The Learning Assistance Review

The Journal of the National College Learning Center Association

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National College Learning Center Association

About *The Learning Assistance Review*

The Learning Assistance Review, an official publication of the National College Learning Center Association (NCLCA), is published by the University of Minnesota. NCLCA serves faculty, staff, and graduate students in the field of learning assistance at two- and four-year colleges, vocational and technical schools, and universities. All material published by *The Learning Assistance Review* is copyrighted by NCLCA and can be used only upon expressed written permission.

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As we embark on our last volume (this issue and the fall 2006 issue) as editors, we are pleased to announce that the National College Learning Center Association (NCLCA) has appointed Christine Reichert of Lourdes College as the new Editor of *The Learning Assistance Review* beginning with Volume 12, the spring 2007 issue. We are looking forward to working with Christine over the next 6 months. We also want to take this opportunity to encourage NCLCA members to volunteer to serve on the TLAR editorial board and to submit manuscripts for future publication. We want to make this transition as smooth as possible for everyone—Christine, the reviewers, and authors. In the fall issue we will provide further information about any changes in submission procedures.

Before introducing the articles in this issue, we also want to thank Emily Goff, Managing Editor, once again for her service "above and beyond." As we approach the June 30th close of the General College, the current editorial home of TLAR, Emily has once again taken on additional duties in order to get this issue of TLAR to the printer in a timely fashion.

We are very pleased with the range of topics addressed in the articles in this issue. Although the setting for the research study presented in "Regulating Learning With Student-Constructed Study Guides," by Andrew Katayama, is a highly competitive U. S. military academy, the strategies tested can be adopted at any postsecondary educational institution. This research illustrates how giving students responsibility for developing their own study materials can result in enhanced engagement in the learning process and improved achievement on quizzes and exams. The results also indicate that the types of exam items (e.g., multiple choice, essay) should dictate the nature of the study guide to be used in preparation for the exam.

Our new TLAR Editor, Christine Reichert, and Carol Hunter provide an in-depth description of a tested tutor selection process in "Tutor Selection: A Four-Tier Approach to Success." The authors provide examples of their tutor selection and tutor application checklists to assist readers who wish to implement this approach at their own institutions.

In "Unit Mastery in a Personalized System of Instruction Psychology Course for Developmental Education Students," Tom Brothen's research demonstrates the value of mastery, and particularly mastery within teaching units, for developmental education students. Although Brothen teaches psychology, a content area not offered in many developmental education programs across the U. S., his findings are equally applicable to other subject areas, including mathematics, another discipline in which PSI is frequently used. This article also has implications for tutoring programs that might consider using a PSI model.

In this issue's "Join the Conversation" Betsy Bannier chronicles the origins and evolution of the GI Bill and its impact on developmental education. Meanwhile,

the book review for this issue, written by Kelly Norton looks at *Prepairing Educators for Online Writing Instruction.*

Finally, we want to call to your attention the advertisements in this issue for the upcoming NCLCA Summer Institute, as well as the fall NCLCA Conference to be held in October in Harrisburg, PA. In addition to a call for submissions and author guidelines for TLAR, we are also pleased to include a call for submissions to the *Journal of College Reading and Learning*, a publication of the College Reading and Learning Association (CRLA). We thank CRLA for this reciprocal advertising agreement. We all benefit—our professional associations and we as individuals—from collaborations across organizations and from the dissemination of our research and best practices.

Jeanne & Irene

Regulating Learning With Student-Constructed Study Guides

Andrew D. Katayama
United States Air Force Academy

Abstract

The authors investigated the effectiveness of 3 types of self-regulated study guides at a highly competitive military academy. Cadets were asked to construct 6 sets of study guides for 8 separate graded tests. After examining the cadets' own preferences for constructing their study guides for the first quiz, cadets were instructed to construct 3 other types of study guides (outlines, matrix organizers, and concept maps) to help self-regulate study strategies for subsequent tests. Results show that matrix organizers and concept maps correspond to higher achievement on the application items, whereas outlines tended to provide the best study guide for the multiple choice factual items.

One common misconception of cadets attending a highly competitive academic institution is that they possess highly developed self-regulated learning strategies. Although this assumption may be true for many "high achieving" students, there remains a good number of students who still do not possess the necessary skills to be successful in such an environment (Pintrich, 1995; Zimmerman, 1989). More specifically, this has been found to be true among adolescent students at American colleges and universities (Hengstler, 2001; Young & Ley, 2001).

Having self-awareness of effective study strategies and how they may help one to learn can be a strong ally for the motivated student in a highly structured environment (Zimmerman & Schunk, 2001). The current literature has described several effective self-regulated study strategies. Perhaps one of the greatest yet most overlooked study strategies is that of study guide construction. Successful students have the ability to create useful study guides (Henderson, 2000; Katayama, Robinson, Kiewra, Dubois, & Jonassen, 2002; Zimmerman & Pons, 1986) to help them prepare for exams. Because previous literature indicates strong benefits for faculty guidance on writing assignments (e.g., Boice, 1982; McGovern & Hogshead, 1990), the instructors of the study presented in this article taught students how to construct the various types of study guides using a variety of methods such as modeling in classroom, distribution of examples, detailed feedback.

Active learning is another key for successful academic learning (Katayama &

Crooks, 2001). Dewey (1933) taught us that students learn best when they are active participants engaged in the learning process (Madsen & Turnbull, 2005). Active and engaged learning supports the notion that students should learn through experience and well designed activities such as student- constructed study guides that could link a student with opportunities for more generalized applications and continued life-long learning. Because education at the military academies stresses the courage to think ethically about decisions, it is critical that the students are able to link their knowledge to generalized applications in a careful manner. In an editorial, Waid (2004) commented on why it is not surprising that most people, both military and civilian, associate military education with training and conformity. If so, can this notion be counterproductive to Dewey's (1933) philosophy on active learning and the ability for students at a military academy to self-regulate their learning?

This study examines how study guides can be used to facilitate self-regulated learning (SRL) among high achieving cadets at a military academy. Although some research has been performed in this area (Laveault, Leblanc, & Leroux, 1999), there has been little to no research conducted among a population of highly-trained and motivated students (e.g., Wolters & Pintrich, 1998) in a highly-structured environment. This gap in the literature provided the motivation for this research.

We predicted that student performance on study guide construction would be positively correlated to student performance on the corresponding quizzes. Specifically, we predicted that the outline study guides would correspond most highly to the multiple-choice part of the corresponding quizzes as well as the multiple-choice part of the midterm exam. We predicted that the matrix organizers and concept map study guides would correspond most highly to the essay section of the quizzes and midterm and final exams. We also predicted study guides along with student academic variables such as grade point average (GPA), and standardized admissions test (e.g., ACT or SAT) scores would be positively associated with final exam scores. Finally, we believed that students' attitudes and self-regulated reports (e.g., effort, time spent on study guides) would be positively associated with their study guide scores. This would be consistent with the results that Boysen and McGuire (2005) found in terms of advanced study skills predicting academic performance.

Method

Our investigation examined the effectiveness of three different types of study guide on student performance during an entire semester of a three-credit-hour introductory behavioral science and leadership course that focused primarily on General Psychology. This introductory course is part of the core curriculum at the Air Force Academy that all cadets take in their freshman or sophomore year. We implemented a quasi-experimental design that was used to help detect differences between types of study guides as well as correlations among study guides, several cognitive outcomes, and several affective variables. The course directors, who were not among any of the authors of this article, wrote all of the quizzes and exams and were not involved in the instruction of any of these experimental sections. We administered two attitudinal surveys (i.e., midterm and final) that consisted of 10 short questions each pertaining to how much effort and

time students put into constructing and studying their study guides as well as questions pertaining to perceived usefulness for studying for the exams. Questions on each survey were identical with respect to the exams.

Participants

In exchange for course credit, 143 first and second year cadets at the United States Air Force Academy participated in this study. Two participants were disenrolled from the Academy during the semester and were not included in any data analyses. The cadets completed the study guides in addition to their regular scheduled assignments (e.g., papers) in an attempt to help regulate their study behaviors. The Academy registrar's office randomly assigned cadets to each of the experimental sections to ensure near equal numbers per section. Overall, we had nine sections with approximately 16 cadets each who participated in this study. Three instructors (i.e., the authors) agreed to participate in this study as part of their normal teaching workload.

Materials

We required all cadets to purchase Myers' (2003) *Psychology* text as well as a supplemental binding of readings for leadership, sociology, and cultural anthropology (Department of Behavioral Sciences and Leadership, 2003). We used these materials to help cadets construct a total of six study guides throughout the semester. All cadets used their own materials to construct their study guides. For the final two study guides, many cadets chose to use concept mapping software (e.g., Inspiration®) to construct their study guides. Again, the course directors wrote all six quizzes and two exams (midterm and final). The instructors of all of these experimental sections had no input as to the makeup of the graded tests.

Procedure

We explicitly told all cadets in this study (viz., by the instructor and on the syllabus) that they would be required to construct their own sets of study guides to help them study for the tests. Further, we told the cadets that their study guides would be turned in on the day of the test and would be graded. We informed them that their study guides would be graded based on the following criteria: (a) completeness, both in terms of content and approximate page length; (b) organization (i.e., distinct levels on outlines, etc.); and (c) elaboration (i.e., self-generated examples vs. textbook examples). Each study guide was worth a maximum of 10 points or1% of their overall grade. A total of 60 points was possible for successful completion of all six sets of study guides. All three instructors consulted each other before handing back each study guide to minimize any variation in grading among the instructors. After we graded each study guide, we gave the cadets written constructive feedback on their study guides as to how they could be improved. The following paragraphs are brief descriptions of each of the study guides that cadets constructed throughout the semester. Note that the first study guide was open-ended to serve as a baseline of how cadets preferred to construct and study their notes.

Open-ended (Baseline)

The first study guide was open-ended; cadets compiled information from class and the text in any format they wished as long as it adhered to the criteria (i.e., 3-4 pages in

length, completeness, and overall organization). Cadets typed and printed out this study guide and turned it in the day of their first unit quiz covering "Systems and Theories of Psychology" and "The Scientific Method" used in the behavioral sciences. Although we gave cadets very little guidance as to how this study guide should look, nearly every one of these study guides was done in a linear format (e.g., outlines, bullets, and paragraphs).

Outlines

Cadets constructed a structured outline that consisted of information from the next two chapters of text in a hierarchical format for the second study guide. We gave an overview of the various levels of an outline and gave examples of how a hierarchical outline might look for this assignment. Cadets typed and printed out this study guide and turned it in the day of their second quiz covering the topics of "Sensation and Perception" and the "Biology of the Brain."

Matrix Organizers

Cadets constructed two-dimensional matrices into meaningful rows and columns (e.g., term and definition in the first row, page number in the second row, self-generated examples in the third row, etc.) for their third and fourth study guides. These study guides were similar to those used by Katayama, Shambaugh, and Doctor (2005). We provided various examples of how these matrices might look for these assignments as well as modeled their structure during the lectures (e.g., overhead transparencies, PowerPoint presentations). Cadets typed and printed out these study guides usually in table format and turned them in on the day of their quiz. Cadets turned in their third study guides on the day of the third quiz, which covered "Behaviorism" and "Social-Cognitive Psychology," and their fourth study guide on the day of their mid-term examination, which covered "Information-processing" and "Cognition" (there was no quiz for this material). Cadets were highly encouraged to use the software program in which they felt most comfortable to construct the matrices (e.g., Microsoft Word®, Excel®).

Concept Maps

The fifth and sixth study guides were nonlinear and arguably the most visual of all the study guides (Rye & Katayama, 2005). Some cadets chose to create their maps using some type of concept mapping software (e.g., Inspiration®, SmartDraw®, or CorelMap®), whereas others chose to use Microsoft Draw®, or PowerPoint®. A few cadets simply hand drew their maps. The fifth and sixth were the only study guides that were acceptable without being typed. Again, modeling took place where the instructors would share examples as well as demonstrate how study guides might be created during the lectures. Study guide five was turned in the day of the fourth quiz covering "Social and Cultural Psychology" whereas study guide six was turned in the day of the fifth quiz covering "Personality and Abnormal Psychology."

Results

All course assessments (i.e., quizzes and tests) consisted of two sections: multiple choice factual items and essays that integrated the material at a higher level. Other assessments such as papers were not included in the analysis of this study. We conducted

all statistical tests with an alpha = .05 level of significance. We entered and analyzed all data using the Statistical Package for the Social Sciences (SPSS v. 11.5). We entered the survey data for both the midterm and final exams at the end of the semester. We entered each case as a unique nine-digit code to help ensure anonymity of the research participants.

The Relationship Between Study Guides and Tests

We found a significant positive correlation between the study guides. and the essay part of the quizzes, r (142) = .43, $p < .001$, but only a marginal relationship between the study guides and the multiple choice part of the quizzes, r (142) = .15, $p < .1$. This relationship was driven by the predicted positive relationship between the outline study guides (one and two) and the related multiple choice part of the quizzes (one and two), r (142) = .35, $p < .001$, as neither the matrix organizer study guide three and quiz three had a relationship, r (142) = .07, nor the concept map study guides (five and six) and their related multiple choice part of the quizzes (four and five), r (142) = .08. Study guide four was not used in this statistic, as it did not have a related quiz.

