



NADE Digest

Promoting Communication among Developmental Education Professionals
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- 1 Selecting Interventions that Succeed:
Navigating Through Retention Literature
DAVID ARENDALE

- 8 Faculty and Librarian Cooperation in Designing
Course Projects for At-Risk Freshmen
MARK DE JONG & SANDRA ECKARD

- 14 A Study of Note-Taking Skills of
First-Year Community College Students
JANE SCHIERLOH

- 19 The Effects of Developmental Mathematics on Student
Performance at an Open Admissions University
CAROLE EFIRD

- 26 Learning Styles of the Developmental
or the Learning Disabled?
STARLETTA BARBER POINDEXTER

- 29 The University College: Responding to
the Needs of Adult Learners
JERRY J. LEWIS

- 32 No Grammar Lessons for Grown-ups: New Pedagogies
for Developmental and Adult Education Writers
K. LEIGH HAMM FORELL

Information for Authors

Submitting manuscripts: The **NADE Digest** invites articles of interest for Developmental Education professionals including developmental educators, learning assistance personnel, academic counselors, and tutors who are interested in the discussion of practical issues in post-secondary developmental education. Articles should relate to issues that inform and broaden our understanding and practice of teaching and learning in developmental education. The subject of the article may emphasize innovative approaches, best practices, how meaningful research affects teaching and learning, or techniques to enhance student performance. Please follow these guidelines when submitting your manuscript:

»The article must be 10 pages or less, including references, tables, and figures. »The body should be double-spaced with one-inch margins, 12-point font. »Only the title of the article and the page number should appear on each page. »The title of the article must not exceed 75 characters and the article abstract must not exceed 125 words. »Include a cover sheet with the title of the article, author name(s), email address, and institutional affiliation. »Manuscript and references must adhere to APA 5/e guidelines.

Manuscripts may be electronically submitted at any time in MS Word® or RTF to
Laura Villarreal at Laura.Villarreal@utb.edu

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Editorial Comments

First, we want to acknowledge the many people who contributed to the success of this issue of the **NADE Digest**. We sincerely thank the members of the Ad Hoc Editorial Advisory Committee for generously sharing their expertise. We are grateful to the NADE Executive Board for creating this publication and for the many ways they support the endeavor. We offer a special thanks to Rick Casper, original **NADE Digest** Committee Chair, current NADE Secretary and **NADE Digest** Liason.

We thank the eight authors whose work was selected for this second issue of the **NADE Digest** for demonstrating how developmental educators:

- » continuously seek more effective ways to help students succeed,
- » willingly share information and insights with others,
- » ask students to develop skills and strategies that will enable them to succeed beyond just this semester or this year,
- » tackle every challenge with knowledge and determination.

David Arendale's opening article, "Selecting Interventions that Succeed: Navigating Through Retention Literature," gives us a system to help us more accurately sort through the growing database of information related to student retention.

Next, in "Faculty and Librarian Cooperation in Designing Course Projects for At-Risk Freshmen," Mark de Jong and Sandra Eckard suggest a more creative and innovative way to use resources to reach at-risk students and help them move towards real change.

"A Study of Note-Taking Skills of First-Year Community College Students," is Jane Schierloh's description of what she did to get an accurate picture of students' note-taking behaviors and the strategies used to share those findings with her students.

Carole Efrid outlines the process and results of her research at the University of Arkansas at Monticello in "The Effects of Developmental Mathematics on Student Performance at an Open Admissions University."

In "Learning Styles of the Developmental or the Learning Disabled?" Starletta Barber Poindexter suggests tools teachers can use to assist students in developmental/remedial/pre-college courses who have been labeled "developmental," but are actually students who, unknowingly, have learning disabilities.

Then, in "The University College: Responding to the Needs of Adult Learners," Jerry J. Lewis encourages us to take a closer look at how that style of administrative unit can help meet the diverse needs of adult learners.

K. Leigh Hamm Forel's "No Grammar Lessons for Grown-Ups: New Pedagogies for Developmental and Adult Education Writers" closes this issue with a proposal to move literacy instruction away from the rote practice of discreet skills.

We also thank you, our readers, for infusing our profession with the energy that keeps us searching for and sharing "better ways."

Jane McGrath & Laura Villarreal
Co-Editors

Selecting Interventions that Succeed: Navigating Through Retention Literature

DAVID ARENDALE
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Many developmental educators have been assigned increased responsibilities for campus-wide enrollment management activities. A new system is needed for educators to more accurately sort through the rapidly growing database of information related to student retention. This will enable the reader to more quickly identify promising practices for further investigation. This article provides a scale to evaluate the likelihood of success among potential programs and identify them for further research. Scrutiny of potential retention programs must be increased by asking more questions early in the investigation process regarding: essential components of a program, research evaluation studies, barriers to successful implementation, and the availability of technical assistance to enable other institutions to successfully adapt and adopt the student retention practice.

Developmental educators are increasingly called upon by their institutions to serve in positions of influence with enrollment management task forces that are charged with increasing student persistence and graduation rates. Being an expert with this topic has become more challenging as there has been an exponential growth in the professional literature associated with this topic. Several national conferences each year are devoted to student persistence (e.g., American Association of Collegiate Registrars and Admissions Officers, Noel-Levitz Centers). Two national publications publish in this area of scholarship (Journal of College Student Retention, www.baywood.com; Recruitment & Retention in Higher Education Newsletter, www.maganapubs.com). A number of publications identify best practices in this area (Habley & McClanahan, 2004; Noel, Levitz, & Saluri, 1985; Thomas, Quinn, Stack, & Casey, 2003; Upcraft, Gardner, & Barefoot, 2005). There are more than 4,000 citations in the national ERIC database that contain the term student retention in a postsecondary setting (ERIC, 2005).

Sorting through all these conference presentations, reports, articles, books, brochures, and other descriptive literature is a challenge for any educational leader. Some of the literature describes home grown student retention programs that have only operated at a single institution. Other publications

describe programs that have been replicated at other institutions in addition to the one that first created the academic intervention program. A better system is needed to help educators select from among this burgeoning database that all claim effectiveness for increasing student persistence and graduation rates.

TRADITIONAL SELECTION SYSTEM

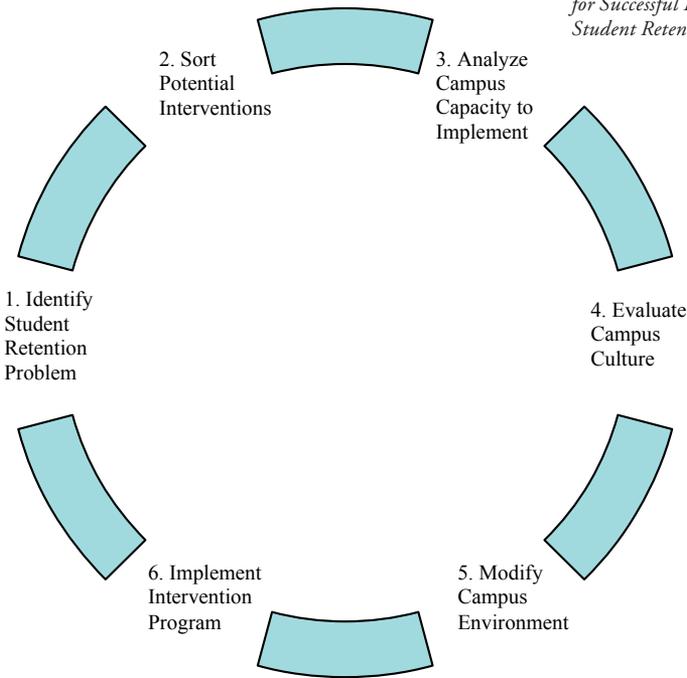
There are common patterns that many educators follow when seeking an intervention system to address the premature departure of students. Often a delegation of one or more is sent to a national conference to listen to a sample of concurrent presentations describing student retention programs. A decision about which session to attend is based on short presentation titles and 50-word summaries from the conference program book. Too often the speakers do not provide detailed research evaluation studies, detailed cost breakdowns, and barriers to implementation. A similar pattern is replicated in written reports or articles that describe the interventions. Little follow-up occurs between the speakers/authors. Institutions commit resources of time, personnel, and money to implementing intervention programs on the basis of several articles or listening to a conference presentation. A better system is needed to be more accurate, timely, and cost-effective in selecting new programs to adopt.

