NADE Digest

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Margaret Hay and Naomi Ludman, Editors

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Together We Stand: Using Collaborative Writing in Developmental Writing Courses

Monica D'Antonio
Montgomery County
Community College

Teaching developmental writing courses is a high-wire act, complicated by its need to balance both rudimentary skill-building and college-level writing preparation. However, many developmental writing instructors spend most of their time on the former, focusing on rote memorization of grammar rules and sentence skills development, which often leaves students feeling unmotivated and anxious about their writing. This article offers an effective teaching method aimed at increasing student success in developmental writing courses by taking an active-learning approach, known here as the "class essay," that emphasizes the entire writing process, not just the building blocks of the English language. Additionally, this article explains the benefits of collaborative writing in general, details the "class essay" approach specifically, and describes the observed results of using this method.

Introduction

Teaching developmental writing courses can be a complex endeavor. Developmental students enter college with below-average writing skills, minimal awareness of what it means to be a writer in an academic setting, and, typically, anxiety over the entire writing process. These negative feelings are often compounded by spending one or more semesters in developmental classes that focus strictly on grammar, spelling, and sentence skills. The lack of student engagement coupled with the stigma surrounding these courses can often lead to poor retention, lack of success, and lowered graduation rates for developmental students.

This article offers an effective teaching method aimed at increasing student success in developmental writing courses by taking an active-learning approach, known here as the "class essay," that focuses on the entire writing process, not just the building blocks of the English language. Additionally, this article

explains the benefits of collaborative writing in general, details the "class essay" approach specifically, and illustrates the observed results of using the class essay.

Background

Writing is traditionally seen and taught as a solitary process. The assumption that writing is always done in isolation, however, causes apprehension in developing writers and, more importantly, does not reflect the full extent to which writing can, in fact, include a highly collaborative revision process. This problem, then, begs the question posed by Speck (2002) in his report *Facilitating Students' Collaborative Writing*: "Does it not make better sense to use writing in our classrooms to mirror the ways that texts are produced… than to confuse the fiction of authorial attribution as the way writing gets done?" (p. 7). In Speck's estimation, collaborative writing is the best way to reinforce a process-oriented writing approach in the classroom (pp. 7-8).

According to Speck, "Collaborative writing fits nicely with the premises that support cooperative learning and logically shares the pedagogical presuppositions of active learning" (p.8). Active learning, proven to be one of the most effective pedagogical strategies, is generally defined as any instructional method that engages students in the learning process. It requires students to do meaningful learning activities and think about what they are doing (Prince 2004). Active learning has been shown to be highly successful in increasing students' comprehension of, interest in, and use of subject matter. In a recent study on active learning versus passive learning in two psychology courses, researchers Smith and Cadaciotto (2011) found that "students in the active learning condition reported greater retention of course material for the majority of topics as well as the course material as a whole" (p. 57). Additionally, the researchers show that "students in the active learning condition also reported greater engagement with the class material" (p. 57).

Active learning's role in the English classroom has also been studied. Citing Sutherland and Bonwell, Remler (2002) argued that the "evidence supporting the benefits of active learning is 'too compelling to ignore'" (Remler, p. 240). Drawing from McKeachie,

Pintrich, Lin, and Smith (1986), Remler also concluded that active learning "helps students '*become aware* of strategies for learning and problem solving'" (p. 240). In accordance with her own use of active learning in her English classes, Remler stated

> My assumption is that the more actively students are engaged in a lesson…, the more engaged they will be in the subject matter and the better opportunity they will have to learn and apply course concepts. My experiences, as well as student reactions to class activities, seem to validate this assumption. (p. 241)

Using various collaborative techniques in her English classes, Remler stated that

> [a]s students take the teacher's role by generating questions and guiding discussions, they not only have the most active role in the classroom, but they also boost their enthusiasm and confidence by revealing to the class (and themselves) their knowledge of the concepts they are studying. They act responsibly as they realize the intellectual investment (as well as time investment) required to lead a class. (p. 241)

Cooperative learning, as a subset of the active learning movement, is another area of ongoing interest in educational research. Mar (1997) described cooperative learning as "instructional techniques or grouping structures in which students are divided into heterogeneous groups to complete instructional activities" (p. 8). In addition, Mar supported the effectiveness of collaborative learning by citing Johnson and Johnson (1989) and Totten, Sills, Digby and Ross (1991), who concluded that the "[r]esults from a meta-analysis of these [cooperative learning environments] data reveal that the average students in the cooperative situations outperformed in a variety of areas their counterparts in competitive and individualistic environments" (p. 9). This information becomes important in the area of writing instruction, which is often taught as an individualistic endeavor.

Collaborative writing, as an extension of active and collaborative learning models, has become a popular method of instruction in many composition courses because it helps to debunk

the myth of the solitary writer and increases students' confidence by allowing them to work together to develop their skills. Peter Elbow (1999) explained the benefit of collaborative writing in his article "Using the Collage for Collaborative Writing":

> When people write alone, they make countless simple and complex writerly decisions *tacitly*, instinctively - without articulating the reasons for them. . . . But the process of writing with someone else forces us to put many of these decisions into words . . . the process of collaborative writing forces students to become more conscious and articulate about the rhetorical decision making. (p. 261)

It is precisely for this reason that collaborative writing is most useful for developmental students who may not yet fully understand their own writing processes, let alone college-level writing expectations. The collaborative environment provides an active, safe space that increases students' confidence in writing, guides them through the writing process, and encourages them to think logically and critically about their writing.

As writing instructors, we want our students to understand the writing process, but, more importantly, we want them to use the writing process. We want them to brainstorm and outline. We want them to be messy—cross out, draw arrows, write notes in the margins, and cut and paste. We want them to debate with themselves about necessary information, diction, organization, grammar, spelling, and mechanics. We want them to share their work with others. We want them to proofread, edit, and revise.

However, as we know, this process rarely happens to the extent that it should. Most students seldom engage themselves in intellectual discussions about their writing processes. They rarely proofread, read their work aloud, or have someone review their work. How can instructors help them see that breaking a larger task down into smaller, more manageable steps often leads to success? We could choose to tell them that these steps are effective, or we could show them that these steps are effective.

The "Class Essay" Approach

As a developmental specialist, I am primarily responsible for teaching developmental courses within the English department, particularly the second-level developmental course, ENG 011. ENG 011, the last developmental course before the college-level ENG 101 course, is typically taught as a "paragraph class." The course has a heavy grammatical emphasis, and the summative assessment of the course is taking three timed paragraph "tests" in which the students must write 250-word, error-free paragraphs on random prompts selected by the instructor. Most of the time, students have no foreknowledge of the prompt, nor do they get much time to plan, draft, write, proofread, edit, or revise.

After teaching the course in this manner, I decided that ENG 011 did not give students enough exposure to the actual writing process, nor did it provide an adequate bridge to ENG 101 (the college-level writing course) where students will have to write academic essays that involve critical thinking, research, and citations. Therefore, I changed my ENG 011 course to be a five-paragraph essay course that incorporated intense guided instruction, collaborative writing, and more individualized help in the forms of tutoring and conferences. I also began using a "theme" (gender and popular culture) for the course so that students would have a consistent and focused topic to write about throughout the entire semester.

I understood that if I incorporated essay writing into my developmental course, the students would have to feel as comfortable and as supported as possible. They would also need to see firsthand the effectiveness of using a process-oriented method of writing. Therefore, in order to provide a supportive environment for developmental essay writers and in an effort to model the full writing process as it should occur, I instituted the "Class Essay" as a method of approaching the students' first essay assignment of the semester. This approach guides them together as a class through all of the stages of the writing process, from brainstorming and outlining to an edited piece of critical prose.

During the first few weeks of class, I lead my students in a series of discussions on our selected topic, most of which focus on

the ways in which the media portrays masculinity and femininity and, in turn, shapes male and female behavior and ideology. I approach these discussions with an eye toward completing the first major writing assignment, an exemplification essay that asks the students to examine the questionable gender values illustrated in the movie *Twilight*. Before we write, I conduct a brief overview of the five-paragraph essay. We also analyze a sample essay written by a former student, highlighting, underlining, and taking notes on the distinct parts of the essay and discussing their functions. Once we have covered these issues, we begin the "Class Essay."

On day one, we read the writing assignment together as a class. I ask the students to explain the prompt to me in their own words. After establishing the prompt's purpose, the students free-write on the topic for three minutes. Building upon this free-writing activity, the students then share their ideas with the class, and those ideas are recorded on the whiteboard. The students spend time grouping similar ideas together under broad topic headings before selecting the three most important topics that they want to explore in the paper. The students then use these topics to create an outline of the body of the essay. I stress the fact that the students will refer to this outline throughout the writing process. I also explain that having all of the evidence in an outline first will make it easier to construct a thesis later, rather than beginning with the thesis and then trying to make the evidence work around it.

Using the outline from day one, the students spend day two in small groups of three or four, working on thesis statements. Each group constructs a thesis, which is then put on the board for the entire class to review. After working on and revising each group's thesis statement, the class then votes on which thesis is the best, and that becomes the thesis statement for the class essay. Once the class has constructed the thesis, each student must write an introductory paragraph for homework and bring it to the next class meeting. To encourage students to write on their own, I award homework points for this assignment.

In the next class, I assign new groups, and the students in each group share their homework paragraphs with each other.

Each group then creates a new introductory paragraph using ideas from each person's homework paragraph. The students are not allowed to use one person's entire paragraph; they must construct a new paragraph together. An elected member of the group types up the completed paragraph and emails it to me. I then make copies of each paragraph in preparation for our writing workshop in the next class meeting.

On day three, writing workshop day, I distribute hard copies of the paragraphs that the groups wrote in the previous class. The students pair up and spend the first ten minutes of class commenting on and editing each paragraph. After the small group workshop, I project each paragraph on the SmartBoard, and, using the students' feedback, we make changes to each paragraph. I use the Microsoft "track changes" function so that the students can see the revisions happening live. After all of the paragraphs have been revised at least once, we accept all changes, read each paragraph again, and then vote on which one we want to serve as the class introduction. Once the students have voted, I put the selected paragraph on the class's Blackboard[1] site so that the students can see and refer back to each paragraph as we continue to build the essay.