This pattern continued with the relationship between the study guides and the midterm exam. We also found a significant positive relationship between the first four study guides and the essay part of the midterm, r (142) = .36, $p < .001$, as well as the multiple choice part of the midterm, r (142) = .28, $p < .001$. As predicted, we found a stronger positive correlation between the two matrix organizer study guides (three and four) and the essay part of the midterm, r (142) = .33, $p < .001$, than the two outline study guides (one and two) and the essay part of the midterm, r (142) = .28, $p < .001$ but both correlations were statistically significant. Surprisingly, both types of study guides had equally strong, statistically significant relationships with the multiple choice part of the midterm: with matrix organizer study guides, r (142) = .24, $p < .005$, and with outline study guides, r (142) = .26, $p < .005$.

A similar pattern emerged in the relationship between the study guides and the final exam. As predicted, we found a significant positive relationship between the six study guides and the essay part of the final, r (142) = .31, $p < .001$, but no relationship between the study guides and the multiple choice part of the final, r (142) = .13. There was a stronger positive correlation between the two concept map study guides (five and six) and the essay part of the final, r (142) = .31, $p < .001$, than the two outline study guides (one and two) and the essay part of the final, r (142) = .24, $p < .005$. Contrary to our prediction, we did not find a significant relationship between the two matrix organizer study guides (three and four) and the essay part of the final, r (142) = .16, $p < .1$. However, as predicted, only the outline study guides had a significant positive relationship with the multiple choice part of the final, r (142) = .24, $p < .005$, while neither matrix organizer study guides, r (142) = .10, nor concept map study guides, r (142) = .01, were related to the multiple choice part of the final.

Academic Variables and Study Guides

When trying to discover links between overall school excellence and the quality of study guides in this course, the study guides were found to be positively related to student GPAs upon entering the course, r (141) = .44, $p < .001$, and even more strongly upon exiting, r (140) = .50, $p < .001$. Consequently, we also found a significant

relationship between the study guides and student MPAs (i.e., 4.0 scale similar to GPA but measuring military performance), r (141) = .21, p < .05.

Table 1

Summary of Reverse Stepwise Regression Analysis for Variables Predicting Final Exam

Performance (n = 136)

Variable	Multiple Choice				Essay		
	B	*SE B*	*ß*		*B*	*SE B*	*ß*
Step 1 (R^2 = .55)				(R^2 = .19)			
Entering GPA	16.71	2.11	0.55***		3.25	1.27	0.24*
ACT English/SAT Verbal Percentile	0.45	0.08	0.43***		0.06	0.05	0.12
ACT/SAT Math Percentile	-0.18	0.10	-0.13		-0.08	0.06	-0.14
Matrix Organizer Study Guides	-0.27	0.20	-0.09		-0.09	0.12	-0.07
Concept Map Study Guides	-0.23	0.21	-0.07		0.34	0.13	0.24**
Outline Study Guides	0.27	0.35	0.05		0.27	0.22	0.12
Step 5 (R^2 = .53)[a]				(R^2 = .16)[b]			
Entering GPA	15.35	1.90	0.51***		3.60	2.95	0.26**
ACT English/SAT Verbal Percentile	0.39	0.07	0.38***	Concept Map Study Guides	0.35	0.12	0.24**

[a] ΔR^2 = -.002 from Step 1 to Step 2, -.004 from Step 2 to Step 3, -.009 from Step 3 to Step 4, and -.009 from Step 4 to Step 5.

[b] ΔR^2 = -.004 from Step 1 to Step 2, -.007 from Step 2 to Step 3, -.010 from Step 3 to Step 4, and -.004 from Step 4 to Step 5.

* $p < .05$. ** $p < .01$. *** $p < .001$.

A reverse stepwise regression was used to determine what factors had the greatest impact on final exam scores, again separating multiple choice and essay scores. Several factors that could lead to academic performance were examined. For overall aptitude, percentile rankings of ACT or SAT performance were used (for both Math ACT or SAT and English ACT or Verbal SAT). For current global academic performance, overall GPA upon entering the course was used; and scores for each type of the six study guides was used.

For predicting final exam multiple scores, the model of best fit had R^2 = .53, including GPA ($ß$ = 0.51, t = 8.09, $p < .001$) and ACT English or SAT Verbal Percentile ($ß$ = 0.38, t = 6.06, $p < .001$). For predicting final exam essay scores, the model of best fit had R^2 = .16, again including GPA ($ß$ = 0.26, t = 3.23, $p < .01$), but this time did not include ACT English or SAT Verbal percentile and instead included concept map study guides ($ß$ = 0.24, t = 2.97, $p < .01$). Table 1 provides further details regarding the results of the stepwise regression analysis

Cadets' Attitudes and SRL

Relationships among cadets' attitudes (e.g., effort, seriousness, etc.) and self-regulating study habits (i.e., time constructing and studying) concerning the study

guides also were analyzed to see if any SRL variables were significantly related to each other as well as to the perceived helpfulness of the study guides in preparing for the midterm and final exams respectively. Attitudes were surveyed before cadets took the midterm exam and before they took the final exam. Table 2 presents Spearman's correlations of these variables at midterm, along with multiple choice and essay performance on the midterm exam. Effort was significantly related to how early in advance cadets began constructing their study guides, r (108) = .227, p < .05; minutes spent constructing their study guides, r (108) = .327, p < .01; and minutes spent studying their study guides, r (107) = .221, p < .05. Effort was also significantly related

Table 2

Correlations Between Student Attitudes and Behavior at Midterm for Study Guides 1-3 (n = 109)

	2	3	4	5	6	7	8	9
1. Effort	.58***	.28**	.16	.23*	.37**	.22*	.05	.13
2. Seriousness	—	.33***	.16	.15	.40***	.24*	.12	.04
3. Helpfulness for quizzes		—	.59***	.20*	.09	.17	-.07	-.06
4. Helpfulness for midterm exam			—	.17	.16	.16	.12	.21*
5. Early construction of study guides				—	.16	.36***	-.13	.02
6. Time constructing					—	.25**ᵃ	.12	.24*
7. Time studying						—	-.07	-.11
8. Midterm: Multiple choice							—	.50***
9. Midterm: Essay								—

Note. All scales are constructed so that higher values are more positive results (e.g., more effort, more time studying, earlier start times, etc.).

[a] Except for this *Pearson's r* concerning the two time variables, all other variables are ordinal, and thus all correlations are *Spearman's rho.*

* p < .05. ** p < .01. *** p < .001.

to how serious the cadets took the activity of constructing and studying their study guides, r (108) = .575, p < .001. For the perceived helpfulness of the study guides on preparation for quizzes, effort was significantly related, r (107) = .282, p < .01; but not significantly related to perceived helpfulness on the midterm, r (103) = .161, p > .05. Surprisingly, effort was not related to actual performance on the midterm multiple choice items or essay. Figure 1 displays a sample of the attitudinal questions used for the midterm, but are equivalent to the ones used on the final as well.

Table 3 presents Spearman's correlations of the same affective variables for preparations on the final exam. Again, effort was significantly related to how early in advance cadets began constructing their study guides, r (132) = .281, p < .01; minutes spent constructing their study guides, r (132) = .508, p < .001; and minutes spent studying their study guides, r (132) = .195, p < .05. As expected, effort was once again

Table 3

Correlations Between Student Attitudes and Behavior at Final for Study Guides 4-6 (n = 133)

	2	3	4	5	6	7	8
1. Effort	.76***	.22**	.28***	.51***	.20*	-.01	.29**
2. Seriousness	—	.21*	.25**	.42***	.27**	-.06	.19*
3. Helpfulness for final exam		—	.05	.26**	.13	.18*	.16
4. Early construction of study guides			—	.06	.46***	-.23**	-.12
5. Time constructing				—	.13ª	.21*	.03
6. Time studying					—	-.20*	-.11
7. Final: Multiple choice						—	.30**
8. Final: Essay							—

Note. All scales are constructed so that higher values are more positive results (e.g., more effort, more time studying, earlier start times, etc.).

ª Except for this *Pearson's r* concerning the two time variables, all other variables are ordinal, and thus all correlations are *Spearman's rho.*

* $p < .05$. ** $p < .01$. *** $p < .001$.

significantly related to how seriously cadets took the activity of constructing and studying their study guides, r (133) = .763, $p < .001$. Cadets found that constructing and studying their guides helpful in preparing for the final exam. As a result, the cadets' effort was significantly related to the perceived helpfulness of the study guides, r (133) = .224, $p > .01$. Consistent with data previously presented, effort was significantly correlated with essay performance on the final exam, r (126) = .29, $p < .01$, but not with multiple choice performance on the final, r (126) = -.01, $p < .01$.

Discussion

Findings from our study suggest that outlines as study guides correspond highest with how well cadets perform on factual multiple choice items. These results also suggest that the spatial study guides (i.e., matrix organizers and concept maps) are more closely associated with how well cadets perform on essay application items. Additionally, it is clear that although pre-existing academic success is important for success on the final exam, the use of study guides exclusive of this impacts performance for higher-level, essay-type questions. Again, while standardized college admissions test scores (e.g., ACT and SAT) predict multiple choice performance, they do not predict performance on the essay aspects of the exams. Finally, the results show that effort on the study guides was related to essay performance on the final exam. Effort was also strongly associated with how seriously the cadets took the activity of constructing their study guides. Based on these results, we would like to make recommendations on how spatial displays such as matrix organizers and concept maps can be best used by teachers in their classrooms.

Concerning test validation, we recommend that the type of questions asked on tests and quizzes should influence the type of study guides that should be constructed and used. For example, if the instructor is solely interested in testing factual information (e.g., terms and definitions), it is most beneficial for students to create outlines as part of their study guides. However, if the instructor is more interested in how well students can apply information to novel situations or integrate material from a variety of topics, then cadets are best served by creating more spatial study guides that allow them to visualize comparisons and contrasting concepts.

Regardless of study guide type, students should seek out a variety of study strategies that allow them to become more self-regulated in their learning. One possibility for the lack of the predictive value of spatial study guides in our study is that we had great difficulty in controlling for student affect. There were two main reasons for this. The first is due to relative deprivation (e.g., Festinger, 1954; Taylor, 1983; Tesser, 1980). That is, the cadets participating in this study believed the workload they had was heavy or light relative to that of their peers. For example, students at this institution who are divisional majors are perceived to have a light schedule as they only have to complete 142 semester

Beh Sci 110/200 Study Notes Survey—Midterm

Please respond to the following questions as *HONESTLY* as you can as they relate to your effort with the study guides prior to the Midterm Exam by circling the response that best describes your experiences. *Your answers on this survey have NO bearing on your grade in this class. For research purposes only, please PRINT your Social Security Number below.*

_____

PRINT LAST FOUR OF SSN HERE

1. **How much _effort_ did you put into constructing your first three study guides?**

   a. no effort   b. very little effort   c. fair amount of effort   d. great effort

2. **On average, how much _time_ in hours and minutes did you spend constructing each of your study guides?**

   Hours: _____ and/or minutes: _____

3. **On average, how long in hours and minutes did you spend _studying_ your study guides?**

   Hours: _____ and/or minutes: _____

4. **How _seriously_ did you take the first three study guides assignment?**

   a. not at all   b. not too seriously c. seriously   d. very seriously

5. **How _helpful_ do you think the study guides were in studying for the first three quizzes?**

   a. not helpful at all   b. not very helpful c. helpful d. very helpful

6. **How *helpful* are/were your study guides in studying for the _Midterm_ exam?**

   a. not at all   b. a little   c. helpful d. very helpful

7. **What format was the *most helpful* for you to _study_ for your quizzes?**

   a. open format b. outlines   c. matrix organizers

8. **Where did the majority of the information in your study guides _come from_?**

   a. textbook   b. lectures/class notes   c. combination of text and lectures/class notes   d. other

9. **_When_ did you usually start constructing your study guides?**

   a. the day before   b. 1-2 days before   c. 3-4 days before   d. more than 4 days before

10. **How strong do you think your *effort* in constructing these study guides are _related_ to your quiz scores?**

    a. not related   b. a little   c. related d. very strongly related

Figure 1. Study notes survey.

hours (i.e., over 47 courses). They do not compare this heavy load to other Academy cadets but to those at this school who are taking a major and thus have two additional courses (148 hours).

As previously mentioned, the participant population was taught in a course where instead of having one large lecture hall of 700, all cadets were grouped into 41 sections with no more than 18 cadets in each class. Thus, the cadets in the nine experimental sections in this study were aware that they had more total work (i.e., the 6 additional study guides) than other cadets taking the same course. This was evident on the course evaluations as cadets in the experimental courses rated the question "Reasonableness (difficulty and amount) of assigned work" on average nearly a half point lower on a six-point scale than cadets in the regular course, while "the course as a whole" was only.14 lower.