NEW SELECTION SYSTEM

Selecting the appropriate academic intervention or making a change in institutional policies is contingent upon many factors. What are the unique academic and culture issues at the institution and which academic intervention(s) is best fitted to meet those needs? Is there clear evidence that the intervention will contribute to higher academic achievement at a particular institution as opposed to its past success at the institution where it was first developed? What is the capacity of the institution to implement the intervention or policy regarding administrative support, faculty support, skill level of the intervention program, and the cost to implement and continue the program?

Based on twenty years of experience as a learning center director, enrollment management leader, and director of the National Center for Supplemental Instruction at the University of Missouri-Kansas City, I have developed a different perspective for facilitating change regarding improved student graduation rates. An academic intervention or policy decision on one campus may not be effective on another one due to a variety of reasons. The following model presents a decision-making process that helps to more objectively enable institutions to compare among possible actions or intervention programs which are most appropriate for their particular situation and their capacity to enact change.

FIGURE 1 Transformation Cycle for Successful Implementation of Student Retention Programs



This student retention program model [Figure 1] has six stages of activities: (1) Identify the student retention problem by determining the characteristics of the students who are dropping out of the institution; (2) Sort through potential intervention programs by evaluating their likelihood of success at a particular institution; (3) Analyze the capacity of a particular institution to implement the intervention program; (4) Evaluate an institution's campus climate and to what degree it will embrace and support the student subpopulation that it wants to retain; (5) Identification of specific action steps to be taken by an institution to change itself to be more supportive of students and conducive of their success; and (6) Implementation of the identified intervention program designed to increase student retention at the campus.

SORTING POTENTIAL INTERVENTIONS

This article focuses on stage two of these activities: evaluating potential intervention programs regarding their likelihood of success at a particular institution. A prerequisite to selection of an academic intervention or making changes in campus policies is to carefully evaluate the evidence for effectiveness. Time limitations often preclude answering all of the following questions during a conference presentation or addressing them during an article.

However it is reasonable for them to be addressed in professional articles, conference handouts, and during follow-up discussions with presenters. The following scale provides an increasing level of evidence of the likelihood of success in implementing the practice. Programs which reach the higher scale ratings are more likely to result in higher student persistence rates.

1. There is little evidence or documentation that the practice has any evidence of effectiveness or is based on current research-based educational theory. This is the lowest rating that can be assigned to an intervention. In this case the conference presentation or article provides a basic description of the program, but no evidence of its effectiveness. With the rich professional literature that identifies other programs with evidence, spending much time investigating this intervention seems to be a waste of limited time resources.
2. Practice is based upon sound educational theory and other previously validated successful practices. Rather than only a description of the intervention, some explanations or theories are presented that suggest reasons for its effectiveness. What is the theory base for development of the intervention? Theory must lead practice, especially when considering the student population to be served. What is the connection between what we know about student departure (Tinto, 1993) and the intervention program? What other programs or practices similar to the one under scrutiny have been validated in the past? Most successful innovations are always based on elements of previously developed successful programs.
3. Practice has undergone rigorous evaluation at one institution. What were the quantitative and/or qualitative research procedures employed? Are they rigorous and state-of-the art? Are they appropriate for the type of research questions being asked? Use of simple t-tests or student surveys is insufficient for research studies today. Rather than comparing to other research studies published, what are the new evaluation procedures being discussed at national association conferences such as the American Educational Research Association? Does the program make claims that are unsubstantiated or overreaching? This is especially important if the practice is making claims related to student retention and graduation rates.

The further the distance of time between when the intervention occurs and the outcome is measured, the less likely the impact. Too many intervening variables will have an impact upon the student in the meantime. Such claims must be supported by highly sophisticated evaluation procedures. Does the research evaluation model take into account that the student has been impacted by multiples variables? Perhaps they have participated in simultaneous intervention programs? With hundreds of

variables having an impact upon students, the likelihood that only one intervention is responsible for the results is less likely. If the academic intervention model is a complex one with several activities operating simultaneously, how has the research evaluation model identified the contributing impact of each separate activity upon the student outcomes? This is especially important if students have choices on which activities that they participate.

Do the quantitative research procedures take into account background information about the individual students when conducting the analysis? Examples of this would include student demographics, affective domain (e.g., academic content mastery orientation, academic performance orientation, and self-efficacy), and academic preentry attributes as part of the research model. If the research model does not do so, the reported positive results may be due to the participation of students who were more academically prepared or motivated.

What is the cost/benefit equation for the intervention? Careful factoring of all expenses associated with implementation is needed. For example, supervision and training costs are often underreported in conference presentations and journal articles. Often the most expensive component of an intervention is not the direct salaries, but the time required for activities both by the direct service provider and those who administer, supervise, and train (Arendale, 2001). The professional literature often cites these elements for many intervention programs to be effective. Maybe some optional activities are more helpful than others. Perhaps it is not necessary to implement all parts of a complex intervention model since only a few contribute the majority of the impact to the desired effects. With tight budgets and limited resources, academic interventions will need to demonstrate their cost effectiveness as well as the improved student outcomes.

4. Practice has undergone evaluation at one institution over a period of time with consistent results of positive outcomes. Have the research studies been carefully replicated over succeeding academic terms at the institution that originally developed the intervention? One of the most powerful research findings is the consistent report of positive outcomes over a long period of time. This helps to avoid the Hawthorne Effect of introducing something new in the environment and promoting short-term increased productivity before the environment returns back to the previous baseline behavior level.
5. Practice has been validated by one or more external agencies (e.g., accrediting agencies, peer-reviewed publications, national awards competitions). What does a review of the professional literature suggest about

this or similar academic interventions for effectiveness? Publication of research about the intervention by a peer-reviewed journal increases the likelihood of effectiveness since it requires approval by an unbiased third-party editorial staff. Review by external accrediting agencies and national organizations conducting rigorous awards programs serve a similar purpose.

6. Practice has been replicated successfully at several other institutions in addition to the one that originally created it. Has the academic intervention been successfully implemented at other institutions? Were the results replicated over succeeding academic terms? Were the institutions similar to the one considering its adoption? Were the students served at the other institutions similar to the one considering its adoption? An affirmative answer to these question increases the chance that the program can be successfully installed at another institution. This helps to address the potential problem that some programs are more dependent on the personality and traits of the original developer and less on the actual program components. In these cases, rarely is the program successful elsewhere.
7. There are additional sources of information, consultation services, and training workshops about successful implementation of the practice. Will the institution or individual that developed the intervention program allow visitors to view the program in operation and talk with key individuals including the students who are served? Will it sell or share materials and consultation services? Considering the potential economic and social impact of implementation of a potential new program or policy, it is critical to more fully understand the challenges with implementation and ongoing operation. Few conference presenters have the time to share the challenges, failures, and details with program implementation. Considering the total cost of starting and operating a new program, this is a small investment of time and money.

CONCLUSION

I am reminded of the expression, “we are drowning in data but are starved for knowledge and wisdom.” While we may have ready access to articles, reports, and presentation on student retention, we need to increase our scrutiny of these information sources. We must ask more questions early in the investigation process, probe for the essential components of a program, and vigorously evaluate the research studies that evaluate the retention program. These activities will enable educators to more quickly and accurately sort through the confusing data and emerge with more likely prospects to enable our institutions to help students achieve their aspirations and dreams.

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Faculty and Librarian Cooperation in Designing Course Projects for At-Risk Freshmen

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The relevant literature reveals a concerted effort by academics to adjust their thinking regarding teaching methodologies, the need for students to acquire critical thinking skills, and the desire to nurture undergraduate success. Interdisciplinary or team teaching is often cited as a progressive model, as are learning communities and the integration of higher level thinking skills into classes and curricula. However, librarians are rarely asked to participate in designing assignments, classes or general education goals. As information literacy becomes an increasingly important component of campus objectives, librarians should be called upon more often to contribute to their institution's priorities. This paper addresses one successful method of infusing the needs of the instructor, the student, and the campus by integrating the expertise of the "teaching" librarian.