My students repeat this process with the remaining four paragraphs until they have five completed paragraphs. After we have voted on all five paragraphs, the students must copy and paste the paragraphs from the Blackboard site into a Microsoft Word document and format the essay according to Modern Language Association (MLA) guidelines. The students are free to make any additional changes to the essay as they see fit, although they are not obliged to do so.

The students must then take the essay to a writing tutor on campus and get feedback for improvement[2]. The feedback is typically minimal since we all worked together to revise each paragraph thoroughly as we went along; however, I include

1 There are many ways that this approach can be done without the use of advanced technology like Blackboard. Multimedia projectors, wikis, or even just writing paragraphs on a chalkboard or whiteboard could be effective.

2 Colleges with limited tutoring availability can use online tutoring services, or the instructor can use one-on-one student/teacher conferences instead of tutoring services.

this step so that the students learn where the tutoring center is and, hopefully, meet a tutor that they like and trust. They will be required to take their next two essays to the tutor as well; therefore, requiring students to go first with a paper that is fairly good enables them to gain confidence in their writing skills. Based on the tutor's feedback, the students revise the essay and turn the original and revised drafts in to me for additional feedback. After receiving more comments from me, the students revise again and put all three drafts in their writing portfolios, which I collect and grade at the end of the semester.

This project usually takes over six weeks to complete (my class meets three days per week, but I only work on writing two of the three days because I spend one day solely on grammar) and typically works best with classes that meet three days per week.

Results

I am entering my third year of using this method, and I have observed some interesting behaviors throughout the process. First, when students share their homework paragraphs with their peers, they get a chance to see how other students in the class write. This helps them recognize their own strengths and weaknesses, and they are more likely to use the "vocabulary" of writing to describe those strengths and weaknesses. I have overheard students say, "I forgot a concluding sentence," or "I don't have any transition words in my paragraph," or "I think we should go with my topic sentence because yours doesn't echo the thesis."

When students combine their homework paragraphs into one group paragraph, they experience how the real writing process takes place. The students debate word choice, structure, transitions, and details. For example, I've heard a few students snickering that their paragraph was going to be chosen because they had "the best vocabulary words." Another group said that their paragraph "sounded like a Power Point presentation" because there were no transitions connecting their ideas. This evidence suggests that the group work enables students to better understand the elements of good writing and, therefore, look more critically at their own writing.

Many students are driven by the competitiveness of the class workshop days when they vote on the group paragraphs. I often hear students say, "Our paragraph is going to win," and students will sometimes high-five their group mates if the class selects their paragraph. The students take pride in their work and want their paragraphs to be chosen. For many of them, competition is the great motivator because it validates their abilities as writers.

The group writing also elicits frustrations that are common to the writing process. I often see students crossing out entire paragraphs, ripping up papers, and grunting in dissatisfaction. Most of this angst comes from figuring out what to say next, where a sentence belongs, or whether or enough evidence is present. When I see this happening, I shout, "I see writers in Group 2!" because I want them to know that this is exactly what the writing process should look and sound like.

Additionally, the class workshops allow students to see how the proofreading and revision stages work and how beneficial these steps really are. When the students hear their classmates' critiques, they can see how many problems they missed when they either reviewed their work on their own or did not review their work at all. The students begin to see that peer review, tutoring, and reading aloud are significant steps in the writing process.

After the class essay assignment, the students are on their own to complete the final two essays for the semester. However, because of the time spent doing the class essay, students seem much more comfortable and relaxed when approaching these writing tasks. They understand what is expected of them and feel more confident in meeting those expectations. More importantly, they have seen how a writing process works, and they know how to use it effectively.

Some Preliminary Data on the "new" ENG 011

Since beginning this new method of teaching ENG 011 three years ago, I have trained five full- and part-time faculty members to teach the course in the same way, and we have just started collecting data on success rates in the new version of the course, as well as students' success rates in college-level English courses

after completing ENG 011. Preliminary data from Fall 2008 to Spring 2010 show that students' success rates in the new ENG 011 course are on par with, and sometimes better than, the college's ENG 011 success rates overall. More importantly, however, the data suggest that students who pass the new ENG 011 have greater success in ENG 101 than do the students who pass the traditional version of ENG 011. Additionally, the students in the new ENG 011 have higher average pass rates in ENG 101 than the average college-wide passing rates for ENG 101.

In fall 2008, the first semester that I ran the new course, students in my ENG 011 courses had a 68% pass rate compared to the college-wide ENG 011 pass rate at 61.9%. By fall 2009, I had three additional instructors working with me on this new course, and at the end of the fall 2009 semester, the cohort of instructors using the new model had an average pass rate of 78.8%. The average ENG 011 success rate college-wide in fall 2009 was only 68.2%.

Additionally, the preliminary research also shows that students in the new version of ENG 011 are succeeding at higher rates in college-level English and are taking the college-level English course almost immediately following the developmental course. In one instructor's fall 2008 – spring 2009 developmental courses taught in the traditional manner, 20 students passed ENG 011 and went on to take ENG 101 in the subsequent semester. Eighty percent of those students passed ENG 101. Under the new curriculum used in fall 2009 to spring 2010, 23 of her developmental students passed ENG 011 and went on to take ENG 101 in the subsequent semester; 95% of those students passed ENG 101. Therefore, while the number of students passing ENG 011 was similar between the traditional and new models, the pass rate in the subsequent college-level writing course was higher for the group who took the new ENG 011.

While this is only one semester of data, early evidence suggests that the students who take the new version of the ENG 011 course are more likely to take the ENG 101 course in the subsequent semester and pass that college-level writing course. In data collected on my own ENG 011 courses from fall 2008 through fall 2009, the average pass rate of the students who completed the new version of ENG 011 and passed ENG 101 in the subsequent semester was 82%. The average passing rate for ENG 101 at the college in general during those same years was only 65.5%, thereby suggesting that students who complete the new ENG 011 are having greater success in ENG 101 even when compared to the entire campus community and not just to other developmental students.

Since the data provided here are strictly preliminary, it is important to note that more research is necessary in order to show the benefits of this new curriculum, such as the pass rates in ENG 101 for students who placed directly into the college-level writing course (bypassing ENG 011) and the pass rates in ENG 101 for students who completed the traditional version of ENG 101. This information will give us a more comprehensive view as to the actual effect of the new curriculum.

While student success in developmental courses is extremely important, success in college-level courses is even more so. Therefore, if students have successful, engaging, and motivating writing experiences in their developmental courses, this may likely translate into greater success in credited, college-level courses as well.

Anecdotally, my colleagues who teach the college-level English courses state that they can see distinct differences in the critical thinking skills and writing abilities from the students who have completed the new ENG 011 course versus the students who have taken the traditional developmental course that focuses mainly on sentence and paragraph skills.

Additionally, it must be noted that the biggest difference between the traditional and new versions of ENG 011 is that students taking the new ENG 011 are writing essays. That, in and of itself, would make them more prepared for ENG 101 than would the traditional ENG 011 course. However, teaching the essay alone will not set students up for success in future writing courses. Students have to learn how to *think* about their writing. The collaborative writing process does just that. When students write an essay paragraph by paragraph as a class, they are not just learning how to write clear, error-free sentences. They are learning

all of the skills that are necessary to be successful writers. They are learning how to break big projects into smaller, more manageable pieces. They are learning critical thinking and organization. They are learning what good writing looks like to the eye and sounds like to the ear. They are learning how to talk about their writing. All of these lessons make them more comfortable with writing in general, which can ultimately lead to success in the college-level writing course.

Conclusion

Any person who has ever worked on a significant piece of writing, whether a dissertation or an article for publication, knows that good writing is a process–not just a solitary process, but a collaborative one as well. Therefore, it behooves us as writing instructors to show students the actual writing process as we know it, in its full form, and not mislead them into thinking that good writing is merely the product of rote memorization of heavily proscribed rules and structures. By incorporating the "class essay" approach to the teaching of writing, teachers can actively engage their students in the classroom, inspire critical discussion and reflection, and illustrate the undeniable benefits of the writing process.

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Monica D'Antonio is assistant professor of English at Montgomery County Community College in Blue Bell, PA.

Paper Review Revolution: Screencasting Feedback for Developmental Writers

Joni Boone
Kaplan University

Susan Carlson
Kaplan University

Researchers from Kaplan University present findings from a media-rich feedback pilot program that targets students from developmental writing courses. One study of student reactions reveals how screencasting feedback encouraged more formative, holistic feedback and students' awareness of writing process, audience, and revision. A second study comparing grades shows how media-rich feedback had a positive effect on student performance.

Overview of Study

In this study, professional tutors within the writing center of Kaplan University provided media-rich feedback (a combination of screencasting and written comments) to students in several sections of the university's developmental writing course. Screencasting is a method of capturing and recording the screen as the reader scrolls through the student paper and comments on major elements of the writing, thus creating a video and audio examination of the student's writing. The writing center director and a professional tutor within the staff studied the effects of this feedback method using student surveys. They also monitored student grades for the term and compared those to the grades of students receiving written-only feedback as well as students receiving no writing center feedback. The aim of this research was to determine if the process of providing screencasting feedback encourages the center's professional tutors to produce more formative, holistic feedback, and also, if this type of multi-modal, media-rich feedback encourages students to more fully engage in the writing process rather than simply make quick fixes to lower-level writing errors. Finally, researchers wanted to determine

if students who received and used screencasting feedback performed better in the developmental writing course than those who did not receive this type of feedback.

Related Literature

Though not much is written on the use of audio or media-rich feedback in writing centers, a body of research on audio feedback provided by classroom instructors exists and the results are consistent with the results of this writing center's study on the effects of media-rich feedback on developmental writers. One example is Susan Sipple's 2007 study using audio feedback in a developmental writing course where students were given handwritten comments in margins for two assignments and audio feedback for two assignments. In this experiment, 70% of students preferred audio feedback, 20% chose written comments, and 9% preferred both. Some of the reasons students gave for preferring audio comments were that it "increased their self confidence as writers . . . helped them internalize feedback . . . provided more detailed view for revision . . . reduced misinterpretation of feedback, [and] strengthened their perceived bond with the professor whereas handwritten commentary sometimes damaged the bond" (Sipple, 2007, p. 24). Huang (2000) found similar results of audio feedback in English as a Foreign Language studies in a Taiwan university study, which showed student comprehension and motivation were positively affected by audio feedback from instructors.