It also would be fair to say that it was not clear as to whether or not cadets were adequately rewarded for the work they did. Although it may seem clear to most academicians that working on study guides would pay off both in time saved studying at the end of the semester and amount learned, many cadets simply focused on the immediate payoffs rather than long-term benefits. Each study guide was less than 1% of their total grade, and yet for those who completed the assignment, took on average just under 2 hours to accomplish (116.6 minutes, from self-report survey data, averaging across midterm and final examinations). That may be why by the time study guide six was assigned, 21.0% of the participating cadets chose not to turn them in as compared to 1.3% not turning in study guide one).

Thus, two pedagogical lessons to be learned for those who wish to use study guides in their courses are to make sure all students have the same assignment, and to reward students appropriately for their effort and expertise. Additionally, it would be wise to point out continually that current effort in creating study guides is likely to pay off handsomely in both time saving and grade when it is time to study for the final exam.

References

Boice, R. (1982). Teaching of writing in psychology. *Teaching of Psychology, 9,* 143-147.

Department of Behavioral Sciences and Leadership. (2003). *Readings for the behavioral sciences.* Boston: McGraw-Hill.

Dewey, J. (1933). *How we think*. Boston: Houghton Mifflin.

Festinger, L. (1954). A theory of social comparison processes. *Human Relations, 7,* 117-140.

Henderson, B. B. (2000). The reader's guide as an integrative writing experience. *Teaching of Psychology, 27,* 130-132.

Hengstler, J. E. W. (2001). Key factors in adolescent distributed learning. *Academic Exchange Quarterly, 5*(2), 43-50.

Katayama, A. D., & Crooks, S. M. (2001). Examining the effects of notetaking format

on achievement when students construct and study computerized notes. *The Learning Assistance Review, 6*(1), 5-23.

Katayama, A. D., Robinson, D., Kiewra, K., Dubois, N., & Jonassen, D. (2002). Biases with adjunct display construction and testing. *Journal of Research in Education, 11*, 54-61.

Katayama, A. D., Shambaugh, R. N., & Doctor, T. (2005). Promoting knowledge transfer in on-line notetaking. *Teaching of Psychology, 32*(2), 128-131.

Leveault, D., Leblanc, R., & Leroux, J. (1999). Self-regulated learning of young adolescents in a mathematics activity. (ERIC Document Reproduction Service No. ED 435958).

Madsen, S. R., & Turnbull, O. (2005). Teaching citizenship through service-learning. *Academic Exchange Quarterly, 9*(1), 11-15.

McGovern, T. V., & Hogshead, D. L. (1990). Learning about writing, thinking about teaching. *Teaching of Psychology, 17*, 5-10.

Myers, D. G. (2003*). Psychology* (7ᵗʰ ed.). New York: Worth.

Pintrich, P. R. (1995). Understanding self-regulated learning. *New Directions for Teaching and Learning, Issue 63,* San Francisco: Jossey-Bass, 3-12.

Rye, J., & Katayama, A. D., (2005). Using electronic forums and concept mapping to further pre-service teachers' competence with instructional technology. *The Electronic Journal of Science Education*, *7*(4) 1-37.

Taylor, S. E. (1983). Adjustment to threatening events: A theory of cognitive adaptation. *American Psychologist, 41*, 1161-1173.

Tesser, A. (1980). Self-esteem maintenance in family dynamics. *Journal of Personality and Social Psychology, 39,* 77-91.

Waid, A. (2004). Academics and professional military education: Editorial. *Academic Exchange Quarterly, 8*(2), 264.

Wolters, C., & Pintrich, P. R. (1998). Contextual differences in student motivation and self-regulated learning in mathematics, English, and social studies classrooms. *Journal of Instructional Science, 26,* 27-47.

Young, D. B., & Ley, K. (2001). Mathematics self-efficacy performance discrepancies of developmental and regular admission college students. *Academic Exchange Quarterly, 5*(2), 167-175.

Zimmerman, B. J. (1989). A social cognitive view of self-regulated academic learning. *Journal of Educational Psychology, 81,* 329-339.

Zimmerman, B. J., & Pons, M. M. (1986). Development of a structured interview for assessing student use of self-regulated learning strategies. *American Educational*

Unit Mastery in a Personalized System of Instruction Psychology Course for Developmental Education Students

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Abstract

Two studies report on utilizing unit mastery through practice exercises in a personalized system of instruction (PSI) general psychology course for developmental education students and the advisability of giving students the option of attaining that mastery. Study 1 examined the differences associated with attaining or not attaining mastery in a course section that did not require it. Study 2 examined the differences resulting from requiring or not requiring unit mastery in 2 different versions of the course. The results from both studies lend support to designing courses for developmental education students that require unit mastery.

For several years, I have investigated the impact of computer-assisted instruction and mastery-oriented pedagogy on developmental education students' learning in a general psychology course (Brothen, 1992, 1998; Brothen & Wambach, 1999, 2000, 2001; Brothen, Wambach, & Hansen, 2002).

My work with developmental education students has been guided by Bloom's (1976) classic formulation of the mastery learning model in which he suggested that students with academic deficiencies can be nearly as successful in mastery learning courses as well-qualified students. Accordingly, I have adapted Keller's (1968) personalized system of instruction (PSI), a mastery learning teaching method that is particularly effective with developmental education students. In their meta-analysis, Kulik, Kulik, and Bangert-Drowns (1990) found that mastery learning models such as PSI fostered superior student learning compared to traditional forms of instruction, with this advantage even greater for students with lower academic ability. Noted educational researcher James A. Kulik recommended that teachers of developmental education students consider using PSI (Bonham, 1990).

Traditional PSI has five distinguishing characteristics (Buskist, Cush, & DeGrandpre, 1991). Instructors allow students to work at their own pace to finish assignments, require students to master manageable units by passing quizzes before moving on to the next unit, deemphasize lecture, deliver course content through textbooks and written materials such as behavioral objectives and study guides, and use undergraduate proctors to score tests and help students understand what they need to do to improve their

course performance. I have adapted these characteristics in a computer-assisted course model that students access via the Internet and in a computer classroom (Brothen & Wambach, 2000).

Traditional PSI models have clearly stated contingencies but not all have the same grading criteria. Some require students to master all the units to receive an A and give incompletes or Fs to those who do not, while others give the full range of A to F grades (Robin, 1976; Ryan; 1974). Because developmental education students, by definition, are developing their student abilities and may not initially be able to function at the A or B level, I have always used criterion-based final grading with a 90% performance level translating to A, 80% to B, 70% to C, and 60% to D. My expectations for students are that they will improve their academic behaviors through their interactions with the course structure (Brothen & Wambach, 2000).

The issue addressed in this article is the departure that I have taken from the typical PSI format in the characterization of mastery. Instead of requiring students to master units—in my course, textbook chapters—progressively before proceeding to the next, I have required them to achieve increasingly higher levels of mastery with decreasing support as they work on each chapter. I have utilized this system of smaller steps to mastery for two basic reasons. First, similar to the rationale for using a full-range grading system, some students could give up trying to master a particular course unit and never finish. Many developmental education students have ineffective academic behaviors such as procrastination (Wambach & Brothen, 2001) that they must unlearn and replace with effective behaviors before they can become successful (Brothen & Wambach, 2005). My approach with this system has been that poor performance on an early chapter should become a spur to more effective behaviors rather than a roadblock to completion.

Second, there is no inherent rationale for rigid sequencing in a first psychology course. Fox (2004) pointed out that unit mastery "is required because a full understanding of material appearing later in a course is usually dependent upon mastery of the [material] appearing earlier in the course" (p. 203). Students in mathematics courses, for example, need to understand earlier units to avoid getting lost on later material, so requiring a tight sequence of unit mastery seems obvious (Boggs, Shore, & Shore, 2004). However, in a typical introductory psychology textbook, after the introductory chapter there is no compelling reason to arrange the chapters in any particular order. Textbooks differ in their topic sequences and many instructors utilize idiosyncratic assignment orders. Students in my classes have the flexibility to skip and go back to chapters when they are able to do them.

The mastery sequence I require within each chapter addresses the ineffective behaviors many developmental education students bring to their attempt to be successful in college (Brothen & Wambach, 2000). First, they tend to avoid reading carefully or avoid reading at all (Beyeler, 1998). As in the traditional PSI formulation, I provide a study guide that requires students to find information in their textbook to answer questions. In addition, because they often miss important points in their reading, the first computerized mastery practice exercise is a 10-item fill-in-the-blank completion exercise delivered by Internet course software. The items require students

to enter a key word missing from an important phrase in the textbook. Students use their books and can do the exercise easily if they have read the assignment reasonably carefully and especially if they have underlined important points as suggested in the course syllabus and reinforced by the exercise. The items are randomly selected from a large pool; students have 20 min to complete them, and they get feedback consisting of their scores, the items with textbook page numbers, and their answers marked correct or incorrect. They can repeat the exercise as many times as they like, need to achieve a mastery level of 8 correct out of 10 to go on to the next level, and receive extra incentives to persist: one point for 9 correct and two points for 10 correct.

Second, after reaching mastery on the completion exercise, students have access to a computerized multiple-choice practice exercise that is similar to the final chapter quiz in coverage of material (c.f., Oliver & Williams, 2005). This practice quiz has 10 items randomly selected from a large pool of practice items covering the entire chapter content. The items are more difficult than the completion items stressing main points, but students mostly use their books to answer them. Students have 15 min to complete them, can repeat them multiple times, receive feedback consisting of their score along with the items and whether they were correct, and are instructed to find the answers for wrong items. Similar to the completion exercise, students must reach a mastery level of 8 correct out of 10 to continue to the next quiz. They receive one point for getting 9 or 10 correct.

Third, after reaching mastery on the practice exercises, students face the more difficult task of taking the closed book, proctored chapter test. It also is a multiple-choice quiz of 10 items, each worth one course point, selected from a large pool of final quiz items covering the entire chapter. Students can take it three times with their best score counting toward their grade. Feedback is more general, consisting of students' scores and the textbook section they should restudy for incorrect items.

Internet software delivers the practice exercises at any time. The chapter tests are closed book and proctored and can only be accessed from the classroom during regular class times. The software keeps records of all work and also reports to students their course progress. The course syllabus contains a recommended schedule and a review lecture is available on Wednesdays of the week that the chapters are to be completed. However, students work primarily at their own pace against deadlines for each third of the course consisting of six chapter units that come weeks 6 and 12 and at the end of the semester. After deadlines, practice exercises remain available but chapter tests are not again available until a special make-up day on the last day of class. The two intermediate deadlines are designed to reduce the incidence of severe procrastination (Wambach & Brothen, 2001).

That mastery learning models are better for student progress is not at issue as Kulik et al. (1990) have demonstrated. The concern of this article is whether the variant of mastery within units described above is helpful to developmental education students. Fox (2004) has called for research to define mastery further and an opportunity for me to do this occurred in a special section of the course I taught in fall and spring semesters of 2004-2005. That experience is reported here as two studies exploring whether achieving mastery on practice exercises before taking each chapter test results in better

performance than not doing so. Students in any class have various means available to them to prepare for tests. For experienced students, these behaviors are referred to as effective study techniques that can also be conceived of as mastering material before taking a test. The present studies explore the independent effect of practice exercise mastery. The hypothesis for both studies is that mastering unit practice quizzes is positively associated with performance on that unit's test.

Method for Study One

A special section of my general psychology course enrolled 42 students who came to class on Wednesdays to listen to an overview lecture introducing the unit, watch a short video illustrating a relevant psychological concept, and work in groups to discuss issues brought up by the video. On the following Monday they came to a 48-station computer classroom to take tests over the assigned chapter or chapters for that week. In the meantime, they had access to the practice exercises outside of class prior to the test period. These exercises were not required and resulted in no points for completion. However, a mastery criterion was partially in place—students had to score an 8 on the completion exercise to take the practice quiz. I did this because students value practice quizzes but often use them to try to learn the chapter without reading first (Brothen & Wambach, 2001). This procedure increased the likelihood that practice quiz performance reflected mastery rather than simple answer finding from an open textbook.

In addition to gathering records of students' exercise and test taking, I received Human Subjects Committee approval and collected students' American College Testing (ACT) comprehensive scores and their high school ranks (HSR) from the University Records Office for those students who had them on file. Because students could vary their approach by chapter—doing practice exercises some weeks and not others—I treated each student's best score on each chapter's test as the primary units of analysis. Thus, 42 students each taking 18 chapter quizzes resulted in a possible 756 instances of chapter completion. The actual total was 615 due to some students not finishing all the chapter tests. I created a mastery-level score for each chapter by recording whether students did not take a chapter practice quiz (coded 0), took one but did not attain a mastery score of at least 8 out of 10 (coded 1), or achieved mastery of 8 or better (coded 2). I compared this with best chapter test score, HSR, and ACT scores.