Colleges and universities invest academic capital in the "at-risk" student community every semester, and educators try to foster growth within this population using a variety of methods, e.g., contracts, mentoring sessions, workshops, and intensive classes. Sometimes two or more of these strategies are employed together with the hope that at least one will help students get on track. However, it is not just the students who need to get on-track. Despite good intentions, educators tend to work with the same tools, or "pieces of the puzzle," sometimes only rearranging the "pieces" instead of developing desperately-needed new ideas; academia must find more creative ways to reach at-risk students. The authors propose that faculty need to use innovative resources in order to help students move towards real change. This article will focus on how two instructors, a reading specialist and the library's instruction coordinator, combined their unique skills to create a course project wherein academically at-risk students researched, reflected, wrote, and presented on how their chosen career field matched – or did not match – their current attitudes, behaviors, and expectations of success regarding that career.

Frostburg State University (FSU), unlike most educational institutions, dismisses first-year students for abysmal academic performance at the end of the fall semester. Students may be given “a second chance” based on several criteria: a superior letter of appeal, a recommendation from the student’s advisor and an affirmative review by the Academic Appeals Board. The goal of the spring ORIE101: Introduction to Higher Education (ORIE Boot Camp) course at FSU is to offer intensive guidance for these successful appellants during their second semester. The college environment is challenging for this group, and they require additional assistance on how to develop strategies for academic success and personal adjustment. The class activities are designed to promote critical thinking skills and introspection, with the goal of infusing problem solving abilities and promoting self correction of destructive behaviors. Each learning activity is designed for personal success and includes oral and written reflection activities. This course was the vehicle for the authors’ pilot project of librarian collaboration in the development of course assignments fashioned for at-risk students.

REVIEW OF LITERATURE

In a landmark text that focuses on the study of freshmen behaviors, Erikson and Strommer (1991) overview the differences in freshmen, noting that recent generations of students do not seek out challenging coursework and often dedicate less time to homework than previous generations. They often become more engaged in outside activities like television, other media or part-time employment (p. 5). Overall, they may have completed high school successfully, but that does not mean that they have the skills—either academic or emotional—to tackle university life. Light’s (2001) book spotlights students’ reactions to their college experiences, arguing that making the transition from high school to college—complete with self-management and higher expectations—was more difficult than they had anticipated. Interviews noted that time management was a crucial difference in the responses from successful and unsuccessful students. Sophomores who had experienced a successful first year valued what they had learned about how they spent their time, but unsuccessful sophomores “hardly ever mentioned the word [time], even when prompted” (p. 24). Successful students also mentioned the value of a mentoring experience, wherein they learned positive behaviors and felt supported to do their best (p. 94).

Designing a course for unsuccessful first-year students would then involve skill development in time management and effective learning strategies, hopefully within a mentoring setting. Yet skill development and outside reinforcement are not enough. This paradigm also needs to address students’

emotional reactions and belief systems, including self-efficacy and motivation. In Cole and Denzine's (2004) study, they examined students who were dissatisfied with their performance in a particular class. They concluded that the students' self-efficacy, optimism or pessimism, and self-esteem were connected to their success in class. The authors suggest that continual self-assessment should be a component within a first-year experience (p. 41), helping students better understand how their skills and their own perceptions of their skills—affect success in college.

In conjunction with reflection and self-awareness, students may understand the areas they need to improve for academic success. However, wanting to change behavior, or knowing how to take specific steps to change behavior is important to recognize (Dembo & Seli, 2004). Students need to assess both their “skill and will” and if instructors or programs focus on only one of these aspects—such as study strategies or motivation—then students are not as likely to be successful at altering behavior (p. 10).

As a result, Leamson (1999) argues that educators need to involve students in learning in order to “initiate behavioral changes in students” (p. 49). Students cannot simply take notes or be asked to regurgitate information on exams. Productive learning and changes in behavior happen when students are motivated; students must be prompted with reflective activities that will help them become engaged with the material and learning (p. 60). Reflection often begins when students are asked to apply critical thinking to a particular task or assignment. Critical thinking is a high-order thought process essential to molding college students' problem solving skills and evolving analytical abilities (Bensley, 1998, 2002). Information literacy (defined as finding, analyzing and disseminating information in an ethical, coherent manner) has at its core the fundamental charge of infusing students with critical thinking skills (Middle States, 2003). Thus, drawing on the idea that educators must find “new pieces of the puzzle” to fully reach students, collaboration between an information literacy expert and a reading specialist seemed a reasonable avenue to pursue for the authors. Connections between academic and library faculty is a positive approach for working with students, as argued by researchers like Harmony and Young (1999), Ducas and Michaud-Oystryk (2003) and Emmons and Martin (2002).

DEVELOPMENT

Well before the spring term began, the reading specialist for ORIE101 Boot Camp approached the library's instruction coordinator to join the course and co-develop student assignments. After several brainstorming sessions, a

number of assignments were conceived, one of which was the final student project and is the basis for this paper. The final project focused on the concepts of job assumptions, personal skills and future goals/life planning. It was believed that career interests would motivate students, and if a link could be drawn from the end result (the desired career) to the preparation necessary to reach the end result (college), the class's curiosity would remain piqued. With this paradigm in mind, the authors created a three day assignment integrating active learning, self-assessment, reflection, information literacy, and communication competency. The first day involved students listing a preferred career and three personal attributes and three learned skills they thought would be necessary to achieve success in the selected field. Students were then instructed on the reliability of information on the Web, provided with training in advanced Web searching and told to research their career and compare the findings to their preconceptions. On day two the students received coaching on searching for jobs online, resume and cover letter writing and application procedures. Using a Web-based career service, each student found a position in their field of interest and composed a fictitious resume and cover letter to be turned in before their presentations. The final day consisted of making a five to seven minute presentation regarding the selected career, preliminary assumptions, attributes associated with successful people in that career, and whether or not the reality met or differed from their expectations or assumptions. Visual aids such as posters and PowerPoint were encouraged. Students' connection to the project was gauged three ways: the presentation, the cover letter with resume and a short-answer question on the final exam.

RESULTS

All students indicated in their presentations that their initial assumptions were poorly informed or simply erroneous. Two discoveries stood out for all thirteen students in the class: the number of hours worked per week and the specific tasks performed. One student, Ann*, who had wanted to pursue medicine, indicated that her interest in becoming a physician may not be compatible with her dream job: "I realize now that most doctors spend more time doing other work, like paperwork, than seeing patients. I don't know about that." When the student audience asked questions of a presenter, the most common query was, "do you still want to do it [this job]?" Nine of the thirteen participants said yes, but four said no. Three students said they were now reconsidering their chosen career due to rigid job requirements and/or low salary. One student found that the job wasn't anything like she thought it would be; "It seemed interesting, that's all."

*Pseudonym is used

The first drafts of the resumes yielded skimpy results, with many students not knowing what to write. One student, Ben*, commented, “I haven’t completed college, I haven’t done an internship, and I don’t know what skills I have that I could write down.” Ben’s written feedback revealed a clear insight into the steps he had yet to take to realistically pursue his dream job as a computer programmer. In response, the authors tried to help Ben see—in addition to experience he will need to acquire—the qualities, like personal characteristics, that he already possessed. Ben was creative enough to write down skills from his summer job that might transfer: interpersonal ability, a facility for communication and teamwork. The second drafts were far superior. Students showed forethought and problem-solving skills in addressing the need for resume-building experience.

The final exam for ORIE Boot Camp included a short-answer question addressing the career project. When asked to describe what they learned from researching, writing, and reflecting on a possible career path, almost all students “got” the point. Many commented on steps necessary in the future, such as specific course work, internships or far more rigorous dedication to academics. One student wrote, “I learned that I need to get started if I want to really be a doctor!” Students averaged 3.7 out of four points for this question, which was graded on the basis of their demonstrating concrete reflection and critical analysis.

CONCLUSIONS

Interdisciplinary collaboration in the classroom or in learning communities is not uncommon in higher education, but drawing on the knowledge and abilities of a teaching librarian to enhance the learning experiences of students is still a relatively nascent, untapped resource. The traditional model for librarian participation in discipline-specific or First Year Experience style courses is as a guest lecturer or tangential reference source. However, as “teaching” librarians continue to gain insight into educational theories and critical thinking concepts, they offer their campuses a unique opportunity to improve the model for working with the at-risk population; their perspectives could offer a “new” piece to the puzzle. The authors believe their teamwork offered this group of ORIE Boot Camp students a unique and enlightening experience: the advanced Web searching skills and the critical evaluative training (taught primarily by the librarian) will transfer to other classes and promote life-long learning. The nexus between a chosen career, academic coursework and behaviors to obtain the career through academic planning and research—or to redirect energy onto another path—will also benefit the students. However, the data needs to be more definitive. A longitudinal study

using a well-crafted assessment tool—or perhaps collection of tools—could yield more tangible qualitative results. Moreover, a similar study measuring the impact of a librarian-instructor partnership within a discipline rather than one course or project would also be useful.

