Developmental Education: Policy and Practice

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Editors

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Foreword

Over the years, the National Association for Developmental Education (NADE) Annual Monograph series has brought relevant work of the highest caliber to the attention of developmental practitioners, researchers, and theorists—not to mention legislators and the public. It is my coveted honor to welcome you to the 2002 issue, *Developmental Education: Policy and Practice*, the most recent in this series of publications with a well deserved reputation for excellence.

Emphasizing research in policy and practice, the 2002 monograph addresses intensely pressing concerns, for developmental education as it is practiced is often much unlike developmental education as it is commonly perceived outside the field. Once a term inappropriately limited to remedial coursework for the underprepared college student, “developmental education” now more accurately and effectively is understood within the field to refer to a wide array of educational enhancements designed to support and stimulate learners across the preparedness spectrum. Supplemental Instruction, tutoring, counseling, advising, and developmental coursework are just a few of the learning enhancements now understood to fall within developmental practice, which explains the impetus behind NADE’s motto, “Helping underprepared students prepare, prepared students advance, and advanced students excel.” Articulating the ramifications of this more inclusive and developmental perspective to the public we serve must be among our highest priorities if we wish future public policy to be supportive of credible practice.

A journal such as the one you now hold in your hands does not come into being without monumental effort and expertise. NADE and its members extend their sincere appreciation to Jeanne Higbee, Dana Lundell, and Irene Duranczyk, editors. Each has volunteered massive amounts of time, talent, and tenacity toward the production of this exceptional professional publication. We acknowledge our debt of gratitude and collegial admiration.

Enjoy, learn from, and share what you find in these pages—and consider lending your voice to educate others outside our classrooms and off our campuses who have yet to understand developmental education practices and how well informed policies can positively influence that practice.

Carol S. O’Shea
President, National Association for Developmental Education
2001-2002
Introduction

Irene Duranczyk

This eighth annual monograph, Developmental Education: Policy and Practice, has fourteen chapters dedicated to reviewing existing policies and practices in the United States and New Zealand. This issue highlights developmental professionals’ perspectives and research guiding us into the 21st Century. The chapters capture a global perspective for developmental education—one valuing each student’s history and vision. The chapters give us new ways to define developmental education through the empowerment of the learners and educators. There are five main facets of developmental education policies and practices explored: (a) how developmental education policies and practices service students, (b) research on teaching practices promoting student empowerment within developmental education, (c) program design models for developmental services, (d) research on teaching strategies used in developmental coursework, and (e) a book review.

The first five chapters set the tone for this monograph—a look at who developmental education serves, how important it is for us to continue creating opportunities for all persons with the ability to benefit and pursue higher education within four-year or two-year institutions, and a theoretical framework from which to challenge existing policies. This monograph begins with a case study of students who took developmental course work. Berg spends two years meeting with a select group of students in an effort to understand their experiences, challenges, and needs. The next chapter by Jehangir gives a historical and up-to-date review of state policies affecting developmental services to students. The chapter includes New York, California, and Georgia policies with advocacy suggestions. Bruch takes us further into the debate by highlighting the need for continuing multiculturalism conversations. Bruch gives suggestions for enhancing the empowerment of all students’ voices in the classroom and beyond. In chapter four, Crisco guides us in looking at the California State Universities policy for remediation. Even within these restricting policies, Crisco suggests ways for achieving equality and excellence through advocacy. The last chapter in this section by Moore addresses access issues. Moore addresses access issues in a multicultural perspective using a successful model for providing empowering developmental education in traditional, academic, discipline-content courses at the four-year institution.
Chapters six and seven highlight teaching practices for the empowerment of students. Anderson uses a case study approach empowering students to develop a business. Miksch uses a “Law in Society” class to turn students into advocates for educational access.

Chapters 8 through 10 demonstrate successful program design models for developmental education. Gess and Klindworth present a design for a university with a restrictive admissions policy to create a center for multidisciplinary studies, admitting students that could benefit from developmental education services. McDade presents a model for learning services in an institution with an open-door admission policy. Glover presents an online mathematics program model for enhancing access for students beyond the on campus classroom. All three authors include outcomes data to evaluate program effectiveness.

The next three chapters use research design methods to evaluate particular aspects of developmental classroom instruction. Green evaluates the effectiveness of a workshop approach to college literacy through a qualitative study. Kinney uses surveys and interviews to examine outcome differences in computer-mediated and lecture developmental mathematics courses. Duke uses a quantitative study to determine the effect attribution retraining on overall performance of students in developmental mathematics courses. Each of these studies provides outcomes data and practical suggestions for practitioners.

The last chapter of this volume is a succinct review of a text used by many developmental educators to enhance students’ study skills.

All these chapters together create a current view of policies and practices in developmental education. These chapters are designed to expand your thinking, learning, and vision for developmental education in the 21st Century.

This has become a year of transition and change for the editors, too. Jeanne Higbee, one of the founders of the NADE monograph, is stepping down. She will be greatly missed. Jeanne has been the guiding visionary for this publication. Through Jeanne’s commitment, long hours, and vision for education and educational change, this publication exists. Thank you, Jeanne.

Also stepping down this year is Dana Lundell. Although her involvement has been more limited in time and scope, she too will be missed. Dana’s contributions have enhanced this publication. William White has been appointed by the NADE Board to assist in the monograph publications beginning with the 2003 Monograph, Developmental Education: Pathways to Excellence.

Last, but not least, a special thanks to our Editorial Board. They have done a tremendous job this year reviewing the chapters, providing much needed feedback, suggestions, and guidance in the production of this monograph. The unpaid services of this board are invaluable to the authors and the editors. Thank you so very much for your continued commitment and generosity.
If a Tree Falls in the Forest . . .
A New Look at Old Assumptions about Developmental College Students

Christine G. Berg
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Abstract
This study offers a broader view than readily available of students who enter college “underprepared” for credit-bearing coursework. My four collaborators were initially students in my reading classes. These classes are part of a “developmental” program including coursework in writing, reading, and math. The program is designed to facilitate students’ success in credit-bearing classes. My students and I collaborated individually over the three subsequent terms. We explored the home, school, work, and social lives of each of them, delving into the capabilities they nurtured to navigate their lives. Our study illustrates that although various competencies are grounded in lives beyond formal education, those who evidence them serve the academy well.

The problem of addressing students “underprepared” for the rigors of college coursework is as old as the American system of higher education. When Harvard College opened its doors in 1636, it was immediately faced with the “need for remediation among its...
students” (Boylan & White, 1987, p. 4) because Latin, the language of the academy, was unfamiliar to those prospective religious clergy who were Harvard’s first students.

As the colonies united and the U.S. grew and prospered, so did its college and university system. “Remedial” services departments became essential, not only to the survival of college students, but also to the economic well being of the colleges themselves (Boylan & White, 1987). The 19th and early 20th centuries saw ever increasing numbers of students enroll in higher education institutions. Eventually two-year or junior colleges were created to meet the greater demand for post-high school study (Cohen & Brawer, 1996). These schools provided an alternative to college preparatory coursework offered by the four-year school, thereby de-emphasizing remediation in institutions offering baccalaureate degrees. Yet, such programs did not disappear entirely among these schools. According to Enright and Kerstiens (1980), “between 30 and 60 percent of those postsecondary institutions polled in 1942 either offered or planned to offer remedial reading and study skills programs” (p. 2). According to Maxwell (1979), this trend continued with as many as two-thirds of all college freshmen in the 1950s needing reading “remediation” in order to succeed.

The post World War II baby boom prompted a still greater number of students seeking admission to four-year colleges. The corresponding tightening of the criteria used by these colleges and universities to admit applicants was accompanied by a decrease in the remedial services offered by such schools (Boylan, 1988). On the other hand, two-year schools increased the scope of their preparatory programs.

Various reform movements sprang from the tumult of the 1960s and 1970s and led to open admissions policies in many four-year schools and a return to the tradition of offering incoming students additional preparation for their college coursework. Preparatory classes were grounded in various educational philosophies, but were largely intended to “help underprepared students make a successful adjustment to college “ (Boylan, 1988, p. 3). So while many of us today express concern over how best to help our students who are labeled as developmental, remedial, basic, or underprepared, our dilemma is as old as the American institution of higher education.