Results and Discussion for Study One

The students were 42 first-semester developmental education students with a mean ACT score of 20.06 (SD = 2.92) and mean HSR of 57.29 (SD = 15.40). Over all instances of highest chapter test score, practice quizzes were not taken 43% of the time, were taken but without reaching mastery 22% of the time, and taken reaching mastery 35% of the time. There was clear variation in whether students used the practice quizzes. Mastery level on the practice quiz correlated with chapter test score (r = +.282, 614, p < .001) and a one-way analysis of variance (ANOVA) showed the respective means on progress quizzes for instances of not taking, taking, and achieving mastery on practice quizzes to be 6.96 (SD = 1.66), 6.99 (SD = 1.59), and 8.03 (SD = 1.42) respectively with F (2, 613) = 32.30, p < .001. Mastery on practice exercises was clearly

associated with success on chapter tests. On average, students received just above a grade of B when they reached it and just below a grade of C when they did not.

To determine if this relationship was due to only the better students achieving mastery on practice quizzes and also doing better on chapter tests, I completed a multiple regression analysis with ACT, HSR, and practice mastery as predictors in a step-wise model with chapter test score as the dependent variable. The overall model with three predictors was significant ($R = .394$, $F\,3, 461 = 28.07$, $p < .001$). Practice mastery level entered first, indicating it had the strongest relationship with chapter test score ($r = +.282$), while ACT entered second ($r = +.176$), and HSR third ($r = +.140$), indicating weaker relationships. Better qualified students did better but mastery was most important to success.

The tentative conclusion to be drawn from these results is that if students achieved mastery on the practice exercises, they did better on the chapter test. This finding introduces Study Two, which explored whether students with this choice fared better or worse than students who were required to attain practice mastery on each chapter before taking the chapter test.

Method for Study Two

The course structure for the spring semester nonmastery section was exactly the same except that several non-developmental education students from other colleges of the university enrolled, resulting in a wider range of student abilities. I compared this group of students in a quasi-experimental design with the spring semester students enrolled in the standard section of the course in which I required chapter mastery. Only those students in both course versions who finished the course by taking the final exam were included in this study.

To make students' practice quiz performance between the course methods as comparable as possible, I coded practice quiz scores as low or no mastery (0) if they were below 9 out of 10 or high mastery (1) if they were 9 or 10. I did this because all students taking chapter tests in the mastery sections had to achieve mastery to take a chapter test so that scores of below 9 were not informative as to their effect on chapter test performance. But mastery at a higher level of 9 or 10 added information. Thus, both sections were roughly equated on practice mastery. I then added the 0s and 1s to get a practice total and chapter test scores to get a test total.

Results and Discussion for Study Two

Twenty-seven students finished the nonmastery section and 185 finished the mastery section. Of students with ACT scores on record, the 21 students finishing the nonmastery section had a mean ACT score of 22.10 ($SD = 4.58$), while the 173 students finishing the mastery section had a mean ACT score of 19.80 ($SD = 3.17$). These differences were statistically significant by t-test with $t(192) = 2.97$, $p < .004$. HSR provided no additional information so it was not considered for further analysis. The course versions differed in practice quiz taking and chapter test mean scores. Students in the mastery section averaged more scores of 9 or 10 over the 18 chapters ($M = 13.49$, $SD = 5.34$) than the nonmastery section ($M = 4.26$, $SD = 6.11$). This

difference was significant by t-test $t(210) = 8.24$, $p < .001$, indicating that the point incentives in the mastery section were effective—students not only reached mastery but achieved beyond the score of 8. However, the nonmastery section got higher chapter test score totals ($M = 137.44$, $SD = 26.28$) than the mastery section ($M = 120.16$, $SD = 26.11$). This difference was also significant by t-test with $t(210) = 3.21$, $p = .002$.

Nevertheless, practice mastery correlated with chapter test totals for both the mastery section $r(185) = +.601$, $p < .001$ and the nonmastery section $r(27) = +.687$, $p < .001$, showing that practice mastery was important to success on chapter tests for both methods. The reason for the nonmastery section doing better on the chapter tests appeared to be related strongly to the higher average academic ability of that group. Over all students across both methods, test total correlated significantly with ACT score with $r(192) = +.479$, $p < .001$, and practice total with $r(192) = +.471$, $p < .001$. However, a partial correlation between practice and test totals with the effects of ACT removed showed nearly the same result with $r(191) = +.474$, $p < .001$. After the effects of academic ability were removed, mastery remained a strong predictor—showing that a high mastery level was strongly associated with student success.

Overall Discussion

What are we to conclude about the results of these two studies? First, the present findings are consistent with the Kulik et al. (1990) findings—that mastery performance is beneficial for developmental education students. This means that the within-unit approach to requiring mastery evaluated here shows results similar to the traditional PSI model of progressively mastering independent units within a course. Second, given a choice to perform to mastery, developmental education students do not always make the best choices.

The results of these two studies suggest that instructors have a choice of how to implement mastery learning. Requiring students to master steps within individual course units instead of requiring them to reach mastery on each unit to progress to the next also appears to be more effective than nonmastery teaching methods.

In addition, this study strongly suggests that achieving mastery should not be an option, especially for developmental education students. Higher academic ability students may not need to achieve mastery on instructor-provided quizzes because they have the skills to determine if they have studied effectively. But developmental education students may be less likely to ask themselves questions about their understanding and also less likely to use mastery tools voluntarily to make up for this lack. Instructors wishing to utilize PSI's effectiveness can develop practice exercises that give students feedback on whether they are reaching mastery. However, they are advised by these findings to make taking the final unit quizzes contingent on this mastery.

References

Beyeler, J. (1998) Reluctant readers: Case studies of reading and study strategies in introduction to psychology. *The Learning Assistance Review, 3*(1), 5-19.

Bloom, B. S. (1976). *Human characteristics and school learning*. New York: McGraw-Hill.

Boggs, S., Shore, M., & Shore, J. (2004). Using e-learning platforms for mastery learning in developmental mathematics courses. *Mathematics and Computer Education, 38*, 213-220.

Bonham, B. S. (1990). Research on developmental education: An interview with James A. Kulik. *Journal of Developmental Education, 13*(3), 16-18.

Brothen, T. (1992). A developmental education approach to computer-assisted content instruction. *Journal of Developmental Education, 15*(3), 32-35.

Brothen, T. (1998). Transforming instruction with technology for developmental students. *Journal of Developmental Education, 21*(3), 2-8.

Brothen, T., & Wambach, C. (1999). An evaluation of lectures in a computer-based, PSI introductory psychology course. *Journal of Educational Technology Systems, 27*, 147-155.

Brothen, T., & Wambach, C. (2000). A research based approach to developing a computer-assisted course for developmental students. In J. L. Higbee & P. L. Dwinell (Eds.), *The many faces of developmental education* (pp. 59-72). Warrensburg, MO: National Association for Developmental Education.

Brothen, T., & Wambach, C. (2001). Effective student use of computerized quizzes. *Teaching of Psychology, 28*, 292-294.

Brothen, T., & Wambach, C. (2005). Refocusing developmental education. *Journal of Developmental Education, 28*(2), 16-18, 20, 22, 30.

Brothen, T., Wambach, C., & Hansen, G. (2002). Accommodating students with disabilities: PSI as an example of Universal Instructional Design. *Teaching of Psychology, 29,* 239-240.

Buskist, W., Cush, D., & DeGrandpre, R. (1991). The life and times of PSI. *Journal of Behavioral Education*, *1,* 215-234.

Fox, E. J. (2004). The personalized system of instruction: A flexible and effective approach to mastery learning. In D. J. Moran & R. J. Malott (Eds.), *Evidence-based educational methods* (pp. 201-221). San Diego, CA: Elsevier Academic Press.

Keller, F. (1968) "Goodbye teacher. . ." *Journal of Applied Behavior Analysis, 1*, 79-89.

Kulik, C., Kulik, J., & Bangert-Drowns, R. (1990). Effectiveness of mastery learning programs: A meta-analysis. *Review of Educational Research, 60,* 265-299.

Oliver, R., & Williams, R. L. (2005). Direct and indirect effects of completion versus

accuracy contingencies on practice-exam and actual-exam performance. *Journal of Behavioral Education*, *14,* 141-152.

Robin, A. (1976). Behavioral instruction in the college classroom. *Review of Educational Research, 46,* 313-354.

Ryan, B. (1974). *PSI, Keller's personalized system of instruction*. Washington, DC: American Psychological Association.

Wambach, C., & Brothen, T. (2001). A case study of procrastination in a computer assisted introductory psychology course. *Research & Teaching in Developmental Education, 17*(2), 41-52.

Tutor Selection: A Four-Tier Approach to Success

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Abstract

Finding qualified tutors should be one of the top priorities for a learning center professional. Whether selecting for a small college or a large university, a systematic and consistent approach to recruitment and selection of tutors will strengthen the integrity of a learning center. A 4-tiered tutor selection process that includes minimum academic requirements, pretesting for content, a tutoring demonstration, and an interview has shown to be a successful method of assuring quality tutors and reducing tutor attrition. The system includes both objective (i.e., quantitative) and subjective (qualitative) elements that assure a well-rounded selection process.

Martha Maxwell (1994) in *When Tutor Meets Student* wrote that the tutor selection process "is as demanding as the training" (p. 222). Those words are as true today as they were more than 10 years ago. However, the criteria for hiring and training peer tutors have changed. In 1991 many colleges and universities hired peer tutors, but only a few provided them with formal training, and they were traditionally hired solely on their academic success because it was often assumed that "tutors will gain tutoring techniques with experiences" (Sheets, 1994, p. 2). Although tutors unquestionably gain technique with experience, leaving tutor training to the "seat of one's pants" method is no longer the norm; tutor training is heralded as best practice by retention experts, professional associations, and the agencies that set higher education standards. Elaine Wright (2003) stated, "The implementation of training does often enhance a program's credibility and provides rewards for both training staff and for the program tutors" (p. 9). Wright further explained that the College Reading and Learning Association tutor certification program, which is influential in setting best standards for the discipline, has established a model for a 3-tiered tutor certification program: regular, advanced, and master tutor (p. 10). Furthermore, part of the 2003 standards set by the Council for the Advancement of Standards in Higher Education (CAS) included the need for "establishing procedures for staff selection, training, and evaluation; set expectations for supervision, and provide appropriate professional development opportunities. The [learning assistant professional] must strive to improve the professional competence and skills of all personnel [s/he] employs" (Miller, 2003, p. 210). Learning centers are now recognized

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as an effective retention tool for providing quality academic student services. The question has evolved from "Do learning centers and peer tutoring work?" to "What is the best system of providing academic services to students?" Noel-Levitz Senior Executive David Crockett (2004) said: "The vast majority of student services problems are the result of poor systems, not by [*sic*] poor performance of staff" (p. 91-A). That statement resonates well when considering the tutor selection process because a consistent, effective selection process can become an important component in assuring continuity of quality tutoring services. Specifically, tutor turnover, a common problem as demonstrated in two vastly different learning centers—one in a small four-year private liberal arts college and another in a large public research university—may be improved by developing a streamlined selection system.

Although the tutor selection process can be as diverse as the various types of learning centers, traditionally there are some common elements: proof of grade point average, satisfactory course completion, instructor recommendation, some type of display of content expertise, and an interview process (Barnett & Blumner, 2001; Maxwell, 1994; Wood, 1978). The purpose of the research study presented in this article was to see if creating a tiered tutor selection process would streamline the selection procedure, produce tutors better qualified to begin the tutoring process, increase tutor retention, and enhance student success. As such, a pilot program was developed that identified four basic elements in the selection approach: minimum academic requirements, content knowledge pre-testing, the interview, and a tutoring demonstration. The elements became the basis for the four-tier system.

Program Description

A pilot tutor selection procedure was established with a four-tier system that would provide continuity during the tutor selection process, providing four distinct gateway areas that allowed for the selection process to end at any one of those points. Each section gathered progressively more critical objective and subjective information to help the interviewer during the process while simultaneously providing the candidate with an increasingly clear overview of the skills necessary for successful tutoring. The system was piloted in both a large research university learning center with an average tutor pool of about 100 tutors and a small 4-year private liberal arts college with an average tutor pool of about 25 tutors. Consequently, while keeping the same elements of the pilot, the different institutions individualized aspects of the pilot to accommodate specific needs.

Prior to Selection: Recruitment

Although applicant recruitment was not part of this tiered selection pilot, it is an important groundwork component to any tutor selection process. Maxwell (1994) identified four successful ways to interest potential tutors: word of mouth, newspaper ads, flyers, and instructor or tutor recommendations (p. 222). The virtual explosion of college computerized student database systems in that past 10 years provides another way of finding potential tutors. In a few moments, the computer system can print out a list of academically qualified students with home addresses, e-mail accounts, and phone numbers that can then be used for sending a burst of personal invitations to apply. These methods, while not exclusive, are examples of some ways to start the selection process moving. Each method has benefits and drawbacks relative to the quality of

applicants received. Although newspaper ads and flyers do canvas a large area and can bring in "fresh blood," it is logical to assume that some of those applicants may not have a clear understanding of what it is to be a tutor. Similarly, candidates who apply as a result of word of mouth may have a working knowledge of what to expect as a tutor but may not be qualified. There are many benefits for seeking suggestions from faculty and department chairs: (a) the applicant automatically has faculty recommendation; (b) the instructor already likes the applicant and, therefore, feels more comfortable with the tutoring system; (c) and the potential tutor has a personal knowledge of an instructor's teaching style. Yet, neither faculty recommendation nor academic success guarantees student interest, aptitude in explaining contest to others, or availability. The trick is both attracting potential applicants and creating a selection process that will efficiently screen the best candidates. Figure A. the Tutor Selection Checklist, summarizes the steps in the selection process.