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A Study of the Note-Taking Skills of First-Year Community College Students

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The author, a student adviser in a Student Support Services (TRIO) program, took an introductory psychology course in order to study students' note-taking behaviors. The most important finding was that students copied the terminology the instructor wrote on the board, but failed to take notes on the examples he used to clarify the terms. Consequently, they were unprepared for the multiple-choice tests which required students to link terms with examples. She then experimented with a new way to share the findings of this study with the students she advises.

How well do first-year community college students take notes? As a student adviser, I needed to see for myself so that I could help the students in our TRIO program improve their note-taking skills.

When students told me they received a low grade on a test, I often said, "Would you be willing to let me see some of your class notes?" Without exception, they pulled out a spiral notebook with skimpy, difficult-to-understand notes.

A review of the literature on note taking in college classes confirms that taking inadequate notes is a pervasive problem. Williams and Eggert (2002) state that numerous studies have found that college students do not include many important points from their instructor's lectures. In fact, they cite studies that found that the percentage of lecture points recorded by college freshman is as low as 11%.

How important is it to students' academic success that they learn to take comprehensive notes while listening to instructors' lectures? The research confirms what most college instructors and staff assume. Kiewra (1985a) reviewed 56 experimental studies examining different styles of note-taking and listening strategies, and concluded that the process of taking notes more often than not contributes to success on tests based on lecture content.

I have a long career history of studying students' test-taking, reading comprehension, and study skills and over the years, I have found that what students actually know is considerably different from what I think they know.

My experience has been that if I have an accurate picture of what students know and do, I can significantly modify their learning behaviors so that they are more successful in college courses. Therefore, before developing a workshop on note-taking skills, I wanted to observe students' note-taking in a class setting so that my workshop would be relevant to students' needs.

I chose Psychology 1010 for several reasons:

- » It is a college level course frequently taken by first-year students, often while they are still in developmental English.
- » Many students find it a more difficult course than they anticipated.
- » It is a lecture course that requires constant note-taking without the coaching often provided by developmental education instructors.
- » Large numbers of students register for it because it is a prerequisite for popular career majors such as nursing and social work.

The first day of the course, I glanced at the notes of the four students seated near me. I saw that I had twice as many notes as they did. Were they lazy? Were they having difficulty taking notes fast enough to keep pace with the instructor? I resolved to change my seat at the next class session so that I could observe other students' notes.

During the second class session, I watched to see when students wrote and when they stopped. I observed that they wrote only when the instructor wrote on the blackboard. For example, when he wrote "Periodic fluctuations in physiological functioning," every student copied off the board. When he strode back and forth across the front of the classroom giving interesting examples of periodic fluctuations, they stopped writing. He talked about menstruation and the sleep/wake cycle. He explained how we often feel a little tired around 3:00 or 4:00 in the afternoon because our temperature drops slightly. The instructor is an effective lecturer, and students were alert and involved. They asked questions and made comments. But they did not take notes.

Students were consistent in this behavior during the entire 16-week semester. They wrote only when the instructor wrote on the blackboard or overhead. This finding confirms the work of Kiewra (1985b) who found that "most students record the general ideas but are less likely to record specifics related to those ideas" (p. 378).

The penalty for failing to include examples in one's notes came when we took the first test. It had a multiple-choice format and the questions required students to link psychology terms with real life situations. Here is a typical question:

When you tell your children to rub their arm after they've bumped it on something, the amount of pain they feel is actually reduced. This phenomenon is consistent with the theory of pain referred to as the

- A) distraction theory
- B) selectivity theory
- C) opponent process theory
- D) gate control theory
- E) compensatory model

To do well on the test, one needed either an excellent memory or adequate notes to study from. Since I do not have a particularly good memory, I relied on a quick re-reading of my notes to get an A on the test. The students sitting around me apparently had neither a good memory nor useful notes. I saw some very low grades as the tests were passed back.

At the start of the next class session, I observed a remarkable event: The instructor passed out copies of his lecture notes. They were detailed and in outline form. As he began his lecture, I debated whether to take notes. I had in front of me a set of notes far better than any I could write. And yet, I knew that the very act of note-taking involves me in a lecture by making me a more active listener. So I put the instructor's notes aside and took my own notes. However, since I was playing a dual role in this class as both a participant and an observer, I was fascinated to see what the other members of the class would do. I looked around. Only one student took any notes for the entire two-hour class session. The instructor's intention had been to improve students' learning, but the actual effect of his assistance was to further reduce students' participation in the learning process.

After I finished the course, I invited students in my program to a workshop on note-taking. On the day of the workshop, I waited expectantly at the classroom door for students to arrive. No one came! It was difficult to accept. I had spent a semester preparing, and no one was interested.

The next day I came back to my office ready to fight rather than to give up. I knew students needed this information. The question was how to deliver it to them. How can academic counselors reach large numbers of students?

My solution: to build note-taking instruction into the second of the two sessions required for intake into our program. At this session, which is a one-on-one session, I included about ten minutes on note-taking. Students were very responsive. Now, after five years of tinkering with the process, I have found an effective, rapid way to get students involved in the process of improving their note-taking skills. It goes like this:

SCENARIO 1: UNSKILLED NOTE-TAKER

Dr. S: I suppose you're a pretty good note-taker. (positive approach)

Student: Well, not as good as I need to be.

Dr. S: The more classes you take, the better you get at it. It takes practice. I've been taking classes for many years. Here's a sample of notes I took in a psych class a few years ago. People are always asking to borrow my notes. Why do you think they want to use them to get ready for a test?

Student: (glancing quickly) They're very neat.

Dr. S: What makes them neat?

Student: (looking more closely) You leave some space between parts... and you underline vocabulary words.

Dr. S: What else? (pushing student to observe more closely)

Student: You use bullets for the points.

Dr. S: What else?

Student: You put boxes around the main topics.

Dr. S: I learned something about students' note-taking habits in a psych class I took here at the college. I think what I learned may interest you. (I relate the highlights quickly.) Do you see examples in my notes? Where? Why do you think students stopped taking notes when the instructor handed out his lecture notes? How does taking your own notes help you learn?

There are only a few ways to get information to your brain. Can you think of one or two of them? (visual, auditory, kinesthetic). *When we take notes, we look, we listen, and we write. Note-taking uses all three pathways to the brain. It's a powerful learning tool!*

You know, I gave a workshop on note-taking once, and nobody came! You and I just did that workshop together in ten minutes!

SCENARIO 2: SKILLED NOTE-TAKER

Dr. S: I suppose you're a pretty good note-taker.

Student: Yes, I am. I think I take very good notes.

Dr. S: Do you have a sample of your notes with you? I'd like to see them. I get a lot of good ideas on note-taking from my students. Sometimes I make a copy of a page or two so that my other students can see good models.

Student: (pulling out an impressive sample of notes) *These are my English notes.*

Dr. S: *You ARE a good note-taker! I like the way you _____*
(mark potential test questions, include examples, use abbreviations, etc.)
I'm a good note-taker too. (pulling out a sample from Psychology 1010)
I have some favorite abbreviations I use so that I can keep up with
a fast-talking instructor. What abbreviations do you use?

(We share our ideas in a lively, collegial discussion.)

CONCLUSIONS

Those of us who work daily with students have research opportunities that academic researchers do not have. We see our students in natural settings, and we see them often. Best of all, we can use the findings of our research to inform our teaching, advising, and tutoring. Our applied research is beneficial because:

- » It is relevant to students' academic needs.
- » It can be used to initiate two-way conversations with students.
- » It can affirm students.
- » It can provide models of academic success.