The “Problem” of Developmental College Students

I was plunged into this struggle when I was asked, three days after the start of a semester, to teach “basic” English at a large community college in the Northeast. Students were placed in my classes due to their poor performance on an admissions exam. The course was part of a comprehensive program offering work in reading, English or writing, and math in order to help students “develop” the academic skills necessary to survive in college credit-bearing classes.

I had little prior experience working in this setting, so I attempted to remedy my “underpreparedness” by exploring the literature about my students as I worked with them. What I read quickly prompted my curiosity and soon began to trouble me. My daily experiences with my students were often countered rather than reinforced by my reading.
I found that in an effort to address the problem of remediating students like mine, the research tends to emphasize the ways in which these students are “lacking.” Claxton (1990), for example, considers the earlier findings of Cross (1971) about “new” college students to hold true for developmental college students: They seem more passive about their learning than nondevelopmental students and are inclined to have fewer skills in abstract thinking. They tend to exhibit a pragmatic view of learning that displays little interest in learning for its own sake. Terenzini, Springer, Yaeger, Pascarelli, and Nora (1996) report that first generation college students, like mine, have weaker cognitive skills than the college population at large. Roberts’ (1990) definition of these developmental students claims that their “skills, knowledge, and academic abilities are significantly below those of the ‘typical’ students in the college in which they are enrolled” (p. 197). Erwin (1990) observes that the academic deficiencies relating to the reading activities of developmental college students are complicated by their “less than average world knowledge” (p. 264).

Traub (1994) indicts students entering City College in New York under open admissions policies as “arriving at college so deeply disadvantaged, psychologically as well as academically, that City was virtually unable to help them” (p. 109). Needham (1994) describes Patty, a community college developmental student, as representative of those “loose cannons” (p. 22) of the college classroom who come from “deprived backgrounds [and] intellectual wastelands” (p. 27).

Even those educators whose writing stresses their appreciation of underprepared or basic college readers and writers tend to discuss these students in terms of what they lack. Shaughnessy (1977), for example, a pioneer in attempting to determine the needs of the underprepared student, saw this group as “strangers in academia, unacquainted with the rules and rituals of college life, unprepared for the sorts of tasks their teachers were about to assign them” (p. 3). Wilson’s (1994) portrayal of Darleen, an underprepared college student, champions Darleen’s right to schooling while examining her background for explanations of her deficiencies.

Although my experience concurs with the findings that claim that developmental college students tend to carry poor academic records with them to college, my students bring much more than their transcripts and test scores. My students lead busy, eventful, productive lives. They tend to parents, children, and other family members. They work, often more than one job, while attending school on a full-time basis. They come from all over the world. One of my classes this semester has representatives from suburban New York and its inner city, rural India as well as Bombay, various Caribbean Islands, Portugal, Peru, and Egypt. My students enjoy enormous success as All-American football players, prize-winning artists, published authors, and lifesaving medical professionals.

Often they share with me their insights as they participate in the society of a college in a quintessentially suburban American community and travel home after class to cultures that reflect life in countries continents away. When I sit with my students enjoying casual conversation at my dinner table and hear one of them say to my son, “Man, you don’t know how
lucky you are. I never had one meal in my life with my father at my table,” I get a glimpse at a life and a perspective that differs from mine. Even though my students bring their experiences and the capabilities they have nurtured through these experiences with them to college, there is no revelation of this in strictly academic sketches.

Taking a Look for Myself

This disparity between much of my reading and my daily observations led me to collaborate with my students in an investigation of just who they are as they make their way through college. The students in each of my four basic reading classes in the Fall 1997 semester helped me consider and plan our inquiry, which evolved into an in-depth study of four of these students. Over the course of two years, these students and I shared many experiences and stories, at first on at least a weekly basis and eventually on a less frequent, but quite regular, basis. Each of my students helped me plan the path of our individual inquiries, perhaps a bit hesitantly at first, but with increasing confidence as we progressed.

Although they were all most willing to be identified by name in this research, they honored my request that we use pseudonyms. They deliberated over their names, ultimately choosing them to reflect aspects of themselves they considered integral to their portraits. Tree Prince, whose name depicts his stature, is a giant young man, standing literally six feet, eight inches tall and weighing 355 pounds. He grew up as the youngest child and only male in a family that included four sisters. He was raised in one of New York City’s most problematic neighborhoods. McKenna Green selected her name because it kept her monogram and pleased her with its poetic ring. Unlike Tree, she is a rather average-sized young woman who loves to question everyone and everything and comes from suburban New York as do Julius and Destiny. Julius E. Villa chose a name that reflects his Latino heritage and honors his little sister. He speaks English and Spanish and played soccer on our college’s championship team. Destiny Jordan is proud to be known by a name that honors basketball’s hero and reflects her belief in her ability to determine her own future. She was 19 when we began our investigation and balanced her life as a student with her roles as a practical nurse and a single mother of a young son.

My students opened their lives, stories, and hearts to me. At our meetings, we talked, did projects or homework for class, and sometimes explored specifically the research questions I had prepared with my students’ help to guide our inquiry. I met my students’ families and friends, went places, and shared the experiences they suggested would help me to “see” who they are and what they brought with them to our college.

Although I had anticipated my study quite enthusiastically and optimistically, what evolved surprised even me. My students were wonderful! As they directed and guided our individual inquiries, they asked regularly about each other. From time to time we met in small groups to explore areas of mutual interest. They spoke and shared with increasing candor as the weeks passed into months. As I learned who they are, where they come from, and where they hope to go, I observed first hand the capabilities they employed to make their way through their lives in and out of school.
I taped our conversations each week and those that we had with friends, co-workers, and family members. I spoke with several of their other teachers at our college and observed my students in various classes. I looked for possible patterns that might help me paint a collective portrait of my four student collaborators along with their individual pictures.

**My Observations**

Although I knew that my study was in no way a comprehensive report of the developmental college student, I did find some direct overlaps and consistencies among my students’ stories. Several patterns illustrated the competencies students like mine have to offer those of us who may consider ourselves more traditional members of the academy. Most evident is the indication that in coming to college, they had each (as Tree so succinctly observed) “beat the odds,” and they had done so through the power of their own agency.

**Tree**

Tree, the young man from New York City, comes from a neighborhood where survival is in itself a serious challenge. Not only did he defy the statistics offered by the New York City Board of Education in graduating from high school, he, his family, and friends spoke of witnessing the deaths of several of his classmates over the years due to one or another violent circumstance. Despite the turmoil that surrounded him, Tree managed to make his way each day to our suburban setting. This in itself was no small task because his trip involved several trains and buses and often took over two and a half hours.

During the course of our investigation, Tree spoke frequently of the differences between his home community and that of our college. He observed that he handled situations very differently in the two settings. At home he was sometimes compelled to assume a “tough guy” stance, largely because of his enormous stature, but at school he talked through any issues that arose and used his quick wit and appealing personality to negotiate situations.

I was able to witness him do just this on several occasions, both in and out of the classroom. I saw Tree make presentations with a sense of humor and a modest air that belied his commanding presence and encouraged his colleagues to listen to his stories and respect his views. I saw him sit with curiosity through his professors’ lectures and participate in class discussions, asking questions and offering suggestions. He debated issues and questioned assumptions. He was known to pepper his conversations with the phrase “it’s real” quite regularly to demonstrate his appreciation of the exchange of ideas and knowledge that marked his classroom experiences.

He was always the gentleman with the faculty and staff. He got to know people in all areas of campus life and eventually secured a job in our department’s Learning Center. He had become friendly with its director and staff through his frequent visits to do homework and ask advice. During the time he worked in the Center, Tree helped other students learn how to use personal computers and research information on the Internet. He had learned these skills himself.
by working with the tutors in our Center. Every day when he left his job to go to class, Tree would individually thank each tutor for her help and wish her a good day. Even now when I run into them, they smile and inquire about Tree’s progress.

Tree’s presence at our school is sorely missed because he managed to defy even greater odds and graduate in August 2000. He is currently studying for his baccalaureate degree while working as a Resident Advisor at a Midwestern college.

**McKenna**

McKenna’s prior experiences in school had been so troubled that she was eventually expelled from her private high school. She ultimately graduated from her local public school. She mentioned one day that she was with a group of her private school friends when she ran into a former teacher. The teacher asked the other young women what colleges they were attending. Then she turned to McKenna and inquired, “So what are you up to?” McKenna delighted in telling me of her teacher’s incredulity upon learning that McKenna, too, was pursuing a degree.

As with Tree, I watched McKenna share her abilities, insights, and friendship with me and others she encountered in our school. Although she remained wary of new professors and classroom settings, she navigated her way through a variety of circumstances, learning from them and contributing to them as well. We often spoke about classes that challenged her, and she talked her way right through her concerns. I remember one sociology class in particular. McKenna found the instructor difficult to work with, so she considered dropping the class. We discussed her problems with the course, and she decided on her own to speak with her professor. He expressed his gratitude for her questions and brought them up in class in order to understand his students and clarify his point of view. Her classmates thanked her, and she persisted in the course, ultimately earning a “B.” She also studied photography and film, speaking enthusiastically of her projects in these areas. She collaborated with her classmates in many of her courses to fulfill assignments and create videos, films, and photo portfolios. She secured an internship at a local television studio and told me many stories of her experiences there.

McKenna managed all of this while dealing with an enormous tragedy in her family. Her aunt was involved in a catastrophic car accident and left in a comatose state, from which she has yet to emerge. McKenna has been a constant presence in her cousins’ lives, comforting, encouraging, and motivating them to go on living. I spoke several times with one of her cousins who repeatedly expressed his gratitude for all McKenna has done for him and his family. He and McKenna’s sister concurred in their view that McKenna is “the mayor” of their family and friends. Her leadership organizes them and helps them to persist individually and collectively.

In spite of the challenges McKenna faced on and off our college campus, McKenna earned her degree in December 2000. She is working as a teaching assistant in her local school district and pursuing a career in media.
**Julius**

Julius’ family supported his participation in higher education. However, they were in many ways unable to help him make his way to or through our school. They speak Spanish, the language of their Central American homelands, and Julius and they explained that they are uncomfortable with the language and structure of their children’s American school system. Julius was on his own in managing his program and meshing his home culture with those of his schools.

Through his solid participation on our school’s national championship soccer team and his self-effacing, but ready contributions to his individual classes, Julius shared his abilities with the college community. Through speaking with him, his friends, family, and professors, I learned of his willingness to offer his insights into his home culture and his first language, Spanish, with those encountered in college. I observed his camaraderie with his teammates, and his soccer coach told me, “Julius, he’s a real good kid, such a nice guy!”

While attending school and playing soccer, Julius also worked with his father in his father’s fire and damage clean up and repair business. Because fires, floods, and other catastrophes cannot be anticipated, Julius had to be ready to accompany his dad at all hours of day and night. Many of his co-workers do not speak English, so Julius is often called upon to handle difficult situations. Julius told me many stories about his work experiences. One time, for example, he met a man who was still mourning the death of his mother when his apartment was destroyed by a fire. Julius explained that as he worked, he listened to the fellow’s sad tale. The man eventually interrupted his own story to remark to Julius, “You’re such a nice guy.” The next day, Julius did not accompany his dad back to that job site, but his newfound friend asked after him and gave his dad a collectible baseball jersey to thank Julius for his compassionate ear and comforting words.

Julius’ loyalty to his family extends beyond his ties to his father’s work. During the course of our inquiry, Julius’ mom had a new baby. Julius’ only other sibling is his sister, who was sixteen when we began our inquiry. The new baby brought a great change into Julius’ family’s life. Although he felt awkward at first, he learned to tend to his sister’s needs and became a gentle caregiver upon whom his mom was able to rely so that she could continue working. He demonstrated his affection for his new sister time and again when we met. He would bring pictures and share stories about her latest accomplishments.

Julius did not graduate from our school. Financial pressures compelled him to leave school and work long hours. When I consider Julius’ story, I wonder about the ties his team membership provided to the college community. He left school after his two year eligibility on the soccer team ended. His leaving was a loss to us all.

**Destiny**

Destiny, like McKenna, never felt welcome in school. She resisted the regimen of her various teachers. Then, when she was an adolescent, her family moved, and she had to change districts.
Not long after, she became pregnant with her son and estranged from her family for most of her pregnancy. She managed her own academic coursework, practical nurse training, and economic survival. Although she eventually reconciled with her parents, she is responsible for raising her child.

Destiny is an enthusiastic, capable, and confident mother, and her son, Shamel, is her first priority. Her mom and her grandmother expressed their pride in Destiny’s parenting in several of our conversations, and I soon grew to witness first hand the reasons for their feelings. Often when we met for lunch and conversation, Shamel would accompany his mom. Destiny explained that although she could have left him with a friend or family member, she wanted me to get to know him along with her. The cheerful, friendly little boy would sit pleasantly through our conversations, making us both laugh at his efforts to participate in our talks.

Although Destiny’s life was almost too filled with her obligations to work, school, and her family, she made it clear that Shamel is not only her first responsibility, but also the joy of her life. I got to witness the insights her perspective contributed to our college’s classrooms and students through the classes I observed and the people I spoke with about my collaborator. Her confidence in her mothering encouraged her participation in class discussions. She knew that she viewed life a bit differently from most of her peers and was willing to share her observations and convictions with them.

Despite her exhaustion from working, parenting, and attending school, Destiny insisted that she was determined to secure the education she pursued. She repeatedly told me that she wanted it, not only for herself, but also for her son. She saw her attainment of a professional degree as an assurance of her son’s well being. Currently, Destiny is studying toward a nursing degree at another institution. Last semester she made the Dean’s List.

**Drawing Some Conclusions**

In learning my students’ stories, I witnessed their affectionate participation in the lives of their families; their able management of jobs, neighborhoods, and communities; and their contributions to various social, athletic, civic, and religious groups and relationships. In these settings, my students displayed their ability to lead and to follow, to make daring choices and thoughtful decisions, and to act upon their beliefs to enrich those people and circumstances involved in their work, play, and worship. They, like many students disenfranchised by educational institutions and systems, managed this in spite of their earlier schooling rather than through it.

In failing to recognize my students’ creativity and the “often undefinable savvy about the world and how it works” (Payne & Lyman, 1996, p. 14) or “street smarts” (Sternberg, 1997, p. 20) through which they made their way to college, educational institutions have undermined, rather than encouraged, my students. Yet my students’ pursuit of college indicates that, ultimately, they have rejected the message transmitted by their former schools just as they have countered
various political and social factors that combined with the academic to obstruct their path to higher education.

In taking the risk of attending college despite their prior experiences in school settings, they proved themselves to possess abilities recognized by contemporary scholars and researchers including Robert Sternberg (1990, 1997), John Abbott (1994, 1995, 1997), and Edmund Gordon (1995) as critical to life in our society. My students demonstrated that they can “deal with ambiguity and uncertainty, [and] be creative and personally enterprising” (Abbott, 1995, p. 8). They can solve problems through their creative, evaluative, and practical competencies and weave the various contexts of their lives together meaningfully and productively. They offer consistent evidence that they possess abilities that should be valued and celebrated in all schools, including institutions of higher learning.

Along with their competencies, my student-collaborators enrolled in college with the motivation they found in their shared desire to be fruitful, productive, and personally and professionally contributing members of society. Although they pursued career goals as unique as each of their personalities and experiences, they coincided in their recognition of the critical importance of higher education in helping them to achieve their goals. Despite the responsibilities, distractions, and issues that impacted upon their progress, they persisted in their pursuit of college degrees throughout the two year course of our investigation. Two of the four ultimately achieved their goal; at least one of the other two persists as I write this.