TUTOR SELECTION CHECKLIST

Applicant: _____ Date Received: __/__/____
                                     Date Transcript received: __/__/____

Address: _____ Phone #: _____
         _____ Cell #: _____
Email: _____

TIER 1 – Minimum Requirements

Applicant: _____ Current student _____ Graduate _____
Academic Level: ? Freshman   ? Sophomore   ? Junior ? Senior

Applicant is Eligible to Tutor:

Course	Grade

Applicant is Available to Tutor:

Day	Time

Recommended by: _____
Comments: _____
Disposition: _____

TIER 2 - Testing

TEST	DATE SCHEDULED	DATE TAKEN	SCORE
Competency Test			
-Retake Competency			
Proofreading Test			
Essay			

Comments: _____
Disposition: _____

TIER 3 - Demonstration

Date explanation of interview/demonstration provided to applicant: __/__/__
Date of Tutor Demonstration: __/__/__ Demonstration Topic: _____
Comments: _____
Disposition: _____

TIER 4 – Interview

Date of Interview: __/__/__   ? Applicant passed
Comments: _____
Disposition: _____

Hiring Procedures

Date of hire: __/__/__   Start date: __/__/__
  ? Paper work completed and submitted to HR   Date: __/__/__
  ? Applicant entered into TutorTrac   Date: __/__/__
  ? Tutor folder made   Date: __/__/__
  ? Training completed   Date: __/__/__

Figure 1. Tutor selection checklist.

Tier 1: Establish Minimum Requirements

The first tier of the selection process establishes that the applicant qualifies with a base level of subject competency by requiring two mandated components, grades and

commitment to training, and one optional component, faculty recommendation. For this research study, all applicants in both institutions were required to have a minimum 3.0 cumulative grade point average (GPA) because a solid B grade point average can be an indicator of a student with well-rounded study skills as well as content knowledge, but it does not preclude students who may have had a problem with one or two courses outside of the tutoring subject area. The pilot varied by institution for the next two requirements. The university pilot required a 3.0 GPA for the course that was to be tutored, while the college's requirement was a 3.5 GPA. The college determined these grade point criteria when the learning center was developed in 1999 as part of a college task force that included faculty input from various disciplines.

The next component in this tier varied because the two institutions had different tutor training programs. The university already had a program that offered tutor training, so the learning center was able to require applicants to complete a tutor course as part of this tier requirement. However, because the college does not have this course offering, the pilot was changed to require tutor applicants to commit to attending a tutor training program prior to beginning tutoring. A third component was more of an optional component in the pilot because of the higher student-to-faculty ratio in the university compared to the college program. The university did not require faculty recommendations due to large class sizes that make it difficult for instructors to become personally acquainted with many of their students. On the other hand, the college, with a low student-to-faculty ratio, mandated this component because the faculty requested the input in the tutoring selection process for undergraduates.

These components in the first tier immediately provide a concrete assessment of the candidates, thus speeding up the selection process. Academic information, including registered units, cumulative GPA, enrollment status, and courses to tutor, gathered as part of the application form, quickly allows for seamless elimination of clearly academically unsuitable applicants. Other pertinent information such as name, address, phone number, student ID, e-mail address, availability schedule, and financial aid or work-study eligibility, gathered on the application form, becomes more essential once the selection process is completed. Pre-interview questions included on the application form provide a "sneak preview" of the candidate. Although the responses do not determine if a candidate progresses to the next tier, they do benefit both the interviewer and applicant. The questions asking if the applicant has had previous tutoring, teaching, or counseling experience help the interviewer by giving information on what type of understanding the applicant may have in the tutoring process. These responses may give an indication of the applicant's tutoring skill level, assumptions about tutoring, or tutoring potential. Conversely, questions that ask the applicant why she or he is interested in becoming a tutor or asking about characteristics of a good tutor encourage the applicant to start thinking about the tutoring process. The pre-interview questions help both the applicant and interviewer prepare for the third (i.e., interview) and fourth (mock tutoring) phase of the selection process. The interviewer can base questions on these responses while the applicant can build on these answers.

Tier 2: Testing

Subject competency testing, the second tier of the selection process, plays an integral role in finding the most subject-qualified tutors. The tests provide an accurate snapshot

of the candidate's current knowledge base. It is not unusual for students to pass a course with a "qualifying" grade but be unable to pass the qualifying exam. This phenomenon is particularly true if some time has passed since the applicant completed the course.

The institutions differed on how to execute the testing tier. The university used its learning center's professional staff to design a multitude of tests for use in writing, math, chemistry, biology, and statistics. Subject tests in other disciplines came from sample exams from the university professors. Tests were usually 2 hours in length and resembled a final exam. The college, on the other hand, relied on standardized tests. Potential math and writing tutors were required to complete specific pretests in the software self-help program, *SkillsBank4,* by Advancement Technologies (1997). The software program automatically sets up the pretests to an 80% parameter for passage. If the applicant does not pass the pretest, the software automatically indicates the areas of weakness and provides practice assignments, which the applicant must complete before attempting the posttest. Chemistry students were given a standardized undergraduate placement exam, the Toledo Examination 1998, prepared by the American Chemical Society Examination Materials (Eubanks, 1998). This three-part exam contains 60 questions and takes about an hour to complete. Both institutions additionally required writing tutor applicants to complete a proofreading exercise and to write a brief essay from a writing prompt.

The tests are a second quantitative element in the selection process. Because the interviewer has objective data on the candidates' areas of strengths and weakness, the interviewer can prepare individualized, precise questions for the third tier of the selection process or, depending on the results, stop the selection process altogether. This tier may not necessarily guarantee candidate elimination, but can be used to help the tutor recognize areas of weakness and begin immediate steps for improvement. For instance, if the student scored close to the 80% passage on the standardized competency test, the interviewer could still decide to hire the candidate with an added stipulation the candidate complete some remediation exercises and then take a second post-exam. For example, since 2003, 57 tutors for the college took the SkillsBank tests. Of those tutors, 46 passed the standardized test with an average score of 85% the first time. Only 11 applicants (5%) needed the remediation process; all 11 passed the post-test with an average score of 94%. Tutors like the testing system because it is an excellent content review for them and helps build confidence before plunging into tutoring.

Tier 3: Tutoring Demonstration
All applicants who met the minimum qualifications, passed the subject competency requirements, and completed a tutor course or committed to attend tutor training were eligible for the demonstration tier of the selection process. Prior to the interview, applicants received an explanation of the next two tiers (demonstration and interview). This is best accomplished in a detailed e-mail that explains the last two tiers in the interview process: a 10-minute tutoring demonstration and a 20-minute follow-up interview.

The tutor demonstration is a distinct component of the selection process. It provides an opportunity to see the applicant in action and gives the applicant an idea of what is expected from tutors. The applicant is informed that the interviewer will not only be

the tutee but will be observing the applicant for eye contact, level of tutee involvement, the use of feedback techniques, subject preparation, and listening skills. Prior to the interview, armed with the knowledge of how a tutor will be expected to work, the applicant can prepare a tutoring demonstration based on one of the prompts provided that will help the interviewer determine the overall potential success of an applicant and make an effective hiring decision.

This section provides essential qualitative information for the interviewer. The interaction with a candidate provides an immediate personal connection that presents an idea of how a real tutoring session may transpire. It is a fail-safe method for the candidate, who can have an opportunity to experience tutoring without the added pressure of actually working with a student.

Tier 4: Interview

This final tier of the selection process is also qualitative; it allows the interviewer an opportunity to connect with the applicant beyond grades and test scores. The purpose of the interview is to determine if the applicant has the potential to be an effective tutor and allows an opportunity to discuss specific tutoring questions based on the information received in the prior tiers. The interview process can include discussion on performance requirements. This final tier includes an introduction to the professional associations in the discipline. The applicant needs to be willing to accept that professional role.

Method Used in Research

The pilot was implemented for 1 full year at the university and, unfortunately due to unforeseen circumstances, one full semester at the college. Procedural documents were created to aid in the interviewing process (see Figures A and B). Anecdotal results were collected from in-house student satisfaction surveys. This pilot study used both quantitative and qualitative data collection to investigate the factors that can determine the outcome of using a four-tier system to obtain qualified tutors to promote tutoring success. A majority of the data collected included information contained in quarter, semester, and annual reports used for administrative program purposes. The data was used to see if there was a connection between the use of a tiered approach, with specific tested strategies, to hiring tutors and the increase in student success.

Results

The four-tiered process pilot, which brought both subjective and objective elements into the selection process, has shown preliminary success at both the university and the college. Both the quality of tutors and the tutor retention rate have improved as a result of this pilot. For instance, before the system was initiated in the university pilot in 2002, there was a 60% tutor retention rate, compared with a 95% retention rate during the 2005 academic year (Hunter, 2005 a, p. 1). The success rate for students also increased from 70% to 78% of tutees who received a C or better grade following tutoring services. The private college also saw improvement. In the 2003-2004 academic year, the college experienced a 32% tutor retention rate, including 10.5% of the tutors who were hired

TUTOR APPLICATION CHECKLIST

TUTOR'S NAME: _____   DATE: _____

MINIMUM ELIGIBILITY REQUIREMENTS

_____ Applicant is an undergraduate student enrolled in a degree program.
_____ Applicant is available for a minimum of 10 hours per week.
_____ Applicant is available to attend the required Tutor Training sessions.
_____ Applicant has a cumulative 3.0 GPA or better.
_____ Applicant has met the course completion requirements or testing requirements.

TUTORING DEMONSTRATION

> **Note:** Your application must be complete. Only those applicants selected for an interview will be notified.

1. Eye Contact   Above Average   Average Below Average
2. Subject Knowledge   Above Average   Average Below Average
3. Listening Skills   Above Average   Average Below Average
4. Patience   Above Average   Average Below Average
5. Positive Reinforcement   Above Average   Average Below Average
6. Involvement   Above Average   Average Below Average
7. Feedback Techniques   Above Average   Average Below Average

Comments:

Tutor Application

Date _____Quarter _____

Name _____
              (Last)   (First)   (Middle Initial)

Student ID # _____   email:_____

Current Address _____
              Street Address   Apt # or Res. Hall & Rm. #   City   State   Zip   Phone

Units registered this quarter: _____ *Cumulative GPA:* _____ *STEP Student:* Yes _____ *No* _____

Financial Aid Eligible: Yes _____ No _____   Work Study Eligible: Yes _____ No _____

Enrollment Status (Circle One):   Freshman   Sophomore   Junior   Senior

OFFICE USE

ONLY

List courses you want to tutor	Quarter Completed	Grade Received	Testing Required
1. _____	_____	_____	Y N
2. _____	_____	_____	Y N
3. _____	_____	_____	Y N
4. _____	_____	_____	Y N

5. **WRITING TUTOR APPLICANTS ONLY:**
   List all UC Davis writing component courses you have taken and received a "B" or better: _____
   _____

Please indicate below all times you would be available to tutor students (minimum 10 hours).

	Monday	Tuesday	Wednesday	Thursday	Friday
8-9					
9-10					
10-11					
11-12					
12-1					
1-2					
2-3					
3-4					
4-5					
5-6					

Signature of Applicant: _____
1. How did you learn of the Learning Skills Center's need for qualified tutors?
2. Why are you interested in becoming a tutor?
3. Describe the characteristics of a good tutor?
4. Describe your previous tutoring, teaching, or counseling experience.

Figure 2. Tutor application checklist.

and set up for tutoring but dropped out within one month of being hired. Similarly, the following year the college had a 34% retention rate, including 11% of tutors who were hired but dropped out within one month of hiring. Since initiating the pilot tutor selection system, the college learning center has enjoyed a 50% tutor retention rate, a 16% increase of tutor retention (Sattelberg, Knapke, & McIntyre, 2005, pp. 1-3). Furthermore, two potential tutors did not complete the tutor selection process, indicating the selection system worked; the candidates were winnowed out naturally before the process ended.

Comparing the college in-house student satisfaction surveys, the tutor selection process, which was always rated very highly, has also resulted in even more positive anecdotal reports of academic success. During the semester immediately prior to the pilot, 18% of students responded with a 5 (i.e., excellent) on a Likert-type scale to the question to rank the "effectiveness of tutors." Furthermore, 6.7% of the respondents prior to the pilot added an anecdotal comment that they thought that the tutoring had improved their grades. The following semester showed a significant increase in student satisfaction with 43% of respondents ranking the effectiveness of tutors with a 5, a 25%

increase in student satisfaction. Similarly, 28% of the respondents added anecdotal comments that they believed that their grades had improved (Sattelberg et al., 2005, p. 4).