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The Effects of Developmental Mathematics on Student Performance at an Open Admissions University

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NCES (1996) reported that almost one-third of all students entering colleges and universities are unprepared for college coursework and therefore required to enroll in developmental courses. This study focused on developmental and regular mathematics courses at the University of Arkansas at Monticello. Using final mathematics grades from the freshman cohort of 1994, the Mann-Whitney U-test was run to compare final grades in college-level mathematics courses between the students who were first enrolled in developmental mathematics and students who were not. The chi-square test was used to determine whether any difference existed in retention and graduation rates between students who completed their developmental mathematics courses in one year and students who did not.

The study showed that there was no statistically significant difference in final grades in college level mathematics courses between students who took developmental mathematics courses upon arrival to campus and students who did not. However, a difference was detected in retention and graduation rates between students who finished their developmental mathematics courses in one year and students who did not.

Mathematics is a universal language. While verbal languages differ among geographical regions, mathematics is the language that doesn't discriminate. Mathematics provides the necessary background for the more technological skills that today's workforce demands. Moreover, mathematics gives students the tools for problem solving and reasoning. Sequential, logical thinking skills are honed in the mathematics classroom, giving students a means by which they can improve critical thinking and approach problems.

Unfortunately, the National Center for Educational Statistics (NCES) reported that in the year 2000, only 17 percent of high school graduates were considered 'proficient' in mathematics. 'Proficient' is defined as the level of intellect expected of a high school graduate (NCES, 2001). Furthermore, the Third International Mathematics and Science Study-Repeat (TIMSS-R)

report of 1999 showed American students ranked about 20th among the 38 countries that were involved in the study (NCES, 2001).

The downward trend in mathematics and science proficiency has been consistent since the launching of Sputnik in 1957 (Goodstein, 2001). As the nation's schools continue to witness the decline of mathematical abilities, institutions of higher education inevitably inherit the predicament. In 1998, approximately 15 million students enrolled in institutions of higher education (NCES, 2001). Since the number of developmental students entering higher education has been a consistent 30 percent of the enrollment for several years, it is unlikely that retention of these students would be possible without some developmental coursework. Boylan (1999) reported that students who successfully completed their developmental coursework were prone to return to college after their freshmen year and eventually to graduate. Admittedly, the time that the developmental coursework takes is time added to a student's college career. However, such coursework is pertinent in building a strong foundation in basic, fundamental skills. Without developmental programs, the nation could very well witness a thirty percent reduction in college enrollment.

THE STUDY

Monticello, Arkansas is located in the Southeastern corner of the state not far from the Mississippi Delta and has a population of approximately 10,000. The University of Arkansas at Monticello (UAM) has been an open-admissions institution since it opened its doors in 1909. Today, UAM is the only remaining open-admissions university in Arkansas.

The intention of the open-door policy is to make a college education available to anyone who desires it. That policy tends to promote a student body that is diverse in race, economic background, and intellectual level. The average score on the American College Test (ACT) for entering freshmen at UAM is approximately 19.60 (Bryant, 2001). Arkansas law requires that public colleges and universities remediate any student with an ACT score below 19. At UAM, that encompasses 46 percent of the enrollment.

UAM offers two developmental mathematics courses. Entering freshmen with a mathematics ACT score of 15 or below are required to enroll in Introductory Algebra. This is the most basic developmental mathematics course offered at UAM and covers rudimentary mathematics skills and basic algebraic concepts. Students that enter their freshmen year with a mathematics ACT score of 16-18 are required to enroll in Intermediate Algebra, a class that serves to prepare students for one of the freshman level mathematics courses by strengthening their skills in graphing functions, factoring polynomials, and using hand-held technology. Students with mathematics ACT scores of

19 and above are eligible to enroll in a freshman level mathematics course, such as College Algebra, Survey of Mathematics, or Trigonometry, any one of which meets the graduation requirement. Therefore, students required to take developmental mathematics courses must take them sequentially. It should also be noted that students are allowed to voluntarily remediate. For example, the student with a mathematics ACT score above 19 may opt to take Intermediate Algebra if he or she is unsure of his or her math skills.

While the success rate among developmental mathematics students at UAM has traditionally been approximately 46 percent, the success rate of those students in the college-level mathematics course, College Algebra, has been approximately 50 percent. Since UAM is an open admissions university, discussion has arisen on strategies for increasing the success rate of the College Algebra course. The purpose of this study was to examine the developmental education program at UAM. The questions that were addressed and clarified by the research are the following:

1. Are students who successfully pass Intermediate Algebra in their first attempt more likely to successfully complete College Algebra/Survey of Math than those who do not?
2. Are students who complete Intermediate Algebra with a grade of B or better more likely to successfully complete College Algebra/Survey of Math than those who complete Intermediate Algebra with a grade of C?
3. Are students who take and successfully complete Intermediate Algebra more likely to successfully complete College Algebra/Survey of Math than those students who were not required to take Intermediate Algebra?
4. Are students who successfully complete their developmental coursework in one year more likely to be retained the following year?
5. Are students who successfully complete their developmental coursework in one year more likely to graduate than those who do not?

The nature of this study was conducive to quantitative research and analysis. The data was information that had previously been collected on the 1994 freshman class at the University of Arkansas at Monticello. The data was obtained from the institutional research officer at UAM, and statistical analyses were conducted on that information to test the hypotheses. The data that was analyzed were the final mathematics grades received by the students and their successful or unsuccessful attempts at a bachelor's degree.

The participants of this study were the freshmen students that entered the University of Arkansas at Monticello in the fall of 1994. Only first semester freshmen were studied and no distinction was made between full-time students and part-time students. A total of 523 students comprised the population of this study and grades from the subsequent spring semester were collected on this same cohort of students. Of the 523 freshmen who began

their higher education at UAM, 411 returned for the spring semester of 1995. That is approximately a 78.6 percent retention rate. The average grade point average attained by this group of students was a 2.45 on a 4.00 scale.

RESULTS

Research question one asked whether students who successfully pass Intermediate Algebra in their first attempt are more likely to successfully complete College Algebra/Survey of Math than those who do not.

The Mann-Whitney U-test, a nonparametric alternative to the standard t-Test, was conducted on the data for this question. The information obtained on this cohort of students was their final grade in College Algebra/Survey of Mathematics. Students with a final grade of 'A' in the college level mathematics course were assigned the number '4', students with a final grade of 'B' in the college level mathematics course were assigned the number '3', etc. The results of this test supported the null hypothesis that there was no difference between the College Algebra/Survey of Math grades of the students who successfully completed Intermediate Algebra in their first attempt and those who did not. The findings indicated that there was no difference.

Research question two asked whether students who complete Intermediate Algebra with a grade of 'B' or better are more likely to successfully complete College Algebra/Survey of Math than those students who complete Intermediate Algebra with a grade of 'C'.

Again, the Mann-Whitney U-test was used. The test results rejected the null hypothesis that there was no significant difference in the final grades in College Algebra/Survey of Math between the students who completed Intermediate Algebra with an 'A' or 'B' and the students who completed Intermediate Algebra with a grade of 'C'. This means that the students who completed the developmental mathematics course with a 'C' did not do as well in their college level mathematics course as the students who completed the developmental mathematics course with an 'A' or 'B'. (Note: The justification behind the grade of 'C' being a point of reference was that students are not allowed to exit the developmental curriculum without a minimum grade of 'C'.)

Research question three asked whether students who take and successfully complete Intermediate Algebra are more likely to successfully complete College Algebra/Survey of Math than those students who were not required to take Intermediate Algebra.

Using the Mann-Whitney U-test, the results showed that the null hypothesis, that there was no significant difference in the median final grades in College Algebra/Survey of Math between students who were required to take

a developmental mathematics course and those students who were not, could not be rejected. This test shows that the students who took developmental mathematics in preparation for their college level mathematics course differed very little in their final grades in that college level mathematics course from the students that were allowed to enroll in College Algebra/Survey of Math during their first semester.

Research question four asked whether students who successfully complete their developmental coursework in one year are more likely to be retained the following year.

The data was analyzed using the chi-square test. The students who were used in this test were the 366 students that began their first semester of college in a developmental mathematics course. The students who completed their developmental courses in one year were assigned the number '1' and the students who did not complete the developmental courses in one year were assigned the number '2'. The same numbers were assigned for the students who returned the next fall and the students who did not return. The test showed that the null hypothesis, that there was no difference in the number of students retained who did complete their developmental coursework in one year and the number of students retained who did not complete their developmental coursework in one year, could be rejected. However, the effect size in this test was approximately .12. This means that while a difference was detected, it may not be significant enough to warrant any change in policy or practice.

The final research question asked whether students who successfully complete their developmental coursework in one year are more likely to graduate than those who do not.

The test used to measure this data the chi-square test. The students who were used in this test were the 366 students who were enrolled in a developmental mathematics course during the fall semester of 1994. The chi-square test showed that the null hypothesis, that there was no statistically significant difference between the number of students who graduated who had successfully completed their developmental coursework in one year and the number of students who graduated who did not successfully complete their developmental coursework in one year, could be rejected. A difference was detected with an effect size of .31, making the results a bit more substantial.

DISCUSSION

The purpose of this study was to closely examine the developmental education program at UAM to determine whether the developmental courses were adequately preparing the students for a college level curriculum. Conducting this study was both informative and enlightening. This study portrayed a

dire state for developmental students in our institution. The retention rate of developmental students is discouraging. The graduation rate of developmental students is even more disappointing. In the fall of 1994, there was an approximate 16 percent graduation rate among the 366 students that started their college careers in a developmental mathematics course. However, in light of the study, for those students that successfully completed their developmental coursework in one year, there was a significant difference in their graduation rate.

The results of the study could have far-reaching implications on the developmental education program at UAM. One proposal that has been suggested for increasing success among the college-level mathematics courses has been to raise the grade of successful completion of a developmental course from a C to a B. The study showed that a student's final grade in his developmental mathematics course did impact the student's final grade in his college-level mathematics course. Thus, the idea that raising the standard in the developmental mathematics courses from a C to a B has some merit since it may positively affect the success rate in college level mathematics courses.

Boylan and Bonham (1994) posited that students who take developmental courses may be more prepared for a college level curriculum. The results of this study showed that there was no difference in the college level mathematics grades between the students at UAM who took developmental mathematics courses and the students who did not. In other words, developmental students enter the institution underprepared, but yet after successfully completing the developmental program, are able to compete with college level students who were not required to enroll in developmental courses. In fact, the mean final grades in the college level mathematics courses between the two groups were extremely close.

The study did show that there was a difference in retention between students who completed their developmental mathematics course in one year and those who took longer. The retention rate was higher among the group that did successfully complete their developmental coursework in one year. To answer the question that many have asked: Is it wise then to require students to take their mathematics course immediately upon arrival at UAM? This study shows that, yes, requiring students to enroll in that developmental mathematics course and requiring their continuous enrollment until its completion is in the best interest of the student.

As a rule, students at UAM must be continuously enrolled in their mathematics and English courses, whether developmental or freshmen level courses, until they complete the general education requirements for any degree. This issue has been under scrutiny by students, parents, and faculty members

since its adoption. Many have argued that this rule forces students to enroll in courses that they are not yet required to take and therefore may discourage them from returning to school the next year. However, this study showed that students who enrolled and successfully completed their developmental coursework in their first year were more likely to return the following year.

Possibly the strongest argument for the requirement of the continuous enrollment in the freshman mathematics course is the result of research question five. These results depicted a higher graduation rate of students who completed their developmental coursework in one year when compared to students who took longer. In a time when the national economy depends on a skilled workforce, earning a college degree appears to be more important than ever. The community of higher education witnesses an approximate 30 percent of its freshmen entering college lacking the skills for college level coursework each fall (NCES, 2001). While the responsibility of educating tomorrow's workforce is not solely that of higher education, it is a responsibility that nevertheless befalls them.

Institutions of higher education may not have the cure for preventing skills deficiencies in our mathematics students. However, this study indicated that by strengthening some of the basic skills that so many college freshmen are lacking, developmental educators can give their students an advantage in either pursuing a college degree or entering the workforce. Either way, the knowledge imparted is invaluable and the contribution to society is precious.

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Learning Styles of the Developmental or the Learning Disabled?

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I have long believed that many of the students in my developmental/remedial/pre-college courses who have been labeled as “developmental,” actually are students who, unknowingly, have learning disabilities. These students have failed to learn simply because they have different learning styles than “the norm.” It is extremely important for educators to be able to adjust their teaching styles in order to maximize the learning potential of students who are being left behind. In this article, I suggest some of the tools teachers can use to assist these students who have “fallen through the cracks.”

Developmental education has been defined many different ways to encompass many types of individuals. However, no matter how developmental education is defined, most educators agree that developmental education is education that is geared toward improving the study habits and acquisition capacities of students who can advance to become independent and effective learners (Higbee, 1996).

Since I believe that a number of students in the pre-college courses at community colleges have undiagnosed learning disabilities, helping them discover how to accommodate their different needs during the learning process can give them the tools they need to succeed.

In the spring of 2004, I taught Pathways to College Success, a preparatory course for students who place into developmental classes. As I read my students' writing assignments, many curiosities surfaced. These curiosities included the omission of the “s” endings used with singular nouns; spelling errors of the simplest of words, while more difficult words were spelled correctly; hard to read handwriting; and long incoherent paragraphs that students could explain verbally when given the opportunity.

To develop strategies so that all the students in the class would be able to succeed, I asked students to take one of two learning style inventories that could be taken and scored on the computer. The learning style inventories can be found at <http://www.usd.edu/trio/tut/ts/style.html> and <http://www.learning-styles-online.com/inventory/>.

Because I generally participate with students in class activities, I too took

the inventory. Discussing my results first made students more willing to share their own.

The results were amazing. Not one student in the class learned best through lecture, the main teaching or delivery system they have experienced. These students needed to touch, move, and look at brightly colored charts in order to learn all that they could.

While some students may have spent their school days “goofing off,” it seems there were many more of them who might have been inattentive because the teachers’ styles of conveying information was in conflict with the way they processed information.

It is important for teachers to incorporate a variety of instructional strategies in their courses to meet the needs of these diverse learning styles.

TABLE 1—LEARNING STYLES*

LEARNING STYLE	CHARACTERISTICS
<i>Visual</i> (spatial)	Student learns best by using pictures, images, and spatial understanding.
<i>Auditory</i> (aural-musical)	Student learns best when using sound and music.
<i>Verbal</i> (linguistic)	Student learns best when using written or spoken words.
<i>Kinesthetic</i> (physical)	Student learns best when using his sense of touch.
<i>Logical</i> (mathematical)	Student learns best using logic, reasoning, and systems.
<i>Social</i> (interpersonal)	Student learns best while working or studying with at least one other individual.
<i>Solitary</i> (intrapersonal)	Student learns best working and studying alone.

*Adapted from *Overview of Learning Styles*, n.d.

INSTRUCTIONAL STRATEGIES THAT ADDRESS DIFFERENT LEARNING STYLES

Strategies used to improve the effectiveness of learning in a classroom setting include:

Vary the activities during each class. It is important to avoid lecturing the entire class period and include a variety of instructional formats in order to reach all types of learners. One approach to variety in the class could be to combine visual and auditory modalities when presenting lecture material and then create experiential learning through group work and hands-on application of the material (Northwestern University Services for Students

with Disabilities, n.d.). Also, use visual displays to accompany your lecture. Attempt to include charts, photos, PowerPoint presentations, or other visuals displayed to help the visual learners in the class absorb as much material as possible.

Offer alternative assignments. For example, have students draw a diagram or build a model to demonstrate understanding of the lecture. Using more than one way to demonstrate or explain information is always helpful for the tactile and kinesthetic learner. Learning styles can also be enhanced by reconstructing assignments to incorporate computer technology using various multimedia such as course web site, electronic discussions, online quizzing, testing and survey tools, and simulations and animations.

Use easy-to-read fonts and colored paper for your handouts because standard fonts and black ink on white paper are the most ineffective combinations, especially for the dyslexic student.

Understanding the different learning styles of the students in our classes gives us a better opportunity to reach every student in the class. Is it more work? Probably. However, if our students are not learning, then we're not effectively teaching, because to be successful at teaching, learning must occur.

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The University College: Responding to the Needs of Adult Learners

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Colleges and universities are being challenged to meet the diverse needs of the increasing numbers of adult learners enrolling in developmental education courses. Some administrators have responded to this challenge with administrative units called University Colleges. These units are infrequently discussed in the literature. This article briefly describes services that University Colleges provide to meet the needs of these learners.

College students in their mid-twenties, or adult learners, are transforming higher education as they enroll in developmental education courses (Ansley & Creech, 2000). They seek broadened educational experiences, increased self-esteem, career changes, entrance (or reentrance) into the workforce, completion of occupational credentials, or other objectives (Craig, 1997). Friedman (1997) argues that if college administrators are to retain these students at their institutions, they must provide services that meet their unique needs. To do so, some educators have established flexible administrative units called University Colleges.

Although University Colleges have existed in America since the 1930s (Strommer, 1993), they are infrequently discussed in program literature. Even though one can find descriptions of University Colleges at particular colleges or universities, it is difficult to find sources that discuss them from the global perspective of program development. Indeed, some of the dated references cited in this paper demonstrate the paucity of literature that discusses these units.

According to Strommer (1993), most University Colleges are portals of entry for incoming freshmen and focus on these students until they graduate. Campus resources are centralized to provide academic support such as developmental education courses, advisement, and orientation.

University Colleges, however, are flexible and, once in place, can add new programs to meet the unique needs of different student cohorts at different times (Strommer, 1993). Their flexibility makes them ideal to meet the needs of adult learners. Jackson (1986), for example, describes a University College that offered services that included telephoning their adult learners to inform them that requested classes had been cancelled and to recommend

possible substitutions. Likewise, Byrne and Wolfe (1986) describe one that offered free, non-credit Saturday workshops and conferences; another offered its first-year adult learners half-priced tuition.

Some University Colleges offer individualized degrees to meet the unique needs and interests of adult learners. The University College at Ohio University offers a Bachelor of Specialized Studies degree, which provides its adult learners with a method for pursuing specific career or academic goals that cannot be met through traditional degree plans (<http://www.ohiou.edu>). Another University College, at the University of Memphis, offers students the opportunity to develop and complete individualized, interdisciplinary degrees such as the Bachelor of Professional Studies, the Bachelor of Liberal Studies, and the Master of Arts in Liberal Studies degrees (<http://www.uc.memphis.edu/>).

In recent years, some institutions have merged their University Colleges with other administrative units to better meet the needs of their adult learners. The University of Minnesota is an example. Its University College and Continuing Education and Extension(CEE) office merged in 1996 and was renamed the College of Continuing Education (CCE) in 1999 (<http://www1.umn.edu/usenate/fcc/96-10-31a.html>). Today, the CCE focuses its services on adult learners who seek an education on a part-time basis for career enhancement or personal enrichment (<http://www.cce.umn.edu/gateway/aboutcce.html>).

CONCLUSION

Fairchild (2003) argued that most institutions are ill equipped to take on the diverse needs of their adult learners and recommended that institutions 1) revisit how they provide student services, 2) develop orientation programs tailored to adult students, 3) provide different types of financial assistance, 4) engage students in extracurricular activities, and 5) evaluate their admissions criteria and recruitment strategies. In response to Fairchild's recommendations, this paper advocates the use of University Colleges. These administrative units have had a long and successful history in American higher education. They have proven to be flexible and capable of meeting the needs of different students at different times. With institutional leadership and planning, they can also meet the needs of adult learners enrolled in developmental education programs.

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No Grammar Lessons for Grown-Ups: New Pedagogies for Developmental and Adult Education Writers

Although Language and Literacy research has become an impetus for change in the K-12 arena, Developmental and Adult Education practices have evolved little as a result of such inquiries. Driving instruction away from rote practice of discreet skills, educators have the opportunity to depart from deficit models of education and open up the classroom to the social, cultural, and political contexts in which students best develop their literacy skills. Such a move allows adult students to manipulate and author their experiences while continuing to shape and strengthen their identity, building confidence. As Developmental Education Programs continue to increase in size across the nation, it is time to pay attention to how we as educators can best accommodate students' needs.

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Over the past decade, scholars including Perez (1998), Gee (1992), and Zanger (1994) have made tremendous progress in expanding the definition of literacy from the antiquated and hegemonic designation of simply the ability to read and write, to a more comprehensive notion of a contextualized and creative act, capable of generating change. As this stance gained popularity, the pedagogies in elementary and secondary schools began to change to reflect the axiology of a new understanding. Unfortunately, such a shift has not transpired in adult education and developmental writing programs. Scott (2001) describes the protocol of a typical remedial-based program, where students arrive at an institution, are immediately assessed by a standardized diagnostic tool designed to pinpoint the discrete skills they have yet to master, and are then sentenced to several months of worksheet reviews and rote memorization practices that are intended to prepare them for future academic success or career advancement. These programs seldom investigate individual needs, goals, or experiences. They adopt, instead, a deficit model of thinking that focuses on student weakness, rather than building on student strength.

Many scholars have theorized why basic writing programs for adults have neglected research regarding best practice and come to be in such a poor state. Bartholomae (2001) argues that such courses are an expression of the dominant society's desire to reproduce an underclass of citizens and maintain the distinction between normal and deficient. Scott (2001) recognizes that

oppression of this nature may be intentional, but is more likely an uncritical response to institutionalized practices, misconceived to be effective and genuine in their attempts to advance otherwise hopeless individuals.

Educators need to become aware of the dangers of using skills-based writing programs with adults. Not only are such methods, due to their nature of irrelevancy, proven to be ineffective and an impediment to retention and persistence according to the research of many scholars (Curry, 2003; Maloney, 2003; Stygall, 2001), but they also serve to reproduce social, cultural, and educational inequities. Skills-based programs, with their inattention to the development of critical thinking skills and cross-cultural appreciation, do not prepare students to be successful participants in a democratic society. Adopting such a curriculum, rather, perpetuates the pigeon-holing of students as low-performing individuals with little hope of gaining sufficient academic or workforce accomplishment.

Recognizing that skills-based programs fail to meet the needs and expectations of most adult and developmental writers, and in the most extreme cases have damaging, long-lasting results, the remainder of this paper is dedicated to rethinking and imagining anew the possibilities for effective curricular reform. It is a synthesis of the assertions of many scholars who are dedicated to promoting activities that affirm the worth and ability of adults who are learning to write as more effective communicators, activists, and academics. It is my hope that educators and administrators will recognize the urgency for such reforms. As policymakers push for wider participation in higher education and the government demands the eradication of “illiteracy,” more underprepared students are entering colleges and universities and more adults are forced into community education programs so that they might enter the workforce and survive. It is an injustice to short-change such individuals with a skills-based program, which will likely leave them no better off than they started.

CURRICULAR CHANGES: RECOGNIZING THE IMPORTANCE OF SOCIOCULTURAL AND AFFECTIVE INFLUENCES

Many scholars, basing their assertions on the most influential research in literacy and linguistics studies (including Freire, 1970, 1983; Bakhtin 1982; and Gee, 1992), argue that curricular reform for adult education and developmental writing programs must first recognize that effective writing skills are not developed independent of sociocultural and emotional influences. Students do not learn in a vacuum, but they are constantly informed by their peers, families and other social networks as to what skills are important to develop and what knowledge is necessary to acquire. Adult learners are especially attuned to the relevancy of the material that is presented to them.

According to Bartholomae (2002), if a student cannot imagine him or herself using the information they learn in a functional or productive matter, they are likely to forget it in a short period of time. Because the practicality of exercises in skills-based programs, worksheet drills and rote memorization is not immediately evident, adult learners are more likely to become discouraged and give up.

When instructors say, “Read this material and then answer questions that follow,” and their students are then evaluated on their answers without further discussion, the implied message is that a learner’s role is simply to follow directives. Students have little reason to become actively involved and engaged with texts beyond seeking out correct answers to teacher inquiries, and often do not take personal responsibility for their own improvement. This leads to an inadequate understanding of what it takes to develop academic competency, because students are denied the opportunity to identify their own strengths and weaknesses and establish learning goals for themselves. In order for students to become successful writers, they must first master taking active responsibility for their own development. This can be facilitated by allowing students to choose their own texts and author their own goals and objectives with guidance from the instructor.

One way to do this, and set the tone early in the semester, is to allow students to co-author the syllabus. The instructor can use the first class period to engage students in discussions about books that the class might read, why learning to write is important to the students, and what they hope to accomplish. Such dialogue can then be used as a springboard for instructors and students to think about and craft assignments that will be meaningful and engaging. In the same manner, students can be involved in the evaluation process through self- and peer-assessments and through choosing the types of work to include in a final portfolio that displays their best efforts.

Scott (2001) further addresses how to build a program that capitalizes on student experience. The first step is for the instructor to recognize that each student brings unique strengths, which instruction should build upon. Rather than approach students in terms of a deficit model, as if they are broken or lacking, educators need to place them and their prior knowledge at the pedagogical center, according to Bartholomae (2001), who envisions an adult writing program where students harness the power of the “literate arts of the contact zone.” Such arts, based on the work of Pratt (1991) include auto-ethnography, transculturation, critique, collaboration, bilingualism, mediation, parody, denunciation, imaginary dialogue, and vernacular expression, which occur when “cultures meet, clash and grapple with each other, often in contexts of highly asymmetrical relations of power” (p. 177). Bartholomae

insists that developmental writing classrooms must create such a space in order for students to employ their strengths and develop new competencies. Such space necessitates active dialogue and time for students to share about themselves and get to know each other on a personal level.

Allowing for the contact zone to flourish and divorcing from pedagogy that breeds passivity in developmental and adult writing programs permits students and instructors to cultivate a communicative environment vital for success. According to Curry (2003), classroom interaction is the best method for “academic socialization,” or preparation to meet future academic expectations. Communication builds the analytical, argumentative, and critical thinking skills necessary for upper-level academic work, in a way that grammar work and basic skill memorization cannot. It also, perhaps more importantly, allows students to examine their role in the larger political and social context of their communities, and become more active participants in their worlds outside of school.

Students who are exposed to communication in the classroom and who develop writing habits that grow out of such interaction, will increase in their ability to effect social change. By sharing their own experiences and listening to those of others, they gain exposure to differing points of view and learn to develop strong arguments. Lillis (2003) posits that talk in the classroom contributes to meaning making as students explore beyond themselves and make new connections with the world. Lillis states that classroom dialogue allows students to bring their own discourse communities into the classroom and into interaction with others. As a result, there can be a creation of new, hybrid texts, which hold the potential to change worldviews and open new spaces for exploration, because students are exposed to dialects, discourses, and stories that may be novel and challenging to their primary literacies. Such critical inquiry techniques and competent research methods, according to Maloney (2003), can make at-risk students confident and competent both within the academy and outside, as they give input to shape societal norms, standards, and practices. Such a transformation, according to Reynolds and Bruch (2002), cannot occur through the study of a stable or empirically definable set of skills, but rather must transpire as the culmination of multiple communication processes that both shape individuals and allow them to manipulate their world.

FURTHER APPLICATIONS: CREATION IN THE CLASSROOM

For educators who have been using skills-based activities in their classrooms, making the transition to sociocultural methods can be quite difficult. Pedagogy will no longer be focused on checking skills off a list of required abilities. Instead, daily activity will be focused on talk, on meaningful inter-

action with peers, a conversation instead of a monologue. Facilitating such discussion can be a delicate task, and requires one thing above all, a safe classroom environment. As students begin to engage one another, in dialogue then in written word, they must do so within certain boundaries. Scott (2001) speaks of the ground rules for such a project. Students should be free to develop self-generated knowledge without the fear of judgment or ridicule. They should have opportunities to explore their self-identity in an arena where they will be engaged, not closed off or isolated. Educators should be swift to curb habits or expressions that uncritically and unconsciously defend only the advantages of the majority. Furthermore, they should act as cheerleader, quelling attitudes of fear or hopelessness, and inciting the courage to move forward.

Sparks (2002) acknowledges another important consideration for developmental and adult education writing programs. She recognizes, drawing on the work of Ferdman (1991), that every user of literacy is a member of a specific, defined culture with rules, boundaries and an identity deriving from and moderating the symbolic and practical significance of language and literacy. Thus, the degree to which adults will learn to better manipulate the nuances of written language will be directly dependent on how relevant their writing accomplishments will be to their everyday, functional life. The implication for the classroom, then, may be that student writing should be focused on the practical (e.g. writing a letter to their congressperson to appeal for change, composing an informational booklet for other members of their community discussing the prevention of HIV, and so on). Students should have the opportunity to write about issues that are immediately relevant to them and their communities, allowing educators to build on the strengths their students already possess.

Some might question how such tasks will prepare students for higher-order writing, such as research papers, critical essays, and argumentative pieces. Teaching writing as a process has been the dominant pedagogical model for composition since the late 1970s. This process typically involves novice students first choosing from available topics given their interests and prior knowledge. Through freewriting and drafting on these topics, exploring and manipulating them, they often discover their stance, argument or purpose. After receiving and providing peer comments on one another's work and in coordination with the professor and other resources, they revise their work and produce several more directed drafts, which result in a clearer, more concise and meaningful piece. As the semester progresses and students acquire more skills through guided experience, their assignments typically involve fewer cycles of revision and the student is prepared to take on more difficult

projects. In this manner, instructors use the strengths of the students, their interests and experiences to move them towards advanced ventures.

Maloney (2003) encourages educators not to forget about one of the most important dialogues that can occur in the classroom, reading. She supports the introduction of texts in the classroom that are rhetorically varied, but thematically connected, so that students can contextually frame the works and respond by such methods as comparison and contrast, analysis and synthesis. Bartholomae (2002) also calls for exploration of multiple genres of text in the classroom, claiming that students develop as writers as they begin to systematically recognize and analyze the relationship of their texts to those of others. Traditionally, in many postsecondary writing classes, instructors assign students passages to read and follow-up by asking students to express the author's main idea, message, or argument and reiterate it in an assignment. Such tasks often prevent students from participating in reader's response; they do not promote a dialogue between reader and writer. Literacy theorists have stressed, however, that the full meaning of a text develops as a result of this dialogue (e.g., Nystrand, 1989). As Berthoff (1984) writes, "The symbol user, the knower, the learner, is integral to the process of making meaning" (p. 751).

In the beginning, specific texts can be self-selected from a list of possible options provided by an instructor, allowing students the opportunity to choose something of interest that is engaging and relevant. The class can participate in read alouds to facilitate awareness of processing such as graphophonic, phonemic, lexical, syntactic, conceptual, discourse structure, and prior knowledge. Graphophonic awareness, for instance, refers to the recognition of sounds and symbol correspondences that allow readers to decode and comprehend texts. With this knowledge, certain signs cue a reader to the production of particular sounds that lead to meaningful words and phrases.

Classroom reading activities provide an opportunity for teachers to examine miscues, pauses, and inappropriate phrasing in order to determine what information to provide. They may initiate dialogue before the reading to activate prior knowledge or divide texts into pieces to give the reader the opportunity to understand information from a complex sentence. Finally the instructor can provide feedback to the reader after a section has been read to provide associations to other material or to expand on the information. As the students get used to this process, they can move to reading progressively more difficult texts, and transfer their new knowledge as their reading and writing skills grow in concert. Gradual exposure to examples of more sophisticated texts can also serve to prepare students for subsequent requirements in composition classes and other core curriculum courses; whereas in

skills-based programs, students have little to no idea of the nature of future expectations in writing.

Another activity that has gained approval among researchers of primary and secondary grades is that of storytelling. Storytelling can be used to teach several skills including identifying main ideas and recognizing the structure of a “good” tale. As groups share and discuss their experiences, they can also begin to recognize the differences between cultures and communities, see the value in the practices of other people, and question why things are done in a certain manner. As a class community, then, students can scaffold each other’s learning as they critically interpret real life situations and collectively remember events that have transpired.

Although these are but a few of the many visionary pedagogical practices espoused by best practice researchers, the main themes are clear. Classroom practice needs to be intimately related and relevant to student life experiences. Writing exercises and activities consisting of decontextualized repetition of discrete skills do not have the power to develop critical thinking skills or the awareness of how composing fits within the exchanges and boundaries of society. Learning is dictated by belief systems, institutions, relationships, and social experiences and cannot be viewed as independent of cultural norms and values. As students participate in talk in the classroom, a mini-cosmos of society, they begin to solidify their identity and values, and learn skills to negotiate the principles and standards of others. These are valuable tools for both within and outside of the academy. Current programs of watered-down grammar curricula serve to conceal such tools from adult education and developmental writers, refusing to challenge, confront, or negotiate student difficulty. If such programs continue to refuse to listen to the dominant research findings on the matter, there will continue to be a schism between basic writers and mainstream students, one that will continue to perpetuate deficit thinking and its detrimental consequences.

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