatic. For change to last, however, students need “a [self-regulation] toolbox that they can carry with them, rather than something that will carry them” (Young & Ley, 2003, p. 10). Another of the study’s limits, in addition to concerns about the validity of Colligan’s self-reports, is a lack of longitudinal data on whether Colligan internalized learning very long after the course was over.

In addition, a particular trade-off of allowing Colligan so much freedom was that he missed a chance to synthesize research in a traditional term paper. My focus after all was not on having him read and analyze decision making theory in any greater depth. However, as a colleague with whom I shared Colligan’s story concluded at the time, “At first I was worried you’re almost giving him less of an assignment than writing a term paper. But actually, he’s learning something that he really needs to practice. It’s probably one of the hardest things he’ll ever have to do. He’ll learn so much from it.” As issues like time management hinder content learning so much in the first place, the benefits of allowing a self-directed project outweighed the costs in terms of content coverage as it is often conceived traditionally.

Nevertheless, several key questions for further pursuit remain—namely: What place is there for work on self-regulation in science, technology, engineering or math courses? Similarly, what principles can be integrated into other disciplines where content initially reveals little if any directly personal relevance? In addition, how can longitudinal data help show what makes learning and transformation last for an extended time, throughout life's failures and setbacks?

### **Conclusions and Cross-Disciplinary Recommendations**

Given the degree to which personally relevant projects such as Colligan's can generate intrinsic motivation and critical reflection, related work can be assigned across the disciplines—and at only limited expense of content. With resistant or under-prepared developmental learners, faculty can help students connect course content with students' own narrowly personal but often age-appropriate concerns. In economics, for instance, students may examine how changing supply and demand curves affect the price of hot-ticket items in their market demographic. Calculus students obsessed with car-racing videogames may create visual displays of their own best acceleration and deceleration curves. Students of art history can inspect popular fashion ads for evidence of sexualization or cultural bias, or more positively, of metaphysical significance. Whether focused on self-regulation or not, such projects—while requiring some imagination to link to disciplinary foundations—can release transformative energy because they capitalize on what students love and care about.

Additional pedagogical assumptions and actions may better facilitate development of students like Colligan than traditional methods do. Other potentially useful principles, induced from Colligan's story, include:

*Meet the other where they are:*

- Go "meta": Body language, tone, and other signals from students tell us when they need something dramatically different from business as usual in the classroom.
- Catch them getting it right. Affirm even minimal self-reflection to build the habit.



*Moving from prodding and coercion to collaboration and facilitation:*

- Focus on not only whether students do enough work, but also how to creatively evoke their interest and insight into solving their own problems. Help students design projects of genuine and deep concern to them.
- When brainstorming with students, avoid telling how to solve their problems, and instead get them to lay out steps for arriving at solutions themselves.

*Moving from foundational content and concepts to application, action and personal change:*

- Press for what students might do differently the next time in a similar situation.
- In the face of ambivalence, ask for and expect commitment. Model excellence and self-respect by respecting one's own expectations as a teacher, and likewise encouraging students to do *themselves* honor through persistence.

*Modeling learning from mistakes—and rewarding it:*

- Make occasional critical self-disclosures, to model reflective consciousness of one's own lapses.
- When communicating, ask for acknowledgment of precisely what they understood, to prevent misunderstandings early on.
- To ensure validity of student response, ask for and invite accounts of what does *not* work for them.

*Shifting emphasis from extrinsic to intrinsic sources of motivation and reward:*

- Create opportunities for students to celebrate successes and work on failures together.
- Follow up on student initiatives with journals, emails, meetings and class discussions.
- Try to identify pleasures that sustain addictive behaviors, and see if alternate pleasures can be found.
- “Go *with*.” Share students' exaltation and excitement, even when one has reservations. Later, after acknowledging and building trust, one can differ and be heard.

A unifying theme for Colligan's story is that “the goal is for students to learn *how to* construct strategies independently” (Butler, 2002, p. 91, emphasis in orig.). One pathway to such independence is to develop not only trust between student and teacher, but trust of students in themselves and their own reasoning. As the Tao Te Ching advises:

When they lose their sense of awe, / people turn to religion. / When they no longer trust themselves, / they begin to depend upon authority. / Therefore the Master steps back / so that people won't be confused. / He teaches without teaching, / so that people will have nothing to learn. (Lao-tzu, 1992, ch. 72)

The Taoist way is to point people to their inner resources for self-monitoring. Professors too can teach without teaching, or “with your mouth shut” (Finkel, 2000; Torosyan,2001), by creating conditions that help students ultimately decide whether or how to transform.

To help anyone else, however, we need to self-monitor and consider our own strategies for helping. Examining the process of reflection I used in producing this narrative itself, I notice at least five dimensions that may aid others in reflecting similarly on their own teaching experiences. Building on Lauer's (1996-97) five-stage theory of development, I think of the following five aspects as lenses on reality that we need to use all the time—more than stages we proceed through hierarchically.

The first dimension involves sensation. The moment Colligan entered my office, for example, I had a felt sense of his anxiety as well as my own compulsion to solve his problems for him. A second dimension involves categorizing those sensations and perceptions. Labelling Colligan's behaviors as “hyper,” “beleaguered” or “resistant,” I named what I thought was going on—his preoccupation with deeper problems, my interest in making the project relevant to his concerns, and so on. At a third dimension, I weigh the relative trade-offs, fit and context of each such label by, for instance, comparing Colligan's behaviors with those of self-authorship and self-regulation.

At a fourth dimension, I ‘go meta’ and reflect on the very paradigms of thinking I use in weighing or relating categories of sensation in the first place. In quantum physics, gravity is considered not a force that draws objects together through space, but rather a space-time continuum that wraps itself like a blanket around the objects, giving us the perception that masses are attracted to one another. Stepping back for similar perspective, I think outside the box of each story I try to make of Colligan's experience and my own. For instance, I examine skeptically his claim to have redeemed himself, as well as my own attempts to tease out how valid and reliable such claims may or may not be. Even writing this paragraph on my process of reflection, I examine my subjective framing of the narration—the fact that I limit my

reflection to a process of five dimensions, focus on my successes or failures, and otherwise organize my description.

With a fifth dimension, I step back from the process of reflecting upon thinking and towards unifying the separation between things, thinking, and something larger. In physics, an “undivided wholeness” (Bohm, 1980; Bohm & Hiley, 1993) underlies the seeming separation of objects; even electrons are not so much particles as smears that defy categorization as either mass or energy. Attempting to integrate myself and Colligan similarly, I try to see us both as fellow human beings encountering each other and the world. Together the teacher and the learner switch roles and are part of a seamless continuity, as is common in currents of mysticism, Taoism, alternative medicine and other nontraditional attempts to balance body, mind and spirit.

Such dimensions can be applied by other teachers to similar struggles with change and so-called resistance. We can only support students if we sensitize ourselves to the sometimes subtle signals that arise in individuals and in groups as a whole. Noticing a learning problem also requires awareness of what one labels a problem in the first place. We need to compare and contrast alternatives, weighing tradeoffs when we challenge or support learners. Those very comparisons need to be unpacked for the assumptions we use in coming up with them. And all the while, we do well to remember our common humanity—something I easily forget when I perceive a student as resisting my best intentions.

In these ways, Colligan’s story suggests that personal freedom to learn, combined with a teacher’s coaching the process along by using sensitivity, diagnosis, theorizing, self-examination and human connection, can begin to change lives. Or if not, then such practices may at minimum jumpstart a process of reflection on the inevitable failures that attend any attempt at significant life change.

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