Kerr and McLaughlin (2008) found similar trends when video feedback was provided by classroom instructors. Markers at the University of Edinburgh volunteered to provide screencasting feedback to students using a video created with Camtasia. Researchers were interested to know if "students might be less likely to misconstrue and to engage with the [video] feedback better" (Kerr & McLaughlin). Around 75% of students noted they preferred the video summary. Students claimed they paid more attention to the video feedback and merely scanned the written feedback. Many noted that more feedback was actually given through the video summary. A study by Ice, Curtis, Phillips, and Wells (2007) compared student response to text only and to multimedia instructor feedback. According to the results of this study, video summaries provide several benefits to student writers including "1) increased ability to understand nuances that might be lost in written communication, 2) feeling more involved in the course, 3) improved retention of content and 4) a belief that the instructor cared more about the student's learning" (p.13). Ice (2009) also found students were three times more likely to reach the top levels of Bloom's taxonomy in the content of their essays after receiving audio feedback than those receiving text-only feedback. Ice also concluded that audio and video feedback from classroom instructors help students better understand instructor comments, encourages students to think critically, and help students engage with their instructors.

Online Writing Center Background

After considering the current research on audio and screencasting feedback for classroom assignments, the writing center staff at Kaplan University thought screencasting feedback provided by tutors could have a positive impact on the writing process, basic skill level, and confidence of students. The online writing center initially launched with a small staff that created tutorials and offered synchronous online tutoring, but the primary focus was paper review. Major changes in the writing center occurred in 2009-2010 with the implementation of a writing across the curriculum (WAC) program. Under WAC, the paper-review service remained a service focusing on skill development and improving *process* versus *product,* and tutors continually worked to find ways to provide authentic outreach to students in an online environment. In an effort to provide individualized and robust student feedback and avoid the "proofreading service" reputation, the writing center staff implemented a media-rich feedback pilot project.

The inspiration for this pilot came from a need to make paper reviews more engaging, active experiences for students. For online institutions, effective, relevant technology is crucial in the efforts to create a robust learning environment for students. For several months, writing center staff members had already been using TechSmith's screencasting software Jing (www.

jingproject.com), which allows users to simultaneously capture what is occurring on their screen with accompanying audio, for tutor training. Writing center tutors who work with students one-on-one began using Jing to provide instruction and to prompt discussion with adult learners who found it difficult to commit to a live tutoring appointment by phone, instant messaging, or other synchronous methods. Students could download and view a Jing demonstration, listen to their tutor's encouraging words, and view examples when they had time to do so. Recognizing students' positive responses to communication using Jing, staff wondered if providing screencasting feedback to students in paper review would be as effective. The tutors who review papers also considered whether or not they had the resources to provide this level of media-rich feedback given their high volume of paper submissions but through training and practice sessions found that providing screencasting feedback was no more time-intensive than the written feedback they were accustomed to providing. Tutors typically average around three paper reviews per hour using either method.

Method

The pilot involved four tutors who provided screencasting feedback to 157 students in the developmental writing courses who submitted their papers to the writing center for review during three 10-week terms. Some students submitted additional revised drafts for review as well, so the total number of submissions was 181. The tutors provided several written comments in the margins of the papers using the track changes feature in Microsoft Word (the method used in traditional paper review in this particular center). A screencast was also created for each review using Jing. Along with the reviews, tutors provided students with a feedback form that links to writing center tutorials. The link to the screencast was provided in the paper in an end note to the student and in the email used to return the feedback.

SurveyMonkey was used to create and distribute an anonymous student survey. Out of the 157 students who received screencasting feedback, 68 responded to the survey (a 43% response rate). A majority of students in the response group,

67%, rated themselves as average writers. When asked about the quality of the feedback experience, 89% (60 respondents) rated the experience excellent or good, with 65% of students selecting excellent. When asked to rate screencasting compared to written feedback, 62% rated screencasting as more helpful (41 respondents), and 33 % rated screencasting and written feedback equally helpful, yet 78% (52 respondents) preferred having both written and screencasting feedback.

From the survey responses, researchers concluded that a majority of students found the feedback helpful and preferred having both written and screencasting feedback. Researchers also wondered whether or not the screencast feedback alone is just as effective, so one consideration for future study is to provide screencasting-only feedback to determine if this method is as effective as media-rich feedback.

The following qualitative, open-ended questions were also included on the survey:

• What type of help were you hoping to receive from the paper review?

• What did you learn about your writing from the written feedback in the margins?

• Did you learn anything new in the screencasting feedback that you didn't learn from the written feedback in the margins (please explain)?

• Did you incorporate the feedback into your next draft or your next writing project (yes or no)? If yes, please explain what/how you incorporated the feedback.

• Please include any additional comments about written or screencasting feedback.

Results from these survey questions showed media-rich, screencasting feedback encourages students to think more critically about the writing process and their writing overall. The most common type of help students initially expected from paper review dealt with grammar or mechanics and references to a specific assignment rather than their overall writing skills or refining their writing process as illustrated here:

• "I am looking for grammar and spelling corrections."

• "mainly grammatical for me"

• "anything that would aid in revising and editing my paper"

But when asked if and how they would incorporate feedback into their writing, about the same number of students commented on specific, targeted revision or editing changes as the number of students who commented on using the feedback to improve their writing in general or global writing issues. Students claimed:

• "I added more details in my body paragraphs to better incorporate them to my main idea."

• "I made the draft more interesting for the reader."

• "When making revisions, I know what to do to make my paper more readable."

These responses seem promising as this writing center continues to encourage students to use paper review as a means of improving their writing overall rather than simply improving an isolated writing product.

More students responded that they learned about global writing issues like content, clarity, and organization (29) than granular issues such as grammar and mechanics (19) in the written feedback as well. Below are some examples of student responses:

• "I learned that I have to create a decent thesis statement and to make my sentences clear for my readers to understand."

• "I need to take time with drafting."

• "Good transitions between paragraphs [are] essential."

Tutors who provided the feedback remarked that the process of creating screencasting feedback helped them focus their efforts on holistic feedback in both written and verbal comments. This suggests the screencasting process itself encourages tutoring methods that more closely align with the mission of the writing center, a mission that does not promote tutor editing or proofreading, but instruction and demonstration.

The most often cited reason for students preferring screencasting feedback was that it made their tutor's written comments easier to understand. Students said, "I loved the video feedback. It was really helpful to me in figuring out what I need to do differently." "Hearing it helps a lot." "It was not so much learning something new as it was a better understanding." "The video feedback just made the feedback in the margins clearer."

Comments also indicated students recognized audience, referring to the reader, instructor, tutor, or *the voice* as they revised their writing. For example, one student noted, "The video feedback shows the person who read your essay. It's personal and [not] just something written on paper." Through students' recognition of audience, writing center staff hopes to motivate students to achieve higher levels of thinking, and considering Bloom's taxonomy, perhaps screencasting feedback can help students move beyond *recall* to *understanding* and *analysis* of their writing. If students become more aware of the need to appeal to a specific audience in their writing, many issues that developmental writers have (clarity, development, organization,) may be more thoroughly understood and addressed.

Second Study – Grade Point Average Comparison

In addition to the student survey containing largely qualitative data, we compared grades for students who received screencasting feedback, students who received written feedback, and students who received no feedback in two terms of the same course. Researchers initially intended to provide media-rich feedback to all students who submitted; however, a number of students inadvertently submitted their papers incorrectly to the main written feedback queue and others failed to submit their papers to the writing center at all. The results of this component of the study suggest that those students who received screencasting feedback earned higher grades in their writing course. The average final grade on a four-point scale for students who received screencasting feedback was 3.62, the average final grade for students receiving written feedback was 3.13, and the average final grade for students who did not receive any writing center feedback was 1.4. We recognize that students who did not follow the submission guidelines may not have followed additional directions within the assignment which may have negatively affected their

grades as well. However, we did exclude students who were not engaged in the course—completing fewer than 4 assignments tied to course-level assessments—so as to not skew the data.

We must note that one graded assignment required students to submit their writing center feedback with a plan for revisions to their project; therefore, students who did not submit papers to the writing center could not receive any of the 20 points allotted for the assignment. There are 1,000 points total in the course, but the incentive was so small as to not affect course grade (2%). The failure to earn those points does not explain the discrepancy between grades of students who received writing center feedback and those who did not receive any. Overall, the grade differences showed the positive impact of writing center feedback—especially screencasting feedback—on student performance in the developmental writing course.

Summary and Conclusions

Through this study, researchers recognize the effectiveness of media-rich screencasting feedback for developmental writers in various ways. Screencasting feedback encourages students' higher-level thinking as they begin to recognize and acknowledge audience and the need to holistically improve their writing. Students claim that screencasts help them understand written comments provided by tutors and use media-rich feedback to holistically improve their writing. Even more encouraging, researchers see a positive effect on student grades. While recognizing that students claim to prefer the combination of screencasting and written feedback, quantitative evidence suggests screencasting-only feedback has potential as well, so our strategy is to explore this hypothesis with continued research. The student responses and improved student performance, in addition to enhanced tutor approaches to feedback in this study, help validate the importance of media-rich experiences in the online writing center environment.

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Joni Boone is a writing consultant at Kaplan University.

On-screen versus On-paper Reading: Students' Strategy Usage and Preferences

Arden B. Hamer
University of Pittsburgh

Jane L. McGrath
Paradise Valley Community College

Reading professionals at the college level have long taught their students multiple and varied strategies to master textbook reading and learning. Students are continuously encouraged to adapt their strategies to the discipline and the type of text they are reading. Now that students have the option to complete at least a portion of their academic reading electronically, students must adapt these traditional strategies to reading on screen. The objectives of this study were to (a) determine what strategies students are using when reading in each format and (b) ascertain what format students prefer. Two hundred thirty-seven successful students enrolled in higher-level reading intensive courses were surveyed. Results showed that strategy-use was somewhat determined by the format, but that students overwhelmingly preferred to read and study on paper.

Literature Review

College students have always been expected to read and retain large amounts of material. For example, college textbook chapters often exceed 30 pages. To help students master this level and amount of information, reading professionals have consistently advocated multiple and varied strategy usage in their

developmental reading courses. The strategies that are generally endorsed as effective include

- Previewing

- Predicting

- Accessing background knowledge

- Forming questions and reading to find the answer

- Annotating

- Reciting

- Reviewing

Rather than promote one rigid formula, developmental reading instructors cover multiple strategies and encourage students to transfer these strategies to their other courses, choosing the strategies that work best for them with the type of material they are reading (Simpson, Stahl, & Francis, 2004). In general strategies can be divided into three groups and viewed as a process occurring during three segments of the reading experience (for example, before, during, and after reading) with students having the liberty to do what seems most effective for them throughout the reading (Coiro, 2003; McGrath, 2005).

In response to concerns about the cost of traditional textbooks compared to the lower cost of electronic textbooks and the accessibility of technology by college students and professors, the publishing industry has been promoting the electronic purchase of textbooks (Christopher, 2008). For example, Pearson advertises that the average savings is $63.51 per textbook and offers ebooks for iPhone, iPads, Android and Apple devices (www.coursesmart.com/go/mobile). In a survey by the Pearson Foundation in 2011, 48 % of the college students surveyed felt that tablet computers would replace textbooks within the next five years (Fischman, 2011). One of the first institutions to adopt electronic textbooks was Ball State University when in 2008 the nursing department required that all students to purchase AT&T mobile devices through which they access laboratory books, medical dictionaries and other resources

(Carter, 2009). At Seton Hill University, all students and faculty receive an Apple iPad on which they download textbooks, take notes, and communicate (www.ipadonthehill.com).   California University of Pennsylvania, with one of the largest undergraduate and graduate on-line curricula, offers 19 graduate and numerous undergraduate and certificate programs all completely online (www.calu.edu/prospective/global-online).

While there are similarities between reading on screen and reading on paper, there are also major differences. The cognitive demands on the reader are in some ways the same. Horning (2009) states that whether students are reading print or digital material, they still must use the same basic processing skills including the decoding skills of identifying and discriminating the basic letters, predicting using background knowledge, and keeping information in their short-term memory long enough to put the information together. The major difference between on screen and on paper is obviously the format. Reading on screen, particularly when connected to the internet, presents a new format style which is non-linear, has the possibility of adding multiple types of media within the text, and can be quite interactive (Coiro, 2003). Studies conducted by Sanchez and Wiley (2009) suggest that comprehension suffers when text is presented in a scrolling format. This refers to printed text that does not completely fit on one screen and requires the reader to use the mouse or toolbar to see the rest of the text.

Another factor in comprehension is how well the reader is able to maintain focus when reading a long passage such as a textbook chapter and, related, how successful the reader is in understanding the overall scope of the material. A reader's inability to successfully comprehend a passage is often due to a combination of factors such as the inability to maintain interest or concentration, understand how sentences relate to one another, and understand how the information fits together in a meaningful way–how it is organized (Taraban, Rynearson, & Kerr, 2000). Given the possibilities for distractions when reading on screen, Coiro (2003) states that those students who were observed reading on screen selections exhibited "shallow, random and passive interactions" with the material. Carr (2008) reported that he and

others found that they had difficulty staying focused when reading long selections on the web.

Considering student preferences, research conducted by Spencer in 2006 with Canadian undergraduate and graduate students enrolled in online courses found that, regardless of their ages and experience with new technologies, the students preferred printed materials by a wide margin. Their reasons: the print format is easier to use in a variety of environments, and it is more flexible and more dependable.

Given these findings about the preferences of students for paper formats, developmental reading professionals must begin to prepare students to meet the current demands of reading on screen and to equip them to be able to adapt to what is to come. A starting point for designing classroom instruction is to identify the on-screen strategies successful students use. Also, instructors need to know what formats students prefer and why. The study reported here sought to answer these questions as the beginning step for our profession to move forward and prepare our students to be effective readers in all formats.

Method

Terminology.

For the purpose of this study, *on-screen* refers to reading done for a course assignment on any type of electronic device. Electronic devices include, but are not limited to, computer screens, electronic book devices such as the Kindle, iPods, and smart phones. *On-paper* refers to traditional types of academic reading using a textbook, trade book, or printed page.

Participants.

The participants in the study consisted of 237 undergraduates studying at an Eastern mid-size public university. Students surveyed were successful upperclassmen in reading-intensive courses where on-screen reading materials were assigned by the professor. The levels of the classes ranged from sophomore (200 level) to senior (400 level). Any survey response indicating that he/she had earned 30 or fewer credits was eliminated from the pool. Of the final 237

students, only .8% indicated a cumulative grade point average of below 2.0 on a 4.0 scale.

Procedure.

Researchers have found that a primary characteristic of skilled readers is that they flexibly apply multiple reading strategies in a purposeful manner. These include pre-reading strategies, such as setting a purpose and goals for reading, and making predictions about what the author will say; reading strategies, such as varying reading style according to the difficulty and purpose; and reviewing strategies, such as paraphrasing and summarizing (Lorch, Lorch, & Klusewitz 1993; Poole, 2008-2009; Simpson, Stahl, & Francis, 2004). Therefore, in this study, we constructed a questionnaire to determine which common pre-reading, reading, and reviewing strategies students used when reading on paper and on screen.

The surveys were conducted using paper and pencil questionnaires to incorporate both multiple-choice questions and open-ended questions. The open-ended questions were important in this initial research phase to gain insight from the student responses about strategies that we might not have considered.

Professors whose required textbooks were available as an e-book were initially contacted by the researchers. This was not successful as the professors reported that they did not require the e-book format and that most of their students had purchased the paper textbooks. Next, professors using supplemental on-screen materials were identified using a combination of peer educator recommendations and library lists of professors who had put articles on electronic reserve for their students.   Using this list, 13 classes in 200-, 300-, and 400-level sections across seven disciplines (criminology, history, sociology, English, child development, anthropology, and philosophy) were surveyed. The survey was administered during the middle weeks of the 14-week spring semester so that students would have a good grasp of the reading required for the course.

The institution received a grant from the College Reading and Learning Association to conduct the research. Included in the grant was funding to train peer educators to administer the surveys so that all data were collected under similar conditions with

all subjects receiving the same information. Part of their training included taking a pilot survey to help the researchers refine the questions. Sixteen students were trained and ten were able to conduct the surveys in various classes. The remaining student assistants were unable to conduct the surveys due to scheduling conflicts.

Results

The results showed a slight positive difference in the strategies selected when beginning a new reading assignment on paper versus on screen. As table 1 shows, of the four strategies surveyed, students responded that they used the strategy more frequently when reading on paper than on screen except for looking at graphics, in which 2.1% of the students indicated they did that more often when reading on screen.

Strategies Used when Beginning a New Assignment
Table 1

When you begin a new assignment, which strategies do you routinely use?	
Read chapter headings and subheadings	On paper 84%
	On screen 72.2%
Look at graphics	On paper 48.1%
	On screen 50.2%
Read end-of-chapter summaries and questions	On paper 48.9%
	On screen 39.7%
Clarify purpose	On paper 22.8%
	On screen 19.8%
Access background knowledge	On paper 40.1%
	On screen 34.2%

The students indicated a slight difference when asked about the strategies they used when they were having trouble with

cognition. In two cases (defining words and reviewing graphics) students indicated they did this more frequently on screen. Students selected to read surrounding paragraphs and ask for help more frequently when reading on paper (see table 2).

Strategies Used when Having Trouble with Comprehension
Table 2

When reading and have trouble understanding, what do you do?	
Define words	On paper 55.3%
	On screen 58.2%
Review graphics	On paper 27.8%
	On screen 32.1%
Read surrounding paragraphs	On paper 78.5%
	On screen 60.8%
Ask for help	On paper 21.9%
	On screen 18.1%

When reviewing an assignment for an exam, students reported that they more often re-read notes they had taken during the reading process when they were reading on paper. They reported they were more likely to re-read just portions of the text when reading on screen (see table 3).

Strategies Used when Reviewing for An Exam
Table 3

When reviewing an assignment for an exam, what do you do?	
Reread the entire assignment	On paper 43.5%
	On screen 33.3%
Reread portions	On paper 56.5%
	On screen 61.6%
Reread notes taken while reading	On paper 70.5%
	On screen 55.3%

A large difference was seen when students were asked which format they preferred and which format aided or detracted from

their learning. They overwhelmingly indicated that they remember better when reading on paper (see table 4), concentrate more effectively when reading on paper (see table 5), prefer on paper over on screen, (see table 6) and are more easily distracted when reading on screen compared to on paper (see table 7).

Remembering On-Screen Material versus On-Paper Material
Table 4
When you've read a long assignment (more than 5 pages), do you remember more effectively when you read it

On screen	5.9%
On paper	60.8%
No difference	27.4%
It depends on	5.9% (Student submitted open-ended response)

Concentrating with On-Screen Reading versus On-Paper Reading
Table 5
When reading a long assignment (more than 5 pages), do you find you concentrate more effectively when you read it

On screen	7.2%
On paper	72.6%
No difference	17.3%
It depends on	2.5% (Student submitted open-ended response)

Preference for On-Screen versus On-Paper Reading
Table 6
If you had a choice of format, which would you choose?

On screen	11.8%
On paper	71.7%
No difference	11.0%
It depends on	5.5% (Student submitted open-ended response)

Distractions with On-Screen versus On-Paper Reading
Table 7
When reading, are you more easily distracted/your mind wanders when you read in which format?

On screen	71.3%
On paper	8.4%
No difference	17.7%
It depends on	2.5% (Student submitted open-ended response)

Discussion

From the results of this study, it appears that successful students are using effective strategies when reading on screen and on paper. However, depending on the format, they may be making some slightly different strategy choices. In all questions except three, students reported using the strategies surveyed at a slightly higher percentage when reading on paper compared to on screen. The three strategies that were reported to be used slightly more frequently on screen were (a) reviewing graphics, (b) defining words when readers had trouble understanding, and (c) re-reading just portions of the text when reviewing for an exam.

Although this was not mentioned in the open-ended comment section, the ability to easily define words is one of the benefits of on-screen reading.   Since we know that vocabulary knowledge increases reading comprehension (Simpson, Stahl, & Francis 2004) and previous research studies have shown that when students come across an unknown word in a paper text, they spend little time searching the text for context cues or looking up the word's meaning in a dictionary (Nist & Olejnik, 1995), the ability to easily define words is one of the benefits of on-screen reading.

The most striking finding is the large percentage of students who report that they prefer reading on paper and the accompanying reasons:

- Remember better when reading on paper (60.8%) compared to on screen (5.9%)

- Concentrate better when reading on paper (72.6%) over on screen (7.2%)

- Prefer reading on paper (71.7%) over on screen (11.8%)

Another notable finding is the large percentage of students who report that they are much more likely to be distracted or find their mind wandering when reading on screen (71.3%) compared to when reading on paper (8.4%).

Recommendations

With the increased cost of textbooks, it is inevitable that more students will be reading academic materials on screen. However, to achieve their comprehension goals, readers will still need to combine multiple strategies to maximize their understanding and memory of text information. Therefore college reading professionals must continue to focus on helping students acquire a "toolbox" of reading strategies, with explicit instruction in applying the strategies to different formats.

Professors should continue to instruct and model how and why students must make important decisions about what they want to know and what combination of strategies will help them successfully gather that information. As research continues to show, a primary characteristic of skilled readers is that they flexibly apply multiple reading strategies in a purposeful manner (Brown, El-Dinary, Pressley, 1995). Students must understand the need to use their many skills, strategies and knowledge bases in combination, and often in parallel to understand what they read.

In addition, since this study clearly indicates that maintaining concentration when reading on screen is a problem, strategies must be developed, taught, and modeled to minimize distractions and maximize concentration. Classroom discussions concerning eliminating such distractions, time management and effective study environments are needed to help students deal with this issue and successfully manage their on-screen reading.

Suggestions for Future Research

Reading and learning on screen is becoming more common in academia and continued research is needed. This research, for example, gave students "useful strategies" prompts. Future researchers could ask students to list specific strategies they use when reading on screen. Researchers could identify whether students are using adaptations of traditional strategies or something entirely new that has been created for on-screen reading.

Furthermore, researchers in this study did not ask about using any helpful e-device applications. It would be useful to investigate how students are using applications such as highlighting and side notes to help with reading comprehension. In this study, researchers surveyed successful upper-class students. Future research could focus on developmental reading students to discover what strategies they are using when reading on screen, how successful they are when reading on screen compared to on paper, what difficulties they are experiencing in the two formats and what repair strategies work best. Another feature of the study reported here is that the researchers asked about "on-screen reading you are doing for this course," and did not differentiate among types of academic material. With additional studies, researchers could ask students if they use different strategies for reading different types of material on screen.

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Appendix

Representative student comments:

I. Senior-level Philosophy class

I can write on paper in my own words more easily than on a screen.

Paper is easier to read, concentrate on, and take notes on. I like having online access to materials so I can print extra copies and use Ctrl+F to find information later.

On-screen reading is harder on the eyes, necessitates the use of my computer and an available electric outlet, and there are many distractions only a click away. On-paper reading is easier on the eyes, can take it anywhere, and I am able to take notes in the margin and/or use a highlighter.

I find it WAY more difficult to concentrate and to absorb the information when reading on screen. I am a visual person and so the "variated" underlining, circling, boxing and recording of my thoughts that I do on paper assignments is absolutely vital to my understanding of the paper. It is how I get the information to stick in my brain.

On-screen seems to take longer and is frustrating because it is difficult to see how far you've gone/have to go. Also, on-screen often doesn't allow for writing notes around what you read or to underline/highlight important parts.

I can't mark up on-screen readings, which is one way I focus with on-paper formats. Also, on-line distractions are more prevalent for on-screen readings.

I am more likely to get side-tracked when reading on screen, and I can highlight when reading on paper, so on paper is my

preference. Retention when work gets done though, is the same or only negligible difference.

I don't see the difference. I still get just as distracted with on paper as I do on screen. With paper and on screen I'm still able to make notes in the proper area.

II. Sophomore-level English class

My eyes get fatigued after reading a lot of material on screen much more easily than on paper. I have to sit in different positions to read on screen than with a "Kodex" or print out. Variety of places I can read is also less with on-screen as I do not purchase e-books - only find the text online.

I find I am more easily distracted when I read online.

I do a lot of both on-screen and on-paper reading. I like on-screen reading because it makes it easier to look up things I do not understand. I prefer on-paper reading when it comes to longer materials like novels. It is easier for me to become distracted on screen because I can look up different search engines.

On-screen lets me read multiple articles whereas on paper I only focus on what is given to me.

Hurts my eyes on screen more.

III. Junior- level English class

Reading on screen is easier, mostly because the font is bigger and there are more graphics to look at.

On screen I am distracted and tempted to do other things while on the computer.

On-screen involves less hassle, eliminates the need to waste money on useless overpriced books, and is much easier to comprehend. Doing anything else is a foolish waste of time.

One of the biggest differences is the notes/highlighting I can do when I read on paper. Sometimes it's easier to get distracted when I read assignments on screen. I can make informed notes and questions I might have more easily on paper than on screen.

IV. Junior-level Criminology class

I concentrate and retain more by reading things on paper. I

always print readings off if they are on the computer.

I focus on the reading better when I have a paper copy. I also like to highlight or take notes on the paper while reading - which has to be done on paper.

I lose concentration quicker and can be distracted by facebook, email, etc. Also, it hurts my eyes.

The print is smaller on screen and harder to follow by scrolling down.

If you don't make the print really small you have to do a lot of scrolling. It's convenient but not like having a book you can read basically anywhere.

You can't highlight on screen.

On-screen is just convenient and you never have to worry about losing materials.

On-screen hurts my eyes and also is less "portable." I can't take it anywhere and read it. I have to lug my laptop. Also I will get more distracted on screen because I'll be playing on the internet.

On-screen creates more of a headache than actually making the reading easier.

On paper is easier on my eyes, easier to make marks on and add additional notes to as well as easier to take with me.

The main differences are seating postures and effects on my eyes.

Dr. Arden Hamer is a professor at University of Pittsburgh.

Dr. Jane McGrath is a professor emerita at Paradise Valley Community College.

Goal Setting as an Explicit Element of Metacognitive Reading and Study Strategies for College Reading

Eric J. Paulson
Texas State University

Laurie Bauer
University of Cincinnati

An understanding of the role of metacognition—thinking about thinking—is a fundamental aspect of the theoretical base of most textbooks for college reading and study strategies courses today (e.g.,Veenman, Van Hout-Wolters, & Afflerbach, 2006). The theme we seek to develop in this article is that elements of what make a reading and study strategy "metacognitive" on a theoretical level need to be made explicit to college students enrolled in reading and study strategies courses.

In particular, this article examines one aspect of metacognition: goal setting. We first establish its importance as a central theoretical aspect of metacognition. We then argue that goal setting must be included as an explicit element of instructional and procedural descriptions whenever metacognitive reading and study strategies are taught. We end with suggestions for making goal setting explicit in the classroom.

What is Metacognition and Its Relationship to Self-regulation?

Casazza and Silverman (1996) offer a succinct definition of metacognition as "cognitive self-awareness . . . an awareness of how information is processed" (p. 201). This awareness necessarily includes not just attention to information but also learning and thinking processes. And while awareness of information, cognition, and learning processes is part of what makes metacognition a core aspect of any effective reading and study strategy, the ability to do something with that awareness is also important. Along these lines, Holschuh and Aultman (2009) emphasize an important component of metacognition as being self-regulation, or students'

understanding and control of their own cognition. In fact, self-regulation may be the aspect of metacognition of most interest to college reading instructors seeking to support their students' textbook reading. For example, Mulcahy-Ernt and Caverly (2009) constructed a compelling argument for effective reading strategies being centered on a self-regulatory framework that fosters "the student's own planning, decision-making, reflection, and evaluation of effective reading strategies" (2009, p. 191). Likewise, Baker and Brown (1984) describe metacognitive reading strategies as including self-regulatory mechanisms, such as "*checking* the outcome of any attempt to solve the problem, *planning* one's next move, *monitoring* the effectiveness of any attempted action, and *testing, revising,* and *evaluating* one's strategies for learning" (p. 353, emphasis in original). When students are metacognitively aware of their learning process, they engage in self-regulatory processes that include goal setting, self-observation, self-judgment, and self-reaction (Bandura, 1986). Indeed, self-regulatory aspects of metacognitive awareness are so commonly included, or assumed to be included, in reading strategies that they have become the de-facto focus of reading and study strategies in general (Mulcahy-Ernt & Caverly, 2009), and students who are self regulating demonstrate what it means to be a "strategic reader" (Allgood, Risko, Alvarez, & Fairbanks, 2000, p. 202). In this article we define metacognition as knowledge about situated cognitive states or processes, with self-regulatory aspects of this knowledge playing a central role in effective reading strategy implementation.

Research shows that the strategies of planning and goal setting are of paramount importance. Winne and Hadwin (1998), place planning and goal setting at the forefront of the executive strategies for regulating thinking. Pintrich (2004) focuses not only on gaining knowledge and setting goals for the task and context, but also on "the self in relation to the task" (p. 389). Students' self-monitoring of their learning and thinking while carrying out the plan or goal was another common phase throughout these executive strategies. Baker and Brown (1984) highlight the importance of self-monitoring and being aware of the effectiveness of the strategy while working toward a specific goal. Such reflective and evaluative processes include revising and changing strategies as

necessary (Jacobs & Paris, 1987); reflecting on the self, the task, and the context (Pintrich, 2004); evaluating one's strategies for learning (Baker & Brown, 1984); and adapting changes in order to positively affect future studying tasks (Winne and Hadwin, 1998). Similarly, Zimmerman (2002) describes the use of three phases to keep students active and aware of their learning throughout the entire reading process: the forethought phase, performance phase, and reflection phase require students to set goals, monitor progress, and evaluate the completion of their goals and the use of the strategy in the future.

Goal Setting

A key component of the view of metacognition described here, and of self-regulation in particular, is goal setting (Pintrich, 2004; Weinstein, Husman, & Dierking, 2000). Goals are often broadly categorized in two ways: as mastery goals and performance goals (e.g.,Darnon, Dompnier, Gillieron, & Butera, 2010; Silverman & Casazza, 2000). Mastery goals are usually associated with process, learning, and development of competence; performance goals are usually associated with product orientations and demonstrating competence or social comparisons to one's peer group. Silverman and Casazza (2000) link mastery goals to strategy learning and metacognition in general, while performance goals are more geared toward grade attainment or other external, comparative validation. Of course, there is overlap between the two types of goals, and some researchers have questioned treating the goal categories as simple dichotomies (e.g., Brophy, 2005). However, where these distinctions are made, mastery goals are more closely aligned to the types of goals focused on in this article.

Weinstein, Husman, and Dierking (2000) observe in their chapter on self-regulation and learning strategies that "strategy-use must be goal-directed" (p. 732) and Pintrich (2004) also emphasizes goal setting as a key aspect of self-regulated learning. Flavell (cited in Dinsmore, Alexander, & Loughlin, 2008) includes goals as one of the four key areas of metacognition, and, similarly, Gredler includes "goal setting and planning" in her summarization of what is termed metacognitive activity when studying (Gredler, 2001, p. 210). Blakely and Spence (1990) emphasize that

metacognitive learning entails that "process goals, in addition to content goals, must be established and evaluated with students" (para. 28). A process goal is one in which the student focuses on an aspect of the strategy—that is, what to do next while reading a textbook—while a content goal involves what knowledge the student wants to learn.

Hadwin and Winne (1996) suggest that students with the same goal will often choose different ways to achieve their goal, highlighting the complexities involved in choosing which reading strategy to use when and with what particular type of text. Without the inclusion of goal setting as an explicit part of strategy-implementation, instruction presented to students, such complexity will only increase and can potentially hinder students' effectiveness as strategic textbook readers.

Goal Setting in the Classroom

Goal setting as an integral aspect of metacognitive reading strategies has a solid theoretical basis, as reviewed above. It is important to also consider how that theoretical basis translates to the classroom. When considering what goal setting would look like in practice, it might be helpful to think of goals on more than one scale. That is, not all goals will have the same scope: some will be broad and focused on overall assignment needs, and some will be more focused on individual parts of the reading and study strategy used to accomplish the overall assignment.

The former can be considered macro goals, where students must consider the overall assignment and what their goal is as related to that assignment, and the latter can be considered micro goals, in which students set goals for each part of the reading and study strategy they are implementing. For example, a typical reading assignment in a variety of introductory courses would be to read a chapter from the textbook before the next class meeting. Within that broad assignment, students must decide on an overarching goal concerning their reading of that chapter, including what the purpose of the assignment might be for the class as a whole and what reading and study strategy might be best suited for the assignment.

Instructors should always explicitly discuss with students the macro goal. For example, given the type of assignment, the macro goal might be to construct a basic understanding and recall of the key points and relationships in the chapter in preparation for a general discussion of the chapter topic in class the following day. Students and instructor may decide that an effective reading and study strategy in this context would be writing a summary of the chapter. Widely considered a metacognitive strategy (see Ciardiello, 1998), most descriptions of summary writing begin with considering the meaning of the whole text and moving from there to the meaning of smaller units like sections or paragraphs, and finally factoring out insignificant details in favor of main ideas before writing up the summary.

We argue that in addition to those macro goals, micro goals should be set for each step of that process, and instructors should discuss the "what" and "why" of each goal. For example, a common step in summary writing is to establish the thesis of each paragraph or small section (e.g., Friend, 2000-2001). Instructors should discuss with students what the goal of figuring out the thesis for each paragraph is, and why that is a useful goal to have for this step of the process. This discussion should be replicated for each step of the summary writing process. This allows deliberate, metacognitive actions to take place on the part of the students, and encourages self-regulation during the implementation of the strategy itself since, with each aspect of the strategy, readers are aware of what they expect to accomplish with that part of the strategy. If students do not accomplish a particular goal while actively engaged in implementing the strategy, this allows for a chance to repair their approach while still working within the strategy, as opposed to realizing a problem after the strategy.

General questions instructors can pose to students that get at these types of goal setting across a variety of reading and study strategies might include

• Taking into consideration the class and the reading assignment, what would be your overall goal—the macro goal—when you open up your textbook? How does that goal relate to the assignment? How will you know whether you have accomplished the goal?

• What kind of reading and study strategy would be a good choice to work toward that goal?

• Now that we have chosen a reading and study strategy, let's look at the steps for that strategy. What micro-goal would you form for the first step?

• How will you know whether you have accomplished that goal?

• What about the second step—what is the goal of that part of the strategy? How do you know if you have accomplished that goal?

• If you find that you haven't accomplished one of the goals for one of the steps of the strategy, what will you do to "fix" it?

• How do those goals relate to each other, and how do they relate to the overriding goal?

Such questions also provide opportunity for self-reflection about the goal-setting process. As students become more familiar with this process, the setting and meeting of goals will become more routine and strategic. Students' self-reflection allows the instructor to understand the goals students set and the process they take to achieve these goals. In addition, students' self-reflection will help pinpoint appropriate and beneficial goals for specific strategies as well as when a strategy is being used effectively. In this way, instructors can help students understand the value of setting both overall, macro goals for their textbook reading purposes, as well as smaller, more immediate micro-goals as they work their way through the metacognitive reading and study strategy they are implementing.

Conclusion

The overall theme in this article centers on the idea that elements of what make a reading and study strategy "metacognitive" on a theoretical level need to be included as part of the explicit descriptions instructors and texts employ in the classroom. Students can control their learning processes and learning outcomes through deliberate self-regulatory decisions and actions, of which goal setting is a central part.

Characteristics of good strategy users include the ability to integrate "goal-specific strategies into higher order sequences that accomplish complex cognitive goals" (Pressley, Symons, Snyder and Cariglia-Bull, 1989, p. 19). One general attribute of successful readers is their use of reading and study strategies in order to achieve a particular, specific learning goal or series of goals. Other measures of textbook reading proficiency can be linked to the ability of readers to set goals for themselves, choose an appropriate strategy, evaluate the effectiveness of that particular strategy and, as necessary, choose another (Hock & Mellard, 2005). In other words, effective students make and monitor specific goals as part of their approach to reading and studying textbooks strategically.

An approach to metacognitive strategy instruction that relies on students' implicit, unstated understanding of the need for forming specific goals is problematic because of the assumption that students somehow already know how to create goals—or even that they should create goals at all. Even more problematic is the assumption that students would deliberately and regularly set useful goals for themselves in the absence of instruction that includes goal setting as explicit aspects of the strategy. Since goal setting as an automatic, intrinsically originating action may be an unrealistic expectation for many students, it likely will not happen. And students may struggle with reading and studying textbooks because they are unsure how to set goals for themselves or are unaware that there need to be specific goals generated for their reading tasks.. In short, if the theory behind metacognitive reading strategies includes goal setting then goal-setting instruction needs to be included in the descriptions of practical applications of such strategies.

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Dr. Eric Paulson is a professor in the graduate program in developmental education at Texas State University in San Marcos.

Laurie Bauer is assistant academic director for literacy and second language studies in the School of Education at the University of Cincinnati.

RELATIONSHIP BETWEEN STUDENTS' READING ABILITY AND THEIR SUCCESS IN MEDICAL TERMINOLOGY AT A TWO-YEAR COLLEGE

Mary Gene Ryan
Midlands Technical College

Health sciences faculty members at a two-year college were concerned about the poor pass rates in medical terminology, a gateway course for all students planning to major in health-related fields. Faculty suspected that students coming out of developmental reading might not have adequate reading skills to do well in medical terminology. Developmental studies faculty undertook a project that compared students' grades in medical terminology during the fall 2009 semester with their COMPASS-R and ASSET Reading entrance scores and their final grades in developmental reading to determine if there was a relationship between students' reading ability and their success in medical terminology. Results revealed that developmental students who enrolled in medical terminology during fall 2009 failed or withdrew from the course at a higher-than-expected rate compared to regular- or transfer-admitted students.

Introduction

At a meeting in September 2010, members of the health sciences faculty at a two-year college met with faculty from the developmental studies (DVS) department to discuss student success rates in medical terminology, which is a gateway course for all students planning to major in health sciences-related fields. The health sciences faculty members were concerned about the poor pass rates in medical terminology, and they suspected that students coming out of developmental reading might not have adequate reading skills to do well in that course. The DVS faculty

agreed to undertake a research project in which students' grades in medical terminology were compared with their entrance test scores on the COMPASS-R and ASSET Reading assessments and their grades in developmental reading to determine if there was a relationship between students' reading ability and their success in medical terminology. The cohort included all those students who were enrolled in medical terminology during fall 2009.

Background

According to Adelman (1996), "Deficiencies in reading skills are indicators of comprehensive literacy problems, and they significantly lower the odds of a student's completing any degree." McCusker (1999) found that students who entered community colleges requiring only developmental mathematics fared better academically than those who needed developmental reading. In addition, Tadlock (2005) found that concentrating primarily on word identification is the primary cause of students' reading problems; she developed a program aimed at improving students' reading by focusing on the development of the student's neural network, thereby improving vocabulary and critical thinking skills. Paulson and Mason-Egan (2007) stress the importance to first-year college students of understanding complex assignments, using appropriate reading strategies and monitoring their own understanding of what they read; these tasks are very difficult for students who enter college underprepared for the reading demands of college-level texts. Wang (2006) reports that developmental students' performance on textually implicit questions on standardized tests indicated limited vocabulary and lack of understanding of the author's message. She states that "… these developmental students need explicit instruction in reading strategies, a broader knowledge base, and more sophisticated analytical skills."

Since two-year colleges are frequently "open door" institutions designed to admit all high school graduates who seek admission (Roueche & Hurlburt, 1968), students enter with a wide range of abilities in reading. The health professions' faculty at Midlands has tried to solve this problem by requiring all students entering health-related programs to have completed remediation

in reading before enrolling in their first curriculum-related course, medical terminology. The premise was that students who had completed the developmental reading sequence would be reading at the 11th- or 12th -grade level as determined by their scores on the COMPASS-R.

Methods and Materials

The class rosters and grade sheets of all medical terminology sections offered during fall 2009 were downloaded from the college's student database. The only classes that were left off the list were the online courses or "hybrid" (combination of online and classroom instruction) courses. This resulted in a total of 745 students broken down as follows:

Figure 1
NUMBER ENROLLED BY COHORT
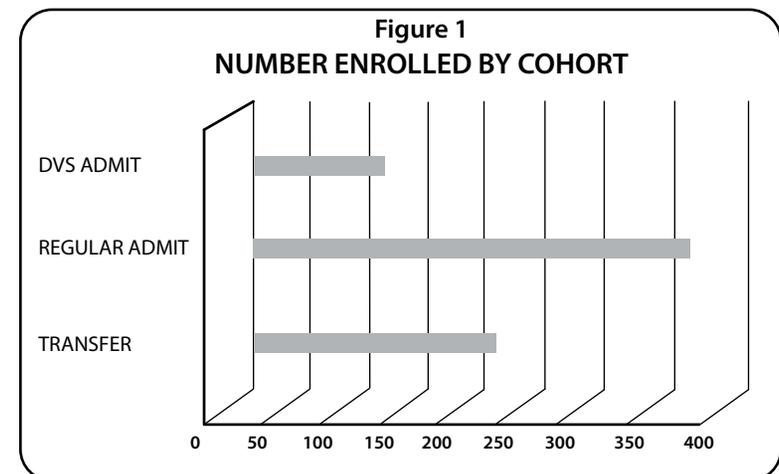
Table 1.

Students' final grades in the course were as follows:

FALL 2009 GRADES IN MEDICAL TERMINOLOGY BY STUDENT TYPE

| ENTRY STATUS	A	B	C	F	WF	W	#	%
TRANSFER	80	69	44	18	1	21	233	31
Percent	34%	30%	19%	8%	0%	9%	100%	
REGULAR ADMIT	102	101	100	34	8	42	387	52%
Percent	26%	26%	26%	9%	2%	11%	100%	
DVS AMIT	20	27	29	22	9	18	125	17%
Percent	16%	22%	23%	18%	7%	14%	100%	
TOTAL	202	197	173	74	18	81	745	100%
Percent	27%	26%	23%	10%	2%	11%	100%	

It is important to note that all DVS-admitted students who were enrolled in medical terminology during fall 2009 had completed their required remediation by passing developmental reading prior to enrolling in medical terminology as described above and were presumed to be able to read college-level texts.

Results

A review of the information in Table 1 above indicates that 39% of the students who came into the college as DVS-admits made grades of F, WF or W in medical terminology during fall 2009. There was a higher rate of failure/withdrawal among the DVS-admit group than either of the other two groups (17% of Transfer admits and 22% of Regular admits). Figure 2 presents a breakdown of failure/withdrawal grades by student type.

Figure 2
% WITHDRAWAL/FAILURE BY COHORT
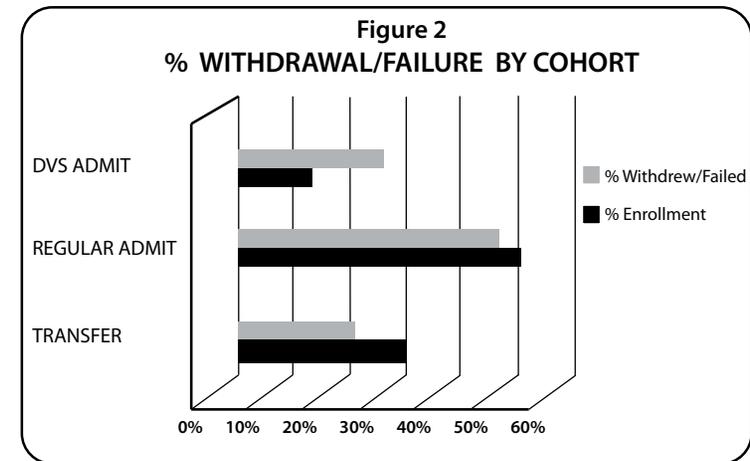
Since the reasons for withdrawing from the course are unclear (students withdraw for a variety of reasons that may or may not have to do with whether they are passing the class), it is perhaps more instructive to consider only those who failed (earned a grade of F or WF) for the purposes of this study. A review of only those who earned grade of F or WF appears in Figure 3.

Figure 3
% FAILURE BY COHORT
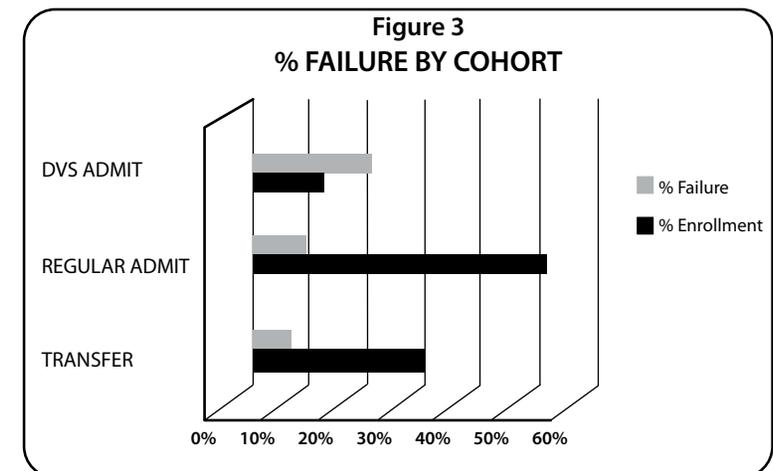
As shown in the Figure 3, the DVS admits represented the majority of the failures in medical terminology during fall 2009.

A review of students who withdrew of their own accord (grade of W) from AHS 102 during fall 2009 appears in Figure 4.

Figure 4
% WITHDRAWAL BY COHORT
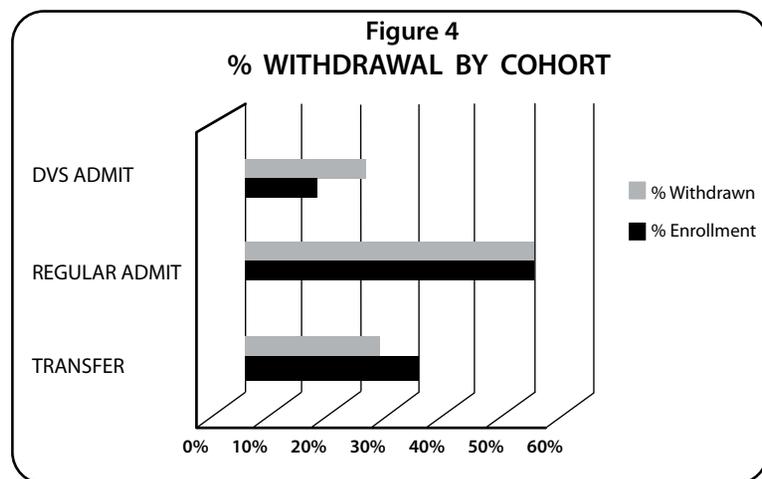
DVS admits withdrew at a slightly higher than expected rate (22% withdrew, 17% enrolled), while the regular admits withdrew at the expected rate (52% withdrew, 52% enrolled) and the transfer admits withdrew at a slightly lower than expected rate (26% withdrew, 31% enrolled).

One interesting item should be noted: Of the 745 students enrolled in medical terminology during fall 2009, 20 were students who tested into the lowest level of developmental reading on admission and had to complete an additional remedial course before they could enroll in developmental reading. At the time, an intensive reading tutoring program (Read Right®)[1] was available to them but not required. Eleven of those 20 students attended Read Right® tutoring on a voluntary basis, and all 11 of those students passed medical terminology with a grade of C or better.

Results and Discussion

Students who entered the college as DVS admits with the goal in mind of pursuing a career in health sciences fields appeared to have had a difficult time in medical terminology during fall 2009. As shown above, they made up 17% of the students enrolled in

[1]Read Right Systems, 310 West Birch St. Shelton, WA 98584

AHS 102, yet they failed or withdrew at a higher-than-expected rate (28% and 22%, respectively). However, while students who participated in Read Right® tutoring in conjunction with their DVS reading courses constituted a very small fraction (only 3%) of the students enrolled in AHS 102, those students had a pass rate of 100% in AHS 102.

Conclusion

The results of this study indicate that DVS-admitted students who had completed their developmental reading requirement and enrolled in AHS 102 during fall 2009 still failed or withdrew from the course at a higher-than-expected rate. However, all of the students who participated in Read Right® tutoring in conjunction with their developmental reading course passed medical terminology during that term. Further study will be required to see if this holds true for DVS students who took medical terminology in future semesters (any students enrolled after fall 2009 would have been required to take Read Right® tutoring as a pre-requisite for developmental reading). These results suggested three interventions:

1) Set up a special section of developmental reading in which the focus will be on reading and vocabulary pertinent to health care for students who plan to enter health sciences fields.

2) Require all students who test below 79 on the COMPASS-R to enroll in Read Right® tutoring as a prerequisite for medical terminology.

3) Create a "medical vocabulary" course that will be a requirement for all students who are pursuing a health services-related major and whose COMPASS-R score is below 79 on admission to the college. The course would introduce students to the vocabulary they will encounter in the healthcare field and focus on medical word derivations, along with the meanings and spellings of prefixes and suffixes. This course would be a pre-requisite for medical terminology for those students.

These interventions will be implemented during the fall 2011 semester, and students will be tracked to determine if they are successful.

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Dr. Mary Gene Ryan is the retention coordinator at Midlands Technical College.

Play as a Method of Engaging Students in Developmental Writing

Ali Mageehon
Umpqua Community College

The article focuses on using creative play in the developmental writing classroom to enhance student engagement. Theories that support the use of play in the classroom are briefly described. Several teaching techniques are shared, including developing metaphors as part of teaching a grammar unit, acting out readings from novels, and using poetry to enhance the student learning experience. The author's experiences of using each of these methods are discussed as is a description of strategies for using students' creative work as part of formative assessment.

One challenge that many educators of students in developmental classes encounter is finding ways to engage students who come from a variety of backgrounds, experiences, and beliefs about education and learning. In addition, students frequently come to the college classroom with the belief that school is not a place where play or fun occurs. Rather, school is equated with work, and writing is often believed to be an especially boring or unpleasant task, a notion which results in disengagement. This article will discuss strategies to encourage students to participate in creative play in a developmental writing classroom for the purposes of keeping them interested and engaged.

What does it mean to play? The very definition of the word suggests engagement (in sport or recreation). A synonym for play is frolic, spontaneous, happy play. Underlying each of these definitions is spontaneity, creativity, and involvement. A significant implication embedded in concepts of play is collaborative activity—often play is something we do socially in groups. Play, in a classroom environment, can be defined as both structured and unstructured moments of engagement in learning for the sake of fun, amusement, and creativity. Throughout this article,

play is defined as collaborative activity that is structured and rule-based, but intended to engage students' imaginations and creative thought processes. Changing the dynamic in the classroom to one in which play is encouraged can make the writing class a more positive experience for students and help them develop a desire for lifelong learning.

Theories That Support Play in the Classroom

Piaget suggested that play serves multiple purposes, including assimilating new information and assisting in the process of accommodating new information with existing schemata ("Play," 2005). Similarly, Erikson examined the role-playing nature of children's play, suggesting that play provides a safe environment in which children can try out different adult roles ("Play," 2005). Nicolopoulou (2010) reflects on Vygotsky's theory about play and child development, noting that one primary component of Vygotsky's theory is that play has structure and rules: "In short, play is not simply frivolous. On the contrary, if properly understood, it can serve as a prototype of a form of activity constituted by shared and voluntarily accepted rules, within which people can experience an intrinsic—rather than merely instrumental—motivation to strive for mastery of the possibilities inherent in that practice" (p. 44).

A common theme in discussions about the value of play is its beneficial use in collaborative groups to encourage creativity and imagination (Sullivan, 2011). At the same time, there is general consensus that play is essential to engaged learning (Warner, 2008; Brown and Vaughan, 2009). The techniques of play that are used in adult education classrooms are often categorized under experiential learning; role play is a primary example and is often used in the classroom for the same reasons that Erikson suggested children play—it gives students a chance to safely try out different roles in spontaneous and new ways. Other play strategies include using games (increasingly prevalent in the digital gaming world), which Rieber and Noah (2008) suggest "are a way of knowing the world, a mediation between experience and understanding" (p. 79). Beidatsch and Broomhall (2009) identify the importance of role-play in history classes to assist students in learning what it means to be a historian. Harris and Daley (2008) examined the relationship of play to social capital for adult learners. (Social capital is defined as cooperative networks, connections, and building relationships within a community.) Exploring, creating, and being spontaneous are all concepts tied with play. In addition, "Göncü and Perone (2005) have found that pretend play and improvisation amongst adult learners foster community building that requires dialogue, trust, reciprocity, sharing and negotiation—all characteristics that are associated with social capital" (as cited in Harris and Daley, 2008, p. 52).

Brown and Vaughan (2009) consider how play is useful for adults as a way to make deeper connections socially, as well as make connections between disparate ideas and to come up with new solutions. "The genius of play is that, in playing, we create imaginative new cognitive combinations. And in creating those novel combinations, we find what works" (p. 35). Their research describes how play is an essential component of development for both human beings and animals alike. Brown and Vaughan also assert that human beings need to maintain the ability to play through adulthood in order to be critical-thinkers and problem-solvers. In discussions with teachers and trainers, Brown and Vaughan found that there is a desire for students to maintain an ability to play, citing the value of being able to think creatively rather than to think mechanically. Furthermore, play in the classroom helps adult learners develop emotional intelligence by assisting them in connecting with one another in teams (DiNapoli, 2009).

Writing instruction is one of many areas in education in which play is an essential element to keep students engaged. Weinstein (2006) writes about the out-of-school writing of at-risk youth in Chicago, describing as pleasurable the work they do writing their own lyrics for rap pieces. She identifies the various types of pleasure that students seek by writing: "Sometimes what comes through is a feeling of solidarity, of belonging, of identifying oneself as part of a larger whole. . . . Sometimes, conversely, there is a pleasure in establishing one's individuality. . . . Finally, there is the sheer fun of the experience itself: pleasure as 'play'" (p. 275).

Activities

Based on this research about the value of play as an impetus for learning, I have developed multiple activities that engage students in creative play to broaden student thinking about writing concepts. Several of these activities will be described here along with some discussion of the resulting products.

Grammar Metaphor.

The use of metaphor is one approach to opening up the world of play for students. For example, the metaphor of a stoplight can help students understand the functions of the period and comma in a sentence (a period is a red light, which indicates a full stop, and a comma is a yellow light, indicating a slow down. A green light indicates that one should move fully ahead without stopping). The concept aids students both in the reading process (as many of the students in developmental writing classes tend to be fairly low-skilled readers) and the writing process in understanding how to cue their own readers. James (2002) suggests that "verbal and visual metaphors help academically underprepared students make conceptual connections between their own knowledge and what they are learning in class" (p. 26).

The grammar metaphor assignment can be used to have students develop a visual metaphor for dangling modifiers, wordy sentences, or misplaced modifiers. Students can work in small groups of three or four students and, as part of the assignment, develop a one-page note sheet explaining the concept, how to identify errors in their own writing for each category and how to fix the errors. Groups then present their metaphors to the class and provide classmates with their note-sheets.

This assignment requires that students think outside of their normal boundaries and to think of grammar in a different way. Metaphors that illustrate wordy sentences are often the most effective. A notable student-developed example includes sentences cut and pasted onto toilet paper. The wordy sentence used too much toilet paper while the concise sentence used just the right amount. Dangling modifiers also offer opportunities for students to play with the concept; in one example, students developed a diorama in which a dangling modifier was attached

to a train that went off the track and was left "dangling" while a second train made it to the station in one piece and on time.

Students are often delighted with the end product that they and other groups produce and engage at a different level in the assignment than in more traditional grammar assignment approaches. Such assignments provide opportunities for creative play, as well as collaboration. Brown and Vaughan (2009) suggest that if we do not continue to play, "Our behavior becomes fixed. We are not interested in new and different things. We find fewer opportunities to take pleasure in the world around us" (p. 38). Activities in the writing classroom that support play assist students in seeing college as an opportunity to learn for the sake of pleasure.

Acting Out Readings.

In many developmental education settings, instructors in writing integrate reading activities to help students understand the connections between reading and writing. Such curricula provide many opportunities for students to play. Activities that support creative play include predicting and writing an end to a story before students finish reading a novel. The second is for students to prepare a mini-play for one scene of a novel. Students can choose the scene, design props, and then act it out in front of their classmates. Such activities serve the dual purpose of both engaging students and helping an instructor check in to see if students have read the material. Students who might not otherwise be interested in a novel or other text tend to be more interested in what they are reading when they are able to engage in a hands-on activity.

An example of playful activities in an integrated reading/writing class center on a group of students reading Bram Stoker's *Dracula*. In this instance, students were asked to find a way to connect to the plot by modernizing some aspect of the story. Notable products from the assignment included a rap that featured the primary plot points of the story and an infomercial advertising Dracula's amazing life-extending capacity. Subsequent short exams showed that students who had engaged in the playful activities were more likely to remember the content than those

students in another class who were being taught through more traditional direct instruction methods.

Poetry as Play.

Many students come to a writing classroom with many fears about making errors and being wrong in their writing. Such fear can be debilitating, causing students to hesitate to even try to put their ideas onto paper. Poetry is a less threatening way to acclimate students to a classroom in which play is acceptable and encouraged. A poetry activity that can be very helpful for setting a tone of collaboration and play is adapted from Statman's (1995) "Poetic Theory and the End of Science." Students first act out a poem about how the moon and sun change places as the transition between day and night occurs. From this activity, students then write their own poems. The instructor begins the process by emphasizing that there is no right or wrong way to write a poem. This sets the stage for subsequent lessons that teach brainstorming and writing as a tool for learning.

Another example of using poetry for play is to ask students to develop creative presentations for essays that they read. Such presentations can include story-boards, posters, raps, or short skits. This activity can be extended into a review presentation at the end of the class so that students demonstrate their knowledge of materials learned throughout the semester. One option in presenting the review material could be to write a poem about it. The other part of the review includes preparing a handout of notes for other students for study purposes. In these ways, students are engaged in the process of playing with language in a manner different from one to which many are accustomed.

Evaluating Play Activities.

Both formal and informal methods of assessment can be used in evaluating play-based activities. In some cases, it may be best not to assess at all but rather to engage in play for play's sake. However, in those instances in which some sort of product is required, rubrics can be used to evaluate student knowledge of the concepts or content that was part of the assignment. For example, for grammar metaphors, students might be rated on their concept, how their concept demonstrated understanding of

the grammar point, and their ability to contribute to a collaborative assignment.

In many instances of assignments with a play component, students could also be required to complete a follow-up assignment that demonstrates general comprehension (in the case of reading assignments) or capacity to apply what was learned to other contexts. Students might be engaged in frequent editing sessions in which they identify and correct wordy sentences, dangling modifiers, or other grammar problems, in their own papers as follow up to a grammar metaphor assignment.

Conclusion

Informally, students in my classes commented on how much fun certain assignments were or indicated that they had not ever had fun in an English classroom before. Engaging in play activities helped to diffuse some of the writing anxiety that many students felt coming into a developmental writing class. This was evidenced by greater creativity in student papers; for example, one student who had previously struggled with developing even short paragraphs was better able to add detail and write more about a topic after going through the exercises described here. In general, students also felt more comfortable working together in groups and sharing ideas with each other, which led to greater comfort levels in common writing course activities such as peer review.

Activities that encourage students to play can be powerful tools to support student engagement. In addition, play activities that are collaborative encourage students to participate by exploring creative solutions to problems. Brown and Vaughn (2009) summarize the critical role of play in learning: "Play isn't the enemy of learning [,] it's learning's partner. Play is like fertilizer for brain growth. It's crazy not to use it" (p. 101).

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Ali Mageehon is the director of the Student Transition Education Program at Umpqua Community College.

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