Comparing the university in-house student satisfaction surveys, an increase in student performance has also been seen. In a 3-year Math and Science Evaluation Summary (2005), the university satisfaction levels increased from an average of 6% in the attitude category, 9% in the competency category, and 4% in the independence category. The anecdotal comments also indicated that the students believed that their increased understanding level of the subject was due directly to the knowledge and expertise of the tutors (Hunter, p. 6).

Implications

Similar results in the parallel pilot studies conducted at both a large university and a small college indicate that the four-tier system can benefit tutoring services in diverse institutions of higher education. Tutor candidates said the process gave them a better understanding of what to expect in the job and a sense of comfort in their own ability. As a result, the quality of the tutoring sessions improved. One implication of the tiered selection system is its adaptability: it was able to be tailored to accommodate the needs of both ends of the higher education spectrum, from a large research university to a small private college. For instance, the larger institution could require potential tutors to complete a tutoring course, an option not possible for the college. Also, the university was able to tap into the various departments for sample tests while the smaller college used standardized tests, and both methods appear to have achieved their goals. The element of content testing remained; only the execution differed.

Suggestions for Further Research

This pilot study focused only on creating an adaptable system of tutor selection that would improve the tutoring program with the goal of maintaining a consistent pool of tutor applicants. The focus was to determine if the tiered system had a potentially positive impact on overall program success. Further research could be conducted to compare the difference between providing a standardized or individually-created test to see if it had any impact, first on the tutoring selection process and second on the tutoring results. Research could also test differences between a required course to train tutors and other training formats.

Because the pilot was relatively new, a long-range study focusing on quantitative learning outcomes with the tutors hired under this system could be beneficial. Further research could also study the connection between the tutor selection processes and student learning outcomes more closely than this study allowed. Finally, formal statistical testing could be used within a controlled environment to test for significant differences in outcomes using the tiered selection process. A sampling of student success of those who were tutored versus those who were not could be collected for analysis based on a study by Hendrickson, Yang, Love, and Hall (2005) that sought to find a measurable outcome by analyzing the achievement of students who passed their tutored course compared with nontutored students (p. 58). The study looked at data

that delineate grades in courses tutored, pass rate in course, and course completion rate (p. 59). While the purpose of the study by Hendrickson et al. was to create a learning outcome for tutored students to pass at the same rate as nontutored students, a study to evaluate the tutor selection process could, instead, review grade completion rate of students tutored prior to the pilot with those tutored after.

In a perfect world, this tiered selection process provides time for a supervisor to assess each applicant's qualifications. However, this is not a perfect world. There are times, unfortunately, where the best laid plans and processes must be thrown to the wind because of an urgent need, a special circumstance, or some other unforeseen complication. However, if a solid procedural basis is in place, those unusual circumstances can be the exception rather than the rule.

References

Advancement Technologies. (1997). *SkillsBank4: Success starts with the basics.* Baltimore: SkillsBank Corporation.

Barnett, R. W., & Blumner, J. S. (2001). *The Allyn and Bacon guide to writing center theory and practice*. Boston: Allyn and Bacon.

Crockett, D. S. (2004, December). *Best practices in mobilizing your campus for retention.* PowerPoint presentation at the 2004-2005 Workshop: Best Practices in Student Recruitment and Retention, Hebron, KY.

Eubanks, L.T. (1998). *ACS Division of chemical education examination Toledo chemistry placement examinati*on. Clemson, SC: Clemson University.

Hendricksen, S. I., Yang, L., Love, B., & Hall, M. C. (2005). Assessing academic support: The effects of tutoring on student learning outcomes. *Journal of College Reading and Learning, 35*(2), 56-65.

Hunter, C. (2005). *Learning skills center annual report.* Davis, CA: University of California Davis

Hunter, C. (2005). *Three year math/science evaluation summary*. Davis, CA: University of California Davis.

Maxwell, M. (Ed.). (1994). *When tutor meets student* (2nd ed). Ann Arbor, MI: University of Michigan Press.

Miller, T. K. (Ed.). (2003). *The book of professional standards for higher education, 2003* (3rd ed.). Washington, DC: Council for Advancement of Standards in Higher Education.

Sattelberg, L., Knapke, C., & McIntyre, K. (2005). *2005 tutor selection pilot analysis* (Department of Academic Services Internal Report). Sylvania, OH: Lourdes College.

Sheets, R. A. (1994). *The effects of training and experience on adult peer tutors in*

community colleges. (Doctoral dissertation, Arizona State University, 1994). Retrieved November 16, 2005, from http://www.pvc.maricopa.edu/~sheets/ dissertation/title.html

Wood, N. V. (1978, March). *Selecting effective peer tutors.* Paper presented at the Annual Conference of the College Reading Association, Long Beach, CA. (ERIC Document Reproduction Service No. ED 154372)

Wright, E. (2003). Planning a tutor training program. In S. Deese-Roberts (Ed.), *Tutor training handbook* (rev. ed.) (pp. 9 -13). Auburn, CA: College Reading and Learning Association.

Join the Conversation
The Impact of the GI Bill on Developmental Education

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Abstract

This article, which was presented at the National College Learning Center Association's 20ᵗʰ Annual Conference, examines the historic and current ramifications of the most comprehensive education legislation package ever created, the Servicemen's Readjustment Act of 1944 (the GI Bill). The article presents the early controversies surrounding the provisions of the Bill, along with the details of its initial passage. It examines the 2-way impact of 7.8 million World War II (WWII) veterans having used the GI Bill to access higher education. Multiple ways in which developmental education programs contributed to the success of WWII veteran students are discussed. Finally, I present the evolution of the GI Bill and its continuing recognition of the importance of developmental education.

In recent years developmental education professionals have increasingly advocated the importance of understanding the history and development of their discipline. The writings of McCabe and Day (1998), Casazza (1999), Boylan (2000), and Stephens (2001) are excellent examples of this movement. Each of the aforementioned authors has emphasized this point: the Servicemen's Readjustment Act of 1944 (the GI Bill) had a profound impact on developmental education. This article examines the ramifications, both historic and current, of the most comprehensive education legislation package ever created.

It is critical always to remember that the landmark education benefits of the GI Bill were birthed from the most violent and devastating war the world had ever known. The December 7, 1941, attack on Pearl Harbor, which resulted in over 2,300 casualties, drew the United States into World War II (WWII). The June 6, 1944, invasion of the beaches of Normandy, which turned the tide of the war on the European front, marked the deadliest conflict in the history of the world with over 200,000 Allied casualties alone. Over 16 million Americans were called to military service prior to the German surrender on May 7, 1945, and the Japanese surrender on September 2, 1945. Of those, WWII claimed over one million American casualties, including more than 400,000 deaths (Pedigo, 1994).

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Prior to WWII, the United States had a poor track record of assisting its military veterans. Civil War veterans frequently returned to dismal economic conditions with little or no government assistance. World War I veterans returned to the first stirrings of the Great Depression, which resulted in as many as nine million people left unemployed (Kiester, 1994). President Wilson and Congress elected not to assist returning soldiers, exacerbating unrest that culminated in the violent Bonus Marches of the early 1930s (Dickson & Allen, 2004). So haunting was the post-WWI economic climate that

> Many feared that postwar America at the end of World War II would be faced with the loss of millions of jobs, creating unprecedented unemployment and possible civil unrest. A federal survey indicated that 50 percent of the nation's soldiers anticipated a widespread economic depression after the war. The Great Depression of the 1930s was still fresh in people's minds. (Pedigo, 1994, p. 54)

These fears were also aggravated by President Roosevelt's record of opposing veterans' assistance benefits. Indeed, in 1935 Roosevelt vetoed a bill legislating bonuses for veterans, "stating that wearing a uniform did not accord a citizen special treatment" (Ford & Miller, 1995, p. 12).

Meanwhile, American colleges and universities were elitist institutions, predominantly attended by wealthy, White, Protestant men. In contrast, only 5% of all enlisted men and their officers who served in World War I had attended college (Edmondson, 2002). Even immediately prior to World War II, only 10% of Americans attended college (Wilson, 1995b). White women were typically relegated to women's colleges, and "Jews and Catholics were limited by quotas in their admittance to the most prestigious universities" (Wilson, p. 22).

Segregationist laws meant that access to higher education was far more limited for African American men and women. For example, of the nine public colleges in the state of Virginia in 1940, only one admitted African Americans (Wilson, 1995a). Approximately 85% of African Americans who did access higher education attended southern historically Black colleges and universities, known as HBCUs (Wilson, 1995b). Graduates of HBCUs tended to remain in the South as teachers and comprised a mere 1.2% of all Americans with college educations (Wilson, 1995a).

Birth of the GI Bill

As early as June of 1942, legislators in Congress were discussing and debating potential programs to assist veterans upon the eventual end of World War II. Pragmatism, not altruism, was the driving force behind those proposals. There was great concern that a sudden return to peacetime government spending levels, coupled with the simultaneous attempts of millions of veterans to reenter the civilian workforce, might cause the United States' economy to plummet into a new depression (White, 2004). In an often-quoted moment, Congressman Hamilton Fish exclaimed that veterans could not "come home and sell apples as they did after the last war. . . I believe we would have chaotic and revolutionary conditions in America" (Wilson, 1995b, p. 21). Planning to seek reelection and recognizing the potential voting power

of millions of veterans, President Roosevelt set aside his earlier opposition and quietly requested that a variety of government and private agencies make postwar planning recommendations to Congress (Edmondson, 2002).

Among subsequent recommendations, provisions of The Wisconsin Educational Bonus Law of 1919 (TWEBL) were highlighted as a potential model for post-WWII assistance. Under TWEBL, WWI veterans in the state of Wisconsin were offered a stipend of $30 per month for up to 48 months to attend any nonprofit school, from elementary school through university, in Wisconsin (Ford & Miller, 1995). Despite this and a host of other recommendations, Congress had failed to vote on approximately 640 veterans' assistance bills by early 1942 (Buckley, 2004).

The American Legion, founded in 1919 to assist veterans of World War I, stepped in and began to lobby Congress actively for comprehensive veterans' assistance legislation in 1942 (Brooks, 2001). In the end, the legislation was drafted by a representative of the American Legion itself. The proposal that was to become the GI Bill was written in longhand by Legionnaire Harry Colmery in a Washington, DC hotel room in 1943 (Kiester, 1994). This bill, originally titled "A Bill of Rights for G.I. Joe and G.I. Jane" (Edmondson, 2002), was astonishingly comprehensive. In addition to educational benefits, the GI Bill included unemployment allowances, hospital services, career counseling, and mortgage loans (Edmondson).

Senate sponsors of the GI Bill included Bennett Clark, a conservative Democrat from Missouri, and John Rankin, a segregationist Democrat from Mississippi (Wilson, 1995b). In the 1930s, Clark had strongly opposed President Roosevelt's New Deal legislation, making him a surprising advocate for the sweeping provisions of the GI Bill (Ford & Miller, 1995). Rankin, in another surprising move, was so adamant in insisting that veterans select educational institutions for themselves that he called upon the federal government to "protect the rights of smaller schools, including some Negro institutions" (Wilson, 1995a, p. 42). From the beginning, the terms of the GI Bill were contentious. Some Congressmen disputed issues related to program oversight, disagreeing about whether state agencies or the federal government should control the exchange of money. Other Congressmen voiced the concerns of the Disabled Veterans of America (DVA), who worried that disabled veterans might lose needed funds if financial assistance was offered to all WWII veterans (Kiester, 1994).

A great deal of controversy arose specifically over the terms of the education provisions in the bill. In order to ensure that veterans would truly be able to choose from among the education institutions that would accept them, legislators sponsoring the GI Bill set the education benefit cap at $500 per year for up to 4 years plus a living allowance of $50 to $75 per month. This stipend, which was high enough to finance full tuition, fees, books, and supplies at prestigious institutions including Harvard, upset many high-profile university administrators. Colleges and universities in the United States were historically elitist institutions; many within those institutions found the thought of opening their doors to primarily working-class veterans outrageous. University of Chicago President Robert M. Hutchins declared the proposal "unworkable" and stated that the GI Bill "threatens to demoralize education and defraud the veterans" (Buckley, 2004, p. 24). Harvard University President James B. Conant

offered even more biting remarks, stating that the bill "did not distinguish between those who can profit most by advanced education and those who cannot" (Buckley, p. 24). Many colleges even announced plans to segregate veterans from other students if the GI Bill passed, but these plans were never realized.

Perhaps the most serious threat to the tenuous passage of this legislation was contained within the terms of the proposed unemployment compensation. The GI Bill was opposed by many Southern legislators, and indeed was almost lost because it dictated that Black and White veterans alike receive the same unemployment compensation, despite the racist two-tiered wage system of many Southern states (Ford & Miller, 1995).

After finally passing through the House of Representatives by a margin of one vote, Public Law 346, the Servicemen's Readjustment Act of 1944, known simply as the "GI Bill" was forwarded to President Roosevelt. On June 22, 1944, in a quiet ceremony with little media attention, Roosevelt signed the landmark legislation into law. Roosevelt declared that the GI Bill "gives emphatic notice to men and women in our armed forces that the American people do not intend to let them down" (Pedigo, 1994, p. 54).

Impact of the GI Bill

The most startling statistics surrounding the education provisions of the GI Bill related to the sheer number of veterans who took advantage of this legislation. In 1944 both the War Department and the Veterans Administration estimated that approximately 700,000 people would use the GI Bill for any sort of education or training (Edmondson, 2002; Ford & Miller, 1995). In reality, an astonishing "7.8 million veterans, or 50.5 percent of the World War II veteran population, received training or education under the bill" (Roach, 1997, p. 26). In addition to the 2.2 million veterans who used their GI Bill education benefits to attend colleges and universities, 3.5 million enrolled in vocational schools, and almost 2.2 million sought on-the-job or farm training (Buckley, 2004).

With the financial support of the GI Bill, veterans flooded the campuses of colleges and universities throughout the United States in the years immediately following World War II. Many of these veterans benefited from increased access to expanding developmental education programs, also funded by the GI Bill. Advising services, tutoring programs, and courses in reading and study skills were developed to meet the needs of veterans pursuing higher education (Casazza, 1999).

Heightened awareness of the importance of developmental education programs became increasingly apparent after WWII ended. In 1948 the California Legislative Interim Committee on the Survey of Higher Education issued a report that included an analysis of the impact of veterans' enrollment. This report proposed that junior colleges in the state of California "may properly include grades 11 through 14" instead of limiting their curricula to grades 13 and 14 only (Legislative Interim Committee, 1948, p. 22). A 1950 study conducted at Illinois University illustrated that an overwhelming majority of colleges and universities had begun offering remedial learning services (Moore, 1950). Boquet (1999) carried this analysis further and suggested that the very nature of learning services, specifically the work of writing centers, became more

individualized and skills-based after World War II.

In 1942 a total of 213,000 college degrees were awarded nationwide. In 1951, that number soared to 454,000 degrees conferred (Bennett, 1996). During this same time, the United States saw a 10% increase in the number of new 2- and 4-year colleges (Bennett). This construction boom, in turn, had a secondary advantage of creating a wide variety of employment opportunities (Reed, 2002).

Many religious colleges and universities received additional benefits from this influx of enrollees. Between 1940 and 1950, enrollment in Roman Catholic colleges increased from 162,000 to 293,000 students. This figure continued to climb, and by 1960 Catholic institutions served 426,000 students (Edmondson, 2002). As their size and visibility grew, Catholic colleges and universities began to receive regional accreditation, which made them more academically competitive. Many Catholic colleges and universities were even able to develop graduate programs as an indirect result of veterans' enrollment (Edmondson).

Historically Black colleges and universities, meanwhile, experienced the mixed blessing of attracting more prospective students than they could possibly accommodate. Between 1946 and 1947, the number of veterans attending White institutions increased by 29%, while the number of veterans attending HBCUs increased by 50% (Wilson, 1995b). Between 1940 and 1950, enrollment at HBCUs more than tripled (Wilson). By some estimates, HBCUs had to turn away 55% of African American veterans who sought admission (How the GI Bill, 2003). The Lantham Act of 1946 only partially alleviated this crisis by providing increased funding and expansion of HBCUs at a rate, measured in dollars per square foot per veteran, of almost double that of White institutions (Roach, 1997).

While African American veterans were allowed to attend many colleges and universities in Northern states, this was logistically impossible for many. The effects of segregation on post-WWII access to higher education were stark. While 19% of White WWII veterans eventually earned a college degree, only 6% of African American veterans were able to do so (How the GI Bill, 2003).

In 1947 alone, veterans accounted for 49% of all students enrolled in college (Bennett, 1994). These older, typically serious students had a tremendous impact on the culture of higher education. Before WWII, many colleges would expel students simply for getting married (Kiester, 1994). After the war, 50% of college students were married and 25% were parents (Willenz, 1994). As Kiester explained,

> Veterans were creating families as fast as they could get to the altar; so many babies were born in one section of the University of Minnesota veterans' housing that it was nicknamed "Fertile Acres." Baby carriages were parked under the campus elms; drying diapers fluttered in place of college pennants. (p. 133)

Despite family obligations, veterans were incredibly dedicated students. At Stanford University, for example, veterans contributed to record-high grade point averages and

record low absenteeism and drop-out rates. Kiester (1994) explained, "other Stanford students called the veterans 'DARs'—'Damn Average Raisers'" (p. 133).

The fast pace with which veterans sought to complete their educations necessitated the offering of early morning, late evening, and summer classes on many campuses. At the same time, carefree collegiate traditions began to disappear. Freshman beanie hats, goldfish eating, and superstitious courting rituals were mocked by many veterans. As Kiester (1994) quipped, "No 25 year-old freshman who had gone through the Battle of the Bulge and had a wife and two kids was going to put up with such a thing" (p. 132).

World War II veterans accessed a grand total of $7 billion in education provisions by 1952 (Reed, 2002). Adjusted for inflation, that figure would equal over $40 billion today. This national investment produced approximately 450,000 engineers; 240,000 accountants; 240,000 educators; 91,000 scientists; 90,000 medical professionals; 17,000 writers; as well as thousands of clergy and other professionals (Buckley, 2004; Kiester, 1994). A 1988 Congressional report estimated that every dollar invested in the education of WWII veterans produced a return of at least $6.90 (Reed). As Buckley stated, these educated veterans "lifted the standard of living of the nation and raised the educational expectations of their children and future generations" (p. 25).

Evolution of the GI Bill

From 1944 to present, the education provisions of the GI Bill have been modified many times, often in conjunction with significant military conflicts. The Veterans' Readjustment Act of 1952, for example, was passed to assist veterans of the Korean conflict. This Act provided veterans with $110 per month, for up to 36 months, to pay for education expenses (Ford & Miller, 1995). Enrollment in U.S. colleges and universities increased almost 21% between 1950 and 1960 (Reed, 2002), with nearly 44% of Korean conflict veterans accessing education benefits (White, 2004).

The Veterans' Readjustment Act of 1952 was modified in 1955 and again in 1966 to provide additional retroactive benefits to post-Korean conflict veterans and Vietnam conflict veterans (Buckley, 2004; Ford & Miller, 1995). One significant modification allowed military members to access their GI Bill benefits while still serving on active duty.

The 1970s saw the enactment of the modest Veterans Educational Assistance Program (VEAP), which served as an enlistment incentive during and after the Vietnam conflict (Roach, 1997). This legislation was inferior to previous GI Bills in that it required service members to contribute to the plan. Enlistees could contribute between $25 and $100 per month, up to a cap of $2,700. The federal government, in turn, matched enlistees' contributions at a rate of two to one (Ford & Miller, 1995). Veterans Educational Assistance Program benefits were modified in October of 1992, granting VEAP-eligible veterans financial assistance for academic tutoring services (Scoggins, 2005).

In 1984, Representative Montgomery, a Democrat from Mississippi, "resurrected and reinvented the GI Bill" (Freedberg, 1999, p. 2422). Under the initial provisions of the Montgomery GI Bill (MGIB), interested service members paid $100 into the plan

each month of the first year of their enlistment. In return, they received up to $400 per month for 36 months to put toward education expenses within 10 years from their date of separation from the military (Ford & Miller, 1995).

The 1990s saw a host of changes to the Montgomery GI Bill. In 1991, in the midst of the Persian Gulf conflict, Montgomery GI Bill benefits were increased by 17% (Freedberg, 1999). In 1992, Congress extended program eligibility from 10 years to 14 years past a service member's date of separation (Buckley, 2004). In 1994, Congress approved annual inflation adjustments. In 1998, an additional 20% increase in the monthly benefit was approved (Freedberg). As of October 1, 2005, the education provision for veterans who paid $1,200 into the plan was $1,034 per month for up to 36 months (*Montgomery GI Bill*, n.d.).

The GI Bill and Developmental Education

WWII-era military education programs contributed heavily to the knowledge base of developmental education. As millions of veterans streamed into colleges and universities, bringing their maturity and desire for accelerated learning along with their GI Bill benefits, rapidly expanding developmental education programs were able to draw on resources developed by and for the military. For example, Paul Andrew Witty's "Army Reader," published by the United States War Department in 1943, served as a seminal example of a Functional Context Education (FCE) literary resource for adults (Sticht, 2005). The "Army Reader" used a fictitious yet contextually relevant character, Private Pete, to teach reading, writing, and basic mathematics to soldiers who needed to develop these skills.

Not all WWII officers and enlistees were educated by the War Department itself. As Sticht (2005) explained,

> In what was known as the Army Specialized Training Program (ASTP), United States colleges were swamped by Army personnel who were on campus to take courses for hundreds of specialized skills needed to win the war. The courses these soldiers had to take were accelerated, highly concentrated, and placed considerable demands on reading and mastering the content of difficult technical manuals. Under such conditions, many men were experiencing reading and learning difficulties. (pp. 24-25)

In response to this challenge, Francis Robinson developed the survey, question, read, recite, and review (SQ3R) study method, a technique well known among developmental educators (Sticht).

In more recent years, the Montgomery GI Bill has evolved to support critical components of developmental education. In 1988, a tutorial assistance program was established (Scoggins, 2005). Upon completion of an Application and Enrollment Certification for Individualized Tutoring assistance, GI Bill eligible veterans may qualify for a tutoring allowance of $100 per month, not to exceed $1,200 total. The first $600 of tutoring benefits does not even count against the veteran's total entitlement (*Montgomery GI Bill*, n.d.). In 1989, "refresher, remedial, and deficiency courses"

were declared eligible for MGIB funding (Scoggins, p. 20). Practically speaking, this provision allows veterans to include necessary developmental education courses as part of their full-time course load, rather than requiring a full-time course load in addition to their non-credit-bearing courses.

The Future of the GI Bill

Today's version of the Montgomery GI Bill has firm supporters. Moskos and Sibley Butler (1996) explained how the MGIB became a capstone example of how military recruitment tools now emphasize post-service benefits over enlistment bonuses. Some organizations, including Veterans of Foreign Wars (VFW), advocate eliminating the $1,200 buy-in requirement. As a VFW representative explained, "It's not right that the decision to participate in the Montgomery GI Bill has to be made when the service member earns the least" (Dyhouse, 2004, p. 4).

The Montgomery GI Bill also has its detractors. The chief complaint about the Bill is that it actually serves as a reenlistment disincentive. As military sociologist David R. Segal explained, "The bill is an incentive to enlist, and an incentive to leave once the benefits are earned" (cited in Freedberg, 1999, p. 2422). One controversial alternative, which was defeated in Congress, would have allowed the transfer of education benefits to military members' children or spouses. This option was opposed by the Non Commissioned Officers Association, which worried that "the less educated lower ranks would face a cruel choice between their own education and their children's" (Freedberg, p. 2422). Another alternative being discussed would allow military members to take "educational leave with pay" (White, 2004, p. 84) to gain practical access to education benefits without separating from the military.

Finally, there are those who believe that the GI Bill has simply outlived its need. As White (2004) candidly stated,

> In 1945, the Bill was the largest source of funding for education and training. Today, there are hundreds of scholarships, grants, work-study programs, and government loans to help finance students' educational needs. Still, the Bill's educational benefits are a major inducement for enlistments. However, too many service members leave the military at the end of their initial enlistment to take advantage of the benefits. Valuable training and readiness, in dollars and personnel, are lost (p. 83).

One fact is certain—the debate over the appropriate scope of veterans' education benefits is sure to continue. History has shown that programs extending education benefits to military veterans capture the attention of lawmakers in times of military conflict. We are living in such a time. As our military members return from Iraq, Afghanistan, and beyond, they will need to readjust to civilian life just as their WWII predecessors did. Developmental educators must remain prepared to assist these new veterans with the same vigor that our own predecessors used 60 years ago.

References

Bennett, M. (1994). The law that worked. *Educational Record*, *75*(4), 7-14.

Bennett, M. (1996). *When dreams came true:The GI Bill and the making of modern America*. McLean, VA: Brassey's.

Boquet, E. H. (1999). "Our little secret": A history of writing centers, pre- to post-open admissions. *College Composition and Communication, 50*, 463-482.

Boylan, H. (2000). *A brief history of the American Council of Developmental Education Associations*. Retrieved August, 2005 from http://www.crla.net/ACDA/History.htm

Brooks, S. (2001). A friend to the GI for 82 years. *The American Legion*, *151*(3), 50-59.

Buckley, M. F. (2004). A magic carpet to the middle class. *The Officer*, *80*(7), 24-27.

Casazza, M. (1999). Who are we and where did we come from? *Journal of Developmental Education*, *23*(1), 2-7.

Dickson, P., & Allen, T. (2004). *The Bonus army: An American epic*. New York: Walker.

Dyhouse, T. (2004). GI Bill needs 21st century upgrade: VFW wants a new GI Bill that pays the full costs of a veteran's education. *VFW Magazine*, *92*(1), 4.

Edmondson, E. (2002). Without comment or controversy: The G.I. Bill and Catholic colleges. *Church History*, *71*, 820-847.

Freeberg, S. (1999, August 21). Beyond the GI Bill. *National Journal,* 2422.

Ford, B., & Miller, M. (1995). The GI Bill of Rights legacy to American colleges. *Viewpoints*. Retrieved Mar 2, 2005, from http://www.eric.ed.gov/ERICDocs/data/ericdocs2/content_storage_01/0000000b/80/24/52/97.pdf.

How the GI Bill widened the racial higher education gap. (2003). *The Journal of Blacks in Higher Education, 41*, 36.

Keister, E. Jr. (1994). The G.I. Bill may be the best deal ever made by Uncle Sam. *Smithsonian*, *25*(8), 128-136.

Legislative Interim Committee on the Survey of Higher Education (1948). *A report of a survey of the needs of California in higher education.*. Retrieved April 6, 2005, from http://ark.cdlib.org/ark:/13030/hb2p3004kd.

McCabe, R. H., & Day, P. R., (Eds.). (1998). *Developmental education: A twenty-first century social and economic imperative.* Mission Viejo, CA: League for Innovation in the Community College.

Montgomery GI Bill (n.d.). Retrieved Mar. 6, 2005, from http://www.gibill.va.gov/education/rates/ch30rates100104.htm.

Moore, R. (1950). The writing clinic and the writing laboratory. In R. W. Barnett & J. S. Blumner (Eds.), (2001), *The Allyn and Bacon guide to writing center theory and practice* (2001). Boston, MA: Allyn and Bacon.

Moskos, C., & Sibley Butler, J. (1996). All that we can be: Black leadership and racial integration the Army way. New York: Basic Books.

Pedigo, K. (1994). Happy birthday GI Bill. *Mortgage Banking*, *54*(9), 54-60.

Reed, A. Jr. (2002). Free college for all. *The Progressive*, *66*(4), 12-14.

Roach, R. (1997). From combat to campus: GI Bill gave a generation of African Americans an opportunity to pursue the American dream. *Black Issues in Higher Education*, *14*(13), 26.

Scoggins, R.. (Ed) (2005). *2005 Handbook for school certifying officials.* Decatur, GA: U.S. Department of Veterans Affairs Atlanta Regional Processing Office.

Stephens, D. (2001). *Increasing access: Educating underprepared students in U.S. colleges and universities past, present, and future.* Retrieved September 10, 2005 from http://faculty.etsu.edu/stephen/misc/increasingaccess.htm

Sticht, T. (2005, September). *Functional context education: Making learning relevant in the 21st century.* Workshop participant's notebook.

White, J. (2004). Recruiting bonus, retention onus: The GI Bill. *Military Review*, *84*(4), 83-85.

Willenz, J. (1994). Invisible veterans. *Educational Record*, *75*(4), 41-46.

Wilson, R. (1995b). Good thing a bell curve didn't block the GI Bill. *Black Issues in Higher Education*, *11*(24), 42.

Wilson, R. (1995a). The G.I. Bill and the transformation of America. *National Forum*, *75*(4), 20-22.

Call for Manuscripts

Journal of College Reading and Learning

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The *Journal of College Reading and Learning (JCRL)*—a national, peer-reviewed forum for theory, research, and policy related to college literacy and learning—invites interested authors to submit manuscripts for publication.

The *JCRL* seeks manuscripts with a focus on the following topics at the college level: effective teaching for struggling learners, learning through new technologies and texts, learning support for culturally and linguistically diverse student populations, and program evaluations of developmental and learning assistance instructional models.

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Reviewed by Kelly A. Norton, Ph.D., Director of Academic Services Center, High Point University (NC).

Preparing Educators for Online Writing Instruction contains a body of knowledge initially published as part of the Smarthinking Inc. Orientation Guide for Writing Instructors. The authors bring to this text a combined 15 years of experience with computer-mediated communication and are employed by Smarthinking as the writing program director and the vice president of education, respectively. The purpose of the book is to assist facilitators of online writing programs in the training of program users. Facilitators are typically content-area faculty who guide the training process for fellow faculty. They may also be educational researchers or faculty outside the content area who have experience in successful online instruction. Program users include faculty who will teach in an online writing program, graduate teaching assistants or writing tutors who will offer writing feedback, or faculty and administrators from fields outside composition and rhetoric. The text addresses these facilitators generically as "trainers" and the program users as "trainees," while keeping the possible variety of roles and learning environments in mind. On several occasions, the authors offer a training method and then follow with potential troubleshooting procedures depending on the trainer's role in the learning experience and the expertise level of the trainee.

The book is organized as a how-to resource for the trainers themselves. The intended audience is any of the trainers previously listed or the technology staff members who are assisting with the computer-based interface on which the training and the communication exchange will take place. Only through a better understanding of the nature of online writing instruction can a trainer empower trainees with the knowledge and skills necessary to be successful online instructors. The book is divided into two primary sections—program development and training. Program development identifies the purposes of the book, provides the basis for the book, and contains a literature review. The book is supported by a conclusion and three appendices, which include a detailed account of how to choose instructors, a section on research on writing and

online writing instruction, and a glossary of online terms with which trainers and trainees should familiarize themselves.

Although readers may be tempted to skip ahead to the training section of the text, it is essential to pay attention to the first section on program development, particularly the Introduction and Chapter 1. In the Introduction, the reader is given an idea of how online instruction has developed over the past decade. In 1998 more than 1,600 institutions offered 54,000 online courses to 1.6 million students, an increase of more than 70% over 1995 (p. xii). The trend continues to grow exponentially. A brief explanation of online writing instruction debunks the myth that good classroom teachers make good online teachers. This discussion raises numerous questions. How is online teaching different than classroom teaching? How does online teaching impact student learning? Can online instruction equal the personal experience of classroom teaching?

Chapter 1 provides an explanation of the five areas of pedagogical foundation for online instruction. With its core based firmly in pedagogical principles, the book draws its training methods from the ideals of investigation, immersion, individualization, association, and reflection. The authors discuss each principle and its objectives, and demonstrate how the principle can be applied in training for online writing instruction. These principles serve as the foundation for the synchronous and asynchronous training programs discussed in later chapters.

Chapter 2 examines the history and lack of empirical research on online writing in general and online instruction in particular. At times, a reader outside the field of composition and rhetoric may get lost in an overly detailed, circular discussion of social-constructivist epistemology. By the end of Chapter 2, the reader may be disappointed to discover that the book does not provide satisfactory answers to the questions that arise while reading the introduction. The authors offer impressions and anecdotal information without empirical, replicable research. They offer exhort online instructors and instructor trainers to collect their own data and publish their findings without explaining why Smarthinking has not remedied the lack of research in the field by sponsoring its own investigations, rather than detailing for others how the research should be done. Due to the language and content in this chapter, I recommend that Chapter 2 be read last, if at all, depending on the reader's purpose.

The second part of the text addresses the training of online writing instructors in asynchronous and synchronous environments. The authors insist that trainees complete training in the environment in which they will teach. Asynchronous teaching exists in e-mail or bulletin board-based systems where the instructor and the students do not interact in real time, asking several questions in each transmission. Synchronous teaching involves a chat-based system in which the instructor and student "talk" in a more traditional, "near-real-time" exchange, where each transmission is a single thought (p. 120). In order to gain adequate perspective of being a student in an online learning environment and to assist struggling students, instructors themselves must complete their own training in a similar online format.

Although trainers may be quite familiar with the trainees' content area, a number of

special situations arise as a result of the online format. For example, a certain level of comfort may be created in a face-to-face conference through a smile, eye contact, or an engaging tone of voice. How can that comfort be established in an online conference? How can that comfort be sustained through numerous sessions of asynchronous communication?

The authors adequately discuss the variety of situations trainees may face. They troubleshoot the situations and offer various alternatives to resolve each issue. A trainer must then replicate similar situations and provide alternatives for trainees in the training environment. The sections of greatest value are the paragraphs labeled "Advice to Trainers," in which the authors prepare the reader for an example that demonstrates a technique. For instance, the authors note that in-the-classroom students learn through instructor feedback. In training for an asynchronous environment, the authors address ways in which an instructor can provide similar feedback via e-mail (p. 69). The instructor must be particularly careful not to overwhelm students with numerous corrections and comments. Instead, the exchange should be viewed as a series of mini-workshops in which the student clarifies and rewrites a portion of the essay and then emails again for more feedback.

The structure of the feedback also becomes a concern for trainers and trainees. The authors draw on the work of Mina Shaughnessy (1977) in selecting the major focal points for critique—fluency, form, and correctness—and emphasize that each feedback session contain only one or two major corrections (p. 75). This method decreases the amount of time instructors must spend on each student's essay, a common criticism among online faculty.

The authors recognize that different institutions or disciplines within institutions may operate different types of learning environments depending on a variety of factors (e.g., cost of the software interface, compatibility, technical support, ease of use, student learning goals). Although no research has been cited to support the notion, the authors speculate that the near-real-time format of synchronous instruction lends itself to increased student learning, or at the very least increased student comfort with the online format.

An educational researcher may find fault with the authors' recommendations, as much of the evidence they provide is based on anecdotal information. However, the training methods and explanations come across as firmly rooted in common sense. Why then does a trainer need such a manual if the information is common sense? The book compiles an extensive variety of training situations that a trainer may not predict until they actually occur over a number of training sessions. It enables the trainer to begin at the reflection stage of training rather than at the quick-thinking, troubleshooting level. As an aide for trainers in planning their training programs, the second section of the text is invaluable.

Although this book will not be the last of its kind, it is certainly a comprehensive start. As noted by the authors, the field of online writing instruction is ripe for an ambitious doctoral student to take on its cause and its desperate need for empirical research. The immediate future of online writing instruction lies in the hands of future

faculty trainers, graduate teaching assistants, and writing tutors. As a learning center director considering an online writing lab, I will draw heavily from the training section of the book in developing a program for peer writing tutors. At that time, I will use the information provided by the authors to decide between asynchronous and synchronous environments, or some combination of the two. And I will use their recommendations and do my part to contribute to the literature so that slowly a foundation of trends and conclusions will emerge to answer our questions: How is online teaching different than classroom teaching? How does the online format impact student learning? Can online instruction equal the personal experience of classroom teaching?

References

Shaughnessy, M. P. (1977). *Errors and expectations.* New York: Oxford

Call for Manuscripts: The Learning Assistance Review

Statement of purpose

As an official publication of the National College Learning Center Association (NCLCA), *The Learning Assistance Review* seeks to foster communication among learning center professionals. Its audience includes learning center administrators, teaching staff, and tutors, as well as other faculty members and administrators who are interested in improving the learning skills of postsecondary students. *The Learning Assistance Review* is available free of charge to all NCLCA members. The library or institutional subscription rate is $25.00.

The Learning Assistance Review aims to publish scholarly articles and reviews that address issues of interest to a broad range of academic professionals. Primary consideration will be give to articles about program design and evaluation, classroom-based research, the application of theory and research to practice, innovative teaching and tutoring strategies, student assessment, and other topics that bridge gaps within our diverse profession.

The journal is published twice a year, in the spring and fall. The co-editors are issuing this call for manuscripts to all learning professionals who are interested in contributing to the field through the publication of relevant, scholarly articles. All submissions are subject to a masked review process.

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NCLCA Membership Information

What is NCLCA?

The National College Learning Center Association (NCLCA) is an organization of professionals dedicated to promoting excellence among learning center personnel. The organization began in 1985 as the Midwest College Learning Center Association (MCLCA) and "went national" in 1999, changing the name to the National College Learning Center Association (NCLCA), to better represent its nationwide and Canadian membership. NCLCA welcomes any individual interested in assisting college and university students along the road to academic success.

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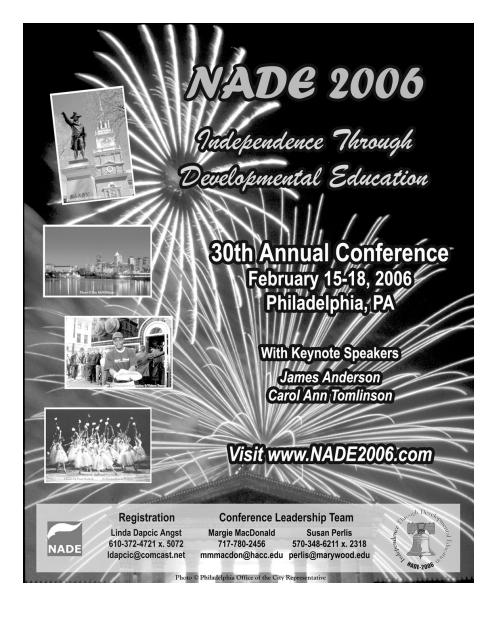
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