How We Must Respond

Colleges and universities need to welcome students like those who collaborated with me to their campuses and their classrooms. Policy makers and enforcers must reconsider restrictions currently being placed upon students’ opportunities to teach and learn among the traditional college community. Those who control policy must rethink their decisions to eliminate developmental coursework and, thereby, the students who enroll in it, from campuses of colleges and universities. They must recognize that those students who will be lost to our colleges are, as Sternglass (1997) so strongly states, “precisely the students that society needs to nurture . . . . Not only will these individuals have more satisfying lives, but the larger society will benefit from receiving valuable input from a segment . . . that is often denied the opportunity to make a contribution” (p. 300).

Motivation and persistence on the part of developmental college students cannot alone ensure their successful accomplishment of their goals for higher education. Although the power of their agency is undeniable, it cannot be expected to level the gullies in the educational playing fields through which they have made their way to college. Those of us who are more traditional members of the academy must facilitate their efforts through our endeavors.

We must rethink the descriptions historically assigned to our students by those who have defined them in terms of their academic deficiencies. Rather than remediating our students, we must explore what all our individual students know and encourage them to use their
knowledge, insights, strengths, and abilities to teach themselves and all of us in and beyond the academy. Through this we will detach ourselves from the connotations of sickness and deficiency so often associated with remedial studies or programs (Johnston & Allington, 1991), and focus on the health and wellbeing of us all.

Because efforts to promote pedagogy that values all learners should be evident in the policy and practice upon which all schools are built, institutions of higher learning, with the associated opportunities for research and study, must participate wholeheartedly in such initiatives. Those of us in college settings must lead the effort to follow the advice of Goodman and Marek (1996) and focus our teaching on our students’ strengths rather than weaknesses by “revaluing” our students and encouraging them to revalue themselves. In so doing, we will provide educational opportunities for all of us beyond those afforded by any remedial program (p. 11).

When I consider my students’ views of themselves as academic learners, I can find strong evidence with which to argue this perspective. Tree, McKenna, Julius, and Destiny worried regularly about their abilities or efforts to meet the rigors of their college coursework, not only in relation to the other demands on their energies, but in terms of their academic histories. As Dickson (1995) observes, this anxiety is an indication of these students’ desire to learn, and we, as the more experienced members of the academy, need to assist our students in recognizing both this and their potential as learners. “[Our students] need to define themselves as literate human beings, not as cheaters in the system” (Goodman & Marek, 1996, p. 11). They must be encouraged to recognize themselves as leaders of our learning environments. If they do not, “they are less invested in the academic task[s and community] and their sense of ownership in the learning process is minimized” (Spires, Huffman, Honeycutt, & Barrow, 1995, p. 340), as is that of those of us who work with them. Those of us who are college educators can only facilitate our students’ confidence and enfranchisement when we demonstrate that we believe in them ourselves by marshaling our efforts to counter the negative views of these students that have existed as long as American higher education.

Although developmental students often enter college tentative about their identity as students in the classroom and members of the campus community (Henry, 1995; Rose, 1989; Scott, 1993; Shaughnessy, 1977; Sternglass, 1997), my study offers evidence that they are willing to enfranchise themselves within the academy. Moreover, I can find from my experiences with my students reason to believe that our efforts to facilitate their presence among us should extend beyond the connection between student and instructor as participants in the same class for a 16 week semester.

When I was establishing the parameters of my investigation, I was uncertain of just how many students I should ask to help me. I realized that I was seeking an enormous commitment on their part, and I was unsure of how to present my proposed inquiry to be certain that my students would realize the potential inconvenience, discomfort, or intrusion inherent in its methods. After much consideration, I determined that if I initiated my work with four collaborators, I would hopefully retain more than one long enough to get to know them and observe their experiences in some depth.
I was concerned because students at the college where I work, like the developmental college population at large, tend to leave without completing degrees (Phipps, 1998). Based on the patterns established over the 12 years our program had been existence when I began my investigation, our department estimated that approximately 40% of the students will stop attending by the end of their second semester. The circumstances in the sections of Reading 090 in which my student collaborators were enrolled illustrate this attrition: During Fall 1997, of the 14 students on my roster in the 8.a.m. section in which McKenna and Destiny participated, only they and two other students were still attending the college as I concluded my exploration in the Spring 1999 semester. One of these two students was a member of the college’s football team who transferred to a four-year school the following fall; the other is a young man who left school for financial reasons after the Fall 1997 semester and re-enrolled in the Fall of 1998. Of the 15 students on the roster in the 2 p.m. class in which Tree and Julius were students, they, two other football players, and one young woman pursuing a certificate in Office Technology remained.

When I consider that the athletes’ persistence in their studies was surely encouraged by their team participation, I feel confident in concurring with the research that finds that a personal connection to people and programs in and beyond the developmental classroom is critically important to the retention of its students and the prosperity of the academy (Boylan, 1983; Brown, 1995; Cohen & Brawer, 1996; Dougherty, 1994; Griffin, 1992; Padron, 1992; Salter & Noblett, 1994; Soliday, 1996). Inadvertently, my study may have facilitated my collaborators’ connection to our college. Their stories reveal that they confronted academic vulnerabilities and personal responsibilities as they pursued school. Yet, throughout the duration of our inquiry, they defied the research that points to these issues as reasons to abandon their studies (Neisler, 1992; Riehl, 1994; Rogers, 1990). Despite their academic and personal concerns, they extended themselves to their coursework and their colleagues at the college, myself included.

Their efforts must be reciprocated. Those of us who guide the developmental college classroom must acknowledge the competencies and capabilities of all students, including those traditionally considered underprepared for college. Because the strengths all of us bring to college are evidenced in and developed through the contexts of our lives, we must celebrate our diversity in our classrooms. We must share our varied experiences, valuing their differences “to see [ourselves] as rooted in other cultures yet also belonging to, becoming transformed by, and in turn transforming [our] school culture” (Soliday, 1994, p. 522). When we accomplish this, “students assume a position of strength” (Soliday, p. 522) just as the academy is strengthened by their presence.

When I reflect upon the investigation I conducted with my students, I am moved by the steadfastness, insightfulness, and generosity with which they guided its course. Tree, McKenna, and Destiny are still very much present in my life; only Julius and I have lost touch. Neither my students nor I know how our stories will end. We are all confident, however, that those of us within the academy must hear the voices of those who seek welcome. We all have too much to gain and too much to lose to do anything else.
References


Higher Education for Whom?
The Battle to Include Developmental Education at the Four-Year University

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Abstract

This chapter examines the debate regarding the role of developmental education at public four-year universities and will focus on the following topics: (a) discussion of the historic and political forces that have shaped perceptions regarding developmental education; (b) a description of developmental education and developmental students; (c) an examination of the debate around its place in higher education with specific attention to current state legislative action against developmental education at the public four-year university; and (d) recommendations for developmental educators who seek to challenge the merit of such legislation and create a paradigm shift around perceptions of developmental education.

Education has long been seen as the great equalizer of American society, yet the question of who should have access to higher education has been debated in different forms for centuries. In 1965 John Brubacher, higher education historian, raised the question: “Higher education for whom?” (Hurtado & Navia, 1997, p. 106). We have still failed to reach real consensus on this issue even in the year 2001. The question of entitlement versus access to higher education is particularly relevant to public four-year institutions that are charged with serving the children of their state and are simultaneously at the mercy of state funding as decided by the legislature. Faced with the pressure and seemingly contradictory goals of excellence and access, public institutions have struggled to justify the role of developmental education at the four-year university, where resistance comes not only from without but also from within the ranks of academe.
Given this struggle, this chapter seeks to explore four aspects of the debate around
devvelopmental education in public higher education. The first section will focus on the historic
and political forces that have shaped perceptions regarding the role and nature of developmental
education. The second section will seek to provide an accurate description of developmental
education. The third and fourth sections will examine the debate around the role of
developmental education in higher education and look specifically at current state legislative
action that continues to threaten the existence of developmental education at the public four-year
university. The last section will focus on recommendations that must be set in place by
developmental educators if they are to successfully challenge the merit of such legislation and
create a paradigm shift around perceptions of developmental education

The History Behind Developmental Education

Although assisting underprepared students to succeed in college has been a component of
higher education since the inception of Harvard in 1636, it has been coupled with a struggle to
justify the appropriateness of a four-year education for inadequately prepared students (Spann &
as 1828 the Yale Report called for an end to admission of students with “defective preparation”
(p.2). Charles Eliot, president of Harvard, countered this ideology in his 1869 inaugural address
when he challenged the traditional curriculum and argued for an elective system, one that
“fosters scholarship because it gives play to natural preferences and inborn aptitudes, takes
possible enthusiasm for chosen work [and] relieves the professor . . . of the presence of a body of
students who are compelled to an unwelcome task” (Lucas, 1994, p. 166). Thus, Harvard and
other colleges instituted programs to address remediation and by 1870 only 23 colleges reported
no college preparatory program (Losak & Miles, 1991). Although Eliot and other modernists like
Andrew White of Cornell (Lucas, 1994) opened the door to a curriculum that spoke to a broader
student body, the traditionalists continued to oppose any shift from the old order. As the debate
continued, other progressive leaders such as the president of DePauw argued in 1890 that “the
Old Education ascribed the virtue to the subject, the New Education ascribes it to the process”
(Lucas, 1994, p. 169).

In addition to the development of a more inclusive egalitarian curriculum, the passage of the
Morrill Acts of 1862 and 1890 provided stimulus for the public state land-grant university, and
with it the recognition of “faithful service to the needs of the community” (Brubacher & Rudy,
1997, p. 160). Challenging the traditional meritocracy of higher education, University of
Minnesota’s President Coffman spoke to the need for inclusivity when he said in 1932,

The state universities hold that there is no intellectual service too undignified for them to
perform. They maintain that every time they lift the intellectual level of any class or group,
they enhance the intellectual opportunities of every other class or group. (Brubacher & Rudy,
p. 171)

The passage of federal legislation from the G.I. Bill in 1944 to the Higher Education Act of 1965
included educational justice and enhancing human capability as critical missions of higher
education (Kerr, 1994). These policies created greater access to higher education and with this the continued controversy of addressing the needs of underprepared students (Brier, 1984). Thus, academically underprepared students have historically been a part of American higher education and efforts to “bridge the gap are part of the traditional, if not formal, mission of higher education” (Brier, 1984).

In the 1970s the growing need for developmental education resulted in the emergence of two major professional organizations: the National Association for Developmental Education (NADE) and the College Reading and Learning Association (CRLA). With this have come regional and national conferences and scholarly journals that have enhanced the understanding and the study of developmental education.

Despite this progress, the increased resistance to “special” opportunity for any group or individual continues to threaten the funding of developmental education and access at public institutions. There are several reasons for this heightened resistance. First, increasing numbers of developmental students raise concerns about the quality of secondary education and its effects on the quality of higher education (Brier, 1984; Clark, 1997). Second, decreased funding for higher education has resulted in demands for more accountability and quality (Davies, 1991; Gladieux, Hauptman, & Knapp, 1997). Third, frustrations from within campus abound as faculty are challenged to work with students who are less prepared than their predecessors (Levine, 1997). Thus, the debate about the place of developmental education in public higher education must wrestle with constraints that are not only ideological and within the academy, but also external and affected by market forces and political sentiment.

The next section will describe developmental education and those it serves and will then further examine the various positions around developmental education’s status within public universities.

**What Is Developmental Education and Who Are Developmental Students?**

The debate regarding the role of public higher education swings between meritocracy and access, and the resistance to providing developmental education at public universities stems from the usual tussle of what has been called the iron triangle in higher education, where the push and pull between providing quality, access, and cost containment are often seen as dissonant goals.

Spann and Mcrimmon (1998) argue that three terms, “remedial, compensatory, and developmental” (p. 41), have emerged to define the educational experience of those who are underprepared. The term remedial implies a deficiency in the student and therefore a push to fix or remedy the issue. The term compensatory was coined in the 1960s as part of Lyndon Johnson’s War on Poverty (Alkin, 1992), when the goal of education was “the lessening or removal of environmentally induced deficits” (Spann & Mcrimmon, p. 41). While the former term simply focuses on remediying the deficit, the latter acknowledges that the deficit is not
innate but a result of external factors. Both terms, however, smack of negativity and tend to label their recipients. Hence, in the 1970s faculty working with at-risk students began to refer to their work as developmental. This term focuses on the students’ “potential rather than the deficits” (Spann & McCrimmon, p. 41). While refocusing on potential, developmental educators argue that they also take a holistic approach to their students—this means focusing on academic transition and personal development beyond the limited realm of academic skills alone.

In an effort to further articulate the difference between what is considered remedial education and the work of developmental educators and students, Jeanne Higbee (1996) writes:

Among the meanings of “develop” are “to evolve the possibilities of . . . to promote the growth of” (Webster’s New Collegiate Dictionary, 1981, p. 308). “Development” is defined as “the act, process, or result of developing” (p. 308). “Remedy,” meanwhile refers to “a medicine, application, or treatment that relieves or cures a disease . . . something that corrects or counteracts an evil” (Webster’s New Collegiate Dictionary, 1981, p. 970). To remedy is “to provide or serve as a remedy for” (p. 970). . . Pardon me if I bristle every time I hear someone refer to what I do as remedial. My students are not sick, and they do not need to be cured. They are evolving, and the possibilities are limitless. (pp. 63, 66)

This argument further illuminates the fact that academically underprepared students often include groups that have been historically marginalized in higher education. Therefore, the ideology of promoting intellectual and holistic growth serves the needs of “the learning disabled, the visual and hearing impaired, the mobility handicapped, the English as a Second Language student, the student-athlete, the returning adult student, and the first generation college student” (Spann & McCrimmon, 1998, p. 41).

In an effort to facilitate a deeper understanding of the diversity among developmental learners, Hardin (1988) created six categories that encompass the varying needs of these students. Ten years later, the author (Hardin, 1998) revisited these categories and confirmed their continued validity while adding a seventh category to the list. The intent of this categorization was not to add to the plethora of labels that already exist, but rather to demonstrate that students who need developmental education come from many different walks of life and experience. The hope was that an understanding of these issues would reduce the victim blaming that tends to taint any service that is out of the norm.

The first category is the “poor chooser” (p. 16), one that Hardin (1998) describes as “the student who made a decision or decisions that adversely affected his or her academic future” (p. 16). There are two primary sources of this poor decision making. One is failure to select a college preparatory curriculum while in high school for a variety of reasons, including discouragement from teachers and counselors. The second type of poor chooser is one who drops out of high school. In 1992 approximately 3.4 million students between ages 16 and 24 had not completed high school (Hardin, 1998). Yet, facing the harsh realities of the work force, many of this population then complete their General Education Development (GED) test and enter college in need of developmental education. Hardin (1998) adds that it is important to note that many of these students have not had control over their life decisions, many have worked in
manufacturing jobs until the decline of such opportunity, and most are first-generation college
students traversing the unknown and intimidating world of academe.

The second type of developmental student is the adult student. Between 1980 and 1990,
college enrollment of students over the age of 25 rose by 34% (Hardin, 1998). These students are
re-entering education to upgrade their skills, to prepare for a career transition due to a lay off, to
re-enter the job market after an absence or because of change in marital status, and hence the
necessity for earning power (Hardin, 1998). Many of these students are women, and a significant
proportion have GEDs as opposed to high school degrees. They are often intimidated by their
younger peers and are simultaneously playing multiple roles of parent, wage earner, student,
and family member.

The third type of developmental student is the student with a disability. “Between 1977 and
1994 the number of learners identified with learning disabilities increased over 200%” (U.S.
Department of Education, 1995). In addition, 47% of students with disabilities are also adult
students and hence face the added challenges of being nontraditional learners (Hardin, 1998).
Hardin suggests that students with disabilities need developmental education because, like poor
choosers, their disability may have limited their options for the college preparatory curriculum
in high school. Also, having come from the special education model of secondary education, they
may have worked in isolation with little practice at working with others or learning via lecture.
Lastly, a student with a disability “may have lost previously learned material if the disability is a
result of an injury” (Hardin, 1998, p. 19).

Hardin describes the fourth type of developmental student as the “ignored student, one who
had “academic or physical problems that were never detected while in high school” (Hardin,
1998, p. 20). Students in this category often develop compensatory behavior to get through high
school, but with the demands of college level work, these strategies no longer work. Hence, it is
often the developmental educator who introduces the idea of disability testing or studying in
accordance with one’s learning style to the students in this category.

The fifth type of developmental student is the “student with limited English skills” (Hardin,
1998, p. 20). The National Center for Education Statistics (1997) “found that the number of
children enrolled in public schools who had difficulty speaking English increased from 12.5
million in 1970 to 2.4 million in 1995” (Hardin, p. 21). As these students graduate they enter
postsecondary institutions with weaker skills and often find limited resources to help them
bridge this gap. It is here that developmental reading and writing courses are particularly
helpful.

The aforementioned five categories suggest that the majority of developmental students
need support and preparation, but that their abilities and motivation to succeed in college are not
in question. Hardin (1998) suggests that there are two final categories that do not fall into the
same area. The sixth category is “the user” (p. 21). These are students who “may simply be
attending college as a means of avoiding a job or facing their parents” (Hardin, p. 21). Their
motivation is not to achieve an education. The final category Hardin discusses is what she terms
the “extreme case—students in this category have such severe academic, emotional, and
psychological problems that they cannot be successful in higher education” (Hardin, p. 22). Although these last two categories are unfortunate, what is even more troubling is that it is from these small groups of students that many people draw their conclusions about all developmental learners. Yet Hardin (1988) concludes, “most students in developmental courses may be underprepared, [but] this does not equate to being incapable or ineducable” (p. 22).

Thus, developmental students wear many hats and have many faces. Even as Hardin demonstrates the range of the individual needs of developmental students, her categories also demonstrate that these students are also more likely to fall into groups of students who have been historically underrepresented in higher education. The overlap between developmental students and students of color, students with disabilities, and adult students is made not to equate developmental education with these groups but to suggest that developmental education plays a role in creating access to public higher education and that threats to developmental education will have an effect on enrollment of other marginalized groups.

Hardin (1988, 1998) developed these categories to make developmental education more accessible to policy makers, in hopes that this would make them less critical of developmental programs. However, the debate over the role of developmental education at four-year institutions has continued and in “1997, the National Association for Developmental Education recorded such debates in 31 states” (Hardin, 1998, p. 15). The next section will address the themes in this debate with particular regard to policy and policy makers.

Who Belongs In College?
The Debate About Developmental Education

Research by Levine and Cureton (1998) indicates that close to one third of all undergraduate students today respond that they have taken at least one developmental course in reading, writing, or math. In addition, nearly three fourths (73%) of deans report an increase within the last decade in the proportion of students requiring remedial or developmental education in two-year (81%) and four-year (64%) colleges. (p. 8)

Despite the fact that significant numbers of students attending four-year colleges are taking developmental courses, legislative concerns over accountability and allocation of funds threaten the existence of developmental education at four-year institutions.

Two camps have emerged around the battle of quality, funding, and admission of developmental students to public universities. Both camps recognize that there is a link between the educational crisis in secondary education and need for developmental education at public four-year universities. Both also realize that limited financial resources heighten the struggle for effective allocation of funds in a manner that would best serve long-term public needs. The difference is the approach that each group takes to address these concerns. For the purposes of this chapter, I will refer to the first camp as the Quality Camp and to the second camp as the Access Camp.
Arguments from the Quality Camp

Advocates for quality argue that open admissions policies that dilute entrance standards, including programs that use special admissions criteria like race, class, or ethnicity, do a disservice to students and to higher education at several levels. First, they suggest that anyone can get into college regardless of credentials. This results in the admittance of too many underprepared students who need classes to learn basic skills that should have been mastered in high school (Burd, 1996). This reality sends the wrong message to students by suggesting that academic achievement and hard work do not matter because almost anyone will be admitted to college (Manno, 1995). It also lets high schools and the secondary education system off the hook for failing to adequately prepare students for college level work. Nancy Kassebaum, a Kansas republican says “maybe we have made access all too easy in some cases.” She suggests that “requiring colleges to toughen admission standards could send a message to the nation’s high schools and they would do a better job preparing students for college” (Burd, p. 3).

Second, 75% of four-year colleges offer remedial education and 30% of entering college students enroll in at least one remedial course (Manno, 1995; Levine, 1997). This essentially waters down the value of a college degree and blurs the margins between secondary education and higher education. This dilution of standards and curriculum impacts faculty as well. Many faculty teach more introductory and remedial courses and therefore report less satisfaction in teaching (Clark, 1997).

Third, and probably most telling, is the increasing cost of developmental education. There are two aspects to this cost. First is the concern that education dollars are used ineffectively within and between secondary and postsecondary institutions (Garnett & Hood, 1998; Hardin, 1998). The common argument of legislators has been that providing developmental education at public universities constitutes “double-dipping” or “paying twice” for the education of the same student given that this is material that should have been mastered in high school (Hardin, 1998; Higbee & Dwinell, 1998). A second type of cost is reflected in the remediation costs absorbed directly within the university budgets. This comes in the form of paying college salaries for teaching high school courses, provision of tutoring, testing, and counseling, and extended time to graduate (Manno, 1995).

In recognition of the connection between high school success and college preparedness, quality advocates suggest the necessity for alliance between secondary and postsecondary education to adequately prepare students and create a pipeline to the university. However, for those who have missed that boat, it is suggested that college enrollment be limited to those who are truly prepared for collegiate work, with the option for conditional enrollment. Other routes include providing options such as community colleges and technical colleges with youth apprentice programs for underprepared college age students (Manno, 1995).

Arguments from the Access Camp

Advocates in the access camp point to the changing demographics of this country and their effect on enrollment trends in higher education. The largest growth in enrollment trends is from
women, adult students, and students of color. They suggest that the challenge that our new student body has brought is the “recognition that access and excellence can be mutually interdependent rather than mutually exclusive goals” (Edwards, 1993, p. 310).

This evidence that disadvantaged students have been and continue to be underserved by the academy suggests that constructive reform cannot occur without fully considering the causes and possible solutions to inequities. The question of cost and what we can afford is critical in this camp as well, but the response is different. Access advocates suggest that access policies towards developmental education and financial aid are moving away from financially supported redistributive legacies to a two-tiered system that continues to support inequities in higher education and the work force (Hannah, 1997). This is viewed as a failure to democratize higher education and to invest in human capital as reflected in the country’s demographics.

In the 1992-93 academic year, two thirds of students who took remedial classes were White but “members of minority groups enrolled in remedial classes in greater proportions” (Burd, 1996, p. 2). It is also interesting to note that students taking developmental courses are “more likely than those not receiving remedial help, to have a family income of less than $20,000 annually, to have been born outside the United States, to speak a language other than English at home, and to be people of color” (American Council on Education Report, 1996, as cited in Burd, p. 2). The intent here is not to simplify political resistance to developmental education by equating it to admissions based on race or class. Rather, the inclusion of demographics such as family income, race, and ethnicity are raised to demonstrate that these issues overlap. This overlap creates a confluence of barriers for groups of students who are being systematically isolated from four-year higher education.

Limiting access of developmental students to four-year universities does create a two-track system. This notion of lowering the aspirations of certain individuals has been referred to as the “cooling-out function” (Clark, 1960) and was believed to be one of the main concerns for the future of democracy because it brought to light “the inconsistency between encouragement to achieve and the realities of limited social mobility” (Spann & McCrimmon, 1998, p. 38). Note, too, that the budgetary ramifications are not limited to funding of developmental programs themselves but are also focused on limiting financial aid to students who require developmental courses.

Recent trends in the dissemination of financial aid have already played a role in limiting access of low-income and first-generation developmental students to four-year colleges. In 1963-1964 loans constituted 20% of aid packages while in 1994 they were 55% of the total aid packages. College work-study has continued to shrink since the 1970s and small growth in Pell Grants cannot match the growing tuition costs (Hearn, 1998). Consequently, denying financial aid to students who need to take developmental classes in an effort to conserve costs would kill the aspirations of many needy students. David Arendale, former president of the National Association for Developmental Education, points out that denying federal aid to students who take remedial classes would do even more harm. He argues that in doing this, “we are creating a
lost generation of students and are effectively slamming the doors of college on one third of our nation’s students” (Burd, 1996, p. 3).

In addition to the effects of financial aid policies and increased academic selectivity, low-income, first generation students face challengers who say there is no place for them in higher education. This idea not only oversimplifies the problem of K-12 education, it punishes the same students whose needs have already gone underserved in high school. The fact that financial aid policies are pushing low-income students to community colleges versus four-year institutions is evident. In addition to this, the idea that remediation is a job for community colleges has gained momentum in several states. This pattern limits postsecondary access to all low-income students, but the fact that students of color take more remedial classes suggests more serious implications for their matriculation and persistence in higher education (Ignash, 1997).

Advocates in the access camp argue that a two-tiered system will have economic repercussions that are likely to be even more costly than the price tag incurred as a result of developmental education needs. It is often the case that a student who needs developmental courses in one subject area may still be in the position to take credit bearing courses in another subject area. To simply foreclose and relegate them to two-year institutions is to close the door on students who could have profitable careers and pay into the coffers of the state and federal government.

With regard to concerns that developmental education will dilute the quality of four-year higher education, access advocates are quick to see that the highly decentralized and diverse nature of American higher education allows for multiple missions to exist side by side. The elite sector need not be damaged by the rise in universal education, rather diverse institutions can exist simultaneously as in the case with land grant universities (Kerr, 1994b). Also there can be several methods of differentiation within the four-year model, where it is possible to have a highly selective level within a less selective institution or vice versa. This allows for easy transfer on merit from less selective to highly selective programs in a given institution (Trow, 1976).

Despite these arguments, the most pressing concern is the recent legislative focus to remove developmental education from the realm of the public university. “Arendale (1996) found a general mood at the federal and state levels to reduce the cost of remediation, cut developmental programs and faculty, and remove developmental courses from four-year campuses” (Garnett & Hood, 1998, p. 49). The following section will address specific legislative action taken by three different states in an effort to reduce or phase developmental education out of the public university.

**Doing Away with Development Education:**
**The Strategies and Policies at the State Level**

Unlike most countries in the world, education in the United States falls largely under the management of state governments rather than the federal government (Trow, 1993). A 1999 survey of top legislators’ views on governance at public colleges and universities suggests that
they must balance public interest factors such as access, affordability, and fit of higher education within the state with structural and environmental interests, such as population needs, business needs, and competing state interests (Martinez, 1999). This heightens the importance of examining how different state governments are reacting and responding to developmental needs in their states because the outcomes may serve as precursors or models for legislative intent in any state.

Since as early as 1985, Florida public universities have not been permitted to teach developmental courses (Garnett & Hood, 1998). This trend has continued in the 1990s, and while several states are making moves to limit developmental educational opportunities at the public university level, this section will highlight policy changes with a primary focus on the state of New York and secondary focus on Georgia and California.

New York is home to the City University of New York (CUNY) system of higher education. This system encompasses both 11 four-year colleges and 6 two-year colleges. This system has traditionally been open admission and has served the diverse population of the city and state. Given the immigrant population and the number of adult students returning to school, the need for developmental courses has been high. In May of 1998 under extreme pressure from Republican Mayor Rudy Giuliani, the CUNY trustees voted in favor of a new remedial education policy that holds students and public schools more accountable for remediation (News Brief, 1999). Dubbing the system “Remedial U,” Giuliani blasted CUNY for putting up with low standards and ridiculed CUNY students for low graduation rates. Along with New York Governor Pataki, he proposed an end to all remedial courses at CUNY and demanded an end to a 30-year-old open admission policy (Romer, 1999).

The result was a surprising response from a “quasi independent” Board of Trustees, which included Herman Badillo, education advisor to Mayor Giuliani (Chenoweth, 1998). This resulted in a series of changes. First, students applying to CUNY’s four-year colleges would be permitted only one summer’s worth of remedial course work prior to matriculation. There would also be university placement exams in reading, writing, and math. Failure to pass all three would prevent enrollment in a four-year CUNY college. Also failure to complete the remedial courses in one semester or during the summer course would require that students be dropped from the four-year system and enroll in one of the two-year colleges (News Brief, 1999; Wright, 1998).

In addition, new admission standards would match the new expectations of incoming students. No longer an open admission college, CUNY applicants would be required to submit either ACT or SAT scores for admission. If these scores along with high school grades did not meet the cut-off threshold, then “applicants would be required to take a new nationally normed assessment test. If they fail one or more exams they will have to take remedial courses” (Healy, 1999).

In face of all these drastic changes, it is interesting to note that “CUNY records show that 55 percent of all freshmen entering the city’s colleges are not recent high school graduates and more than 56 percent do not speak English as their first language” (Wright, 1998, p. 14). In addition, about two-thirds of CUNY’s student body are students of color (News Brief, 1999). Given these
realities, the need for developmental education as a means for transitioning into a collegiate environment could not be more critical. Supporters of the policy argue that raising standards will not have a detrimental effect on enrollment. Critics counter with many concerns. First, according to projections by CUNY, the new remedial policy would “reduce enrollment at the four-year institutions by as little as one-third or as much as two-thirds. And the drops could be most dramatic for the African-American and Latino students” (Chenoweth, 1998, p. 12).

Other critics argue that being denied admission based on a poor test score could destroy an already overwhelmed student’s ambitions to attend college. Also, Bernie Sohmer, professor of mathematics and chairman of the CUNY Faculty Senate, said that the trustees were overemphasizing the weight of tests. He also argued that “all over the country, at every institution, faculty members have students in classes, assess them and give them grades. To say that a multiple-choice test purchased off the shelf will be a better determinant of remediation is an affront and also stupid” (Healy, 1999, p. 1).

Students also suggest that the negativity surrounding remediation is damaging and misconstrued. Dr. Erich Jarvis, graduate of CUNY’s Hunter College and now a research scientist at Rockefeller University, extolled the benefits of having developmental opportunity linked to the collegiate curriculum. He questioned whether he would have been able to complete his degree in a timely manner had he been relegated to a community college. He also said “I find it very insulting that remediation is said to bring down the quality of the school” (Chenoweth, 1998, p. 13).

Faculty at community colleges are concerned that CUNY’s new policy will cause a significant increase in the enrollment in the community colleges, one that they are not prepared to handle. Also there are concerns that the role of the community college will be limited to “remedial mills,” undermining the mission of career education and continuing education that has been central to community colleges (Chenoweth, 1998, p. 13).

Finally, critics like Nancy Romer (1999) reflect back on the mission of the City University of New York, founded in 1848 for “the whole people—educating generations of working class, poor and immigrant New Yorkers” (p. 1). She sees this cutback of public service as “a new level of assault on the opportunity structure, for the poor and working class in a city supposedly thriving” (p. 1). Although there is agreement that improvement needs to begin in the secondary system, Romer questions the integrity of Giuliani’s plan when the need for developmental education has only been exacerbated by cutbacks of the K-12 budget at “$7000 per student a year” (p. 2). Yet, under threats of cutbacks and buoyed by public sentiment, however misinformed, CUNY’s remediation policy has gone into effect.

This trend can be seen in other states as well. In 1995, the regents of the University System of Georgia approved a policy that “requires each public institution to reduce its number of freshman remedial students by at least five percent each year” (Hebel, 2000, p. 1). The expectation was that by 2001 all four-year colleges would no longer admit underprepared students. In order to prepare for the acceptable standard for admission to a state university, underprepared students must first attend a community college or a private institution. The larger
goal is to completely eliminate remedial education for first year students by 2005 (Hebel). Not surprisingly given the strong correlation between poverty and race, institutions that have widely served students of color as well as underprepared students are struggling to meet these new goals. Armstrong Atlantic State University and Fort Valley State University have both been points of college access and are “struggling to make enough progress to meet targets for reducing remedial work” (Hebel, p. 1). Despite this, as seen in other states, Georgia “legislators balk at being required to ‘pay twice’ to prepare students for higher education” (Higbee & Dwinell, 1998, p. 55).

With the dismantling of affirmative action in California, access to higher education has also been affected by efforts to limit developmental education within the California State University System (CSU). Much like New York and Georgia, California state officials have expressed concerns about the rising costs of remediation for four-year college students, yet it is also believed that “remediation reform would penalize the state’s least prepared students, many of whom are minorities and attended poor public schools” (Roach, 2000, pp. 18-20).

When the issue was brought before the California State Board of Trustees, they argued, “the remediation reform movement did not solely originate because of financial concerns” (Roach, 2000, p. 20). Rather, Ralph Pesqueira, CSU Trustee appointed by Republican Governor George Deukmejian, expressed particular concern for the progress of low-income students of color. He said “What I saw seven and eight years ago was that too many African American and Latino students were being brought into CSU with poor preparation. They were capable of handling university work but we were seeing them drop out because they weren’t getting the right attention” (Roach, p. 20). This concern was echoed by Lance Izumi, Senior Fellow at the Pacific Institute for Public Policy, who noted, “more than 50 percent of those enrolling in CSU schools were in need of remediation” (Roach, p. 20).

In an effort to find balance between accountability and access, the CSU system began implementing policy changes regarding remediation in 1998. However, unlike the aforementioned states, the CSU chose a three-pronged approach to developmental education, one that is less punitive and probably the most effective in addressing the lack of preparation at the high school level. By using technology, summer courses, and more advising for students, CSU hoped to reduce the tremendous need for developmental education among its student body (Hebel, 1999).

The long-term goal of the CSU policy is to reduce the percentage of first-time students with developmental needs from the current rate of 50% to 10% by 2007 (Roach, 2000). The CSU policy required that students admitted to CSU complete any remedial course work by the end of their first academic year. Failure to complete developmental requirements during this period required that students leave and complete such requirements at one of California’s community colleges. Also in an effort to meld compassion with accountability, the CSU program agrees to make exemptions to this policy on a case-by-case basis. Also, the CSU goals seek to address the source of the problem by initiating a formal relationship with California high schools, with particular focus on those schools that tend to house the majority of developmental learners (Roach). The
proponents of CSU’s remediation policy believe that the developing liaisons with high schools further stresses the necessity of completing a college preparatory curriculum, and in the long term this will result in better prepared students arriving at CSU.

Although this policy seems to be more humane than that of New York and Georgia, there is still a deep concern for how this affects disenfranchised students who have already been impacted by the demise of affirmative action at California’s public universities. Thus far, Cal State reports that 79% of first time freshmen in need of remedial work at the inception of this policy have completed the work within one academic year. Critics counter that although this number may appear substantial, it does not reflect the damage to access for low-income students of color. They present a different set of numbers to provide a clearer vision of who this policy really impacts. In the fall of 1999 “74% of black freshmen and 65% of Hispanic freshmen in the university system needed remediation in math compared with 40% of white freshmen” (Selingo, 2000, p. 3). The numbers for math remediation are no less disturbing with “64% of blacks and 62% of Hispanic freshmen needing remediation compared with 29% of white freshmen” (Selingo, p. 3).

This type of racial disparity is sharply coupled with income level and hence geographic residence and poorer school district. Gerald Resendéz, chairman of the Chicano studies department at Cal State’s Northridge campus, believes that the CSU policy is doubly punitive to students who attended high schools that failed them. He argues that “We should work on improving our public schools first before we start throwing students out” (Selingo, 2000, p. 3). Yet, the voices that control the budget have a different response. Republican Senator Bruce McPherson suggests, “it is not too much to ask for students to be well prepared and to take on incoming requirements for math and English. If they are not prepared, CSU shouldn’t take on those demands” (Selingo, p. 3). Thus, the role and responsibility of the state university to its constituents appears to be limited, and the battle between access and excellence continues. Assuming conflicting rather than mutually beneficial goals, the last section of this chapter offers some recommendations for combating the broader issues of weak high school preparation and also cutting through the stereotyping of developmental education.

**Recommendations for Developmental Educators**

Policies seeking to limit developmental education at the public research university have certainly had their share of critics and naysayers. Many faculty argue that denying students the right to a four-year education based on developmental educational needs is simply another function of gate keeping at the academy. Mary Leslie (2000), Assistant Professor of Education and Developmental Studies at Louisiana State University, writes that “developmental education is a symptom of larger, unresolved issues and denying people who have not prospered in our less-than-perfect schools an opportunity to try is classic victim blaming” (p. 1). Others like Nancy Romer (1999), Professor of Psychology at Brooklyn College, point to the legislative responses to developmental policy as a “racism that finds further expression in greater disparities of wealth, jobs, and power between social and class defined groups, and spawns a culture that blames the
victim for social ills and hard times” (p. 1). These opinions are well stated but do little to sway the minds of policy makers. Thus, to make real change or even to protect the status of developmental education, changes need to occur on two levels: the first is within the developmental education community and how it defines itself, and second is the breadth and depth of the relationships it develops with the political forces around it.

John Gardner, Senior Fellow of the National Resource Center for the First-Year Experience and Students in Transition at the University of South Carolina, suggests that perhaps a new paradigm for developmental education is a step towards demonstrating the universality of its appeal to all learners. The honest reality of the academy is that it is a hierarchy, and as long as developmental education is seen as the home for the bottom-feeders, its credibility is threatened. Gardner argues that developmental educators need to continue to emphasize the value of its pedagogy not only for the underprepared but for all students (Spann, 2000). Concepts like the freshman seminar, Supplemental Instruction, and learning community, once limited to “special cohorts,” are now mainstreamed in the curriculum. Similarly, stressing the importance of holistically developing students’ potential is a tenet that can be successful for all students.

In addition, the language of discrimination has already mired the view of developmental education. It has become a code phrase for negative qualities and for so-called deficiencies. Gardner suggests that developmental educators should re-explore what this term means to them and work at advertising positive definitions of this work in the educational community (Spann, 2000). In this process of redefinition there are opportunities to create new alliances on campus, make changes within the curriculum, and even within the library system, much in the same way multiculturalism is slowly becoming infused in collegiate curricula rather than simply being an add on.

Finally, the necessity for developmental educators to get involved with “school to college collaboration” (Spann, 2000, p. 28) is integral to affecting change at a policy level. Gardner suggests that NADE and CRLA should become actively involved in the Education Trust, an organization that promotes secondary and postsecondary collaboration. This is particularly relevant because “policy makers and legislators are much more interested in K-12 performance than in higher education, and that is an area where developmental educators can make a major contribution” (Spann, p. 28).

Other means of gathering support include developing coalitions with like-minded allies and formalizing these coalitions by doing research. The relationship between developmental and multicultural education is one such coalition that should be further developed to not only as a means of garnering political support on and off campus, but also to engage in research that reflects the needs of multicultural developmental education in curriculum development, instruction, and retention.

The importance of understanding the stance of policy makers is also critical to the success of developmental education. Arnold Mitchem, the Executive Director of the National Council of Educational Opportunity Associations, represents 900 colleges and universities in Congress. As a long time supporter of developmental education, Mitchem says, “I am not sure Congressmen
and Senators have any idea what developmental education is. That’s a function largely of the fact that developmental educators or the developmental education movement has not been political” (Tierney, 1991, p. 19). Thus, it is essential that developmental educators mobilize their membership not only within the academy, but also in Washington. Given the importance of timing in politics, the capacity to seize a window of opportunity is hugely dependent on the extent to which developmental educators are mobilized and hence informed about legislation in Washington.

Mitchem (as interviewed by Tierney, 1991) stresses the importance of this type of active awareness within the developmental education organizations and adds that this first step should be followed by “training members in the art of lobbying” (Tierney, p. 20). It is evident that without establishing working relationships with members of Congress and when only approaching them in times of crisis, the issues that face developmental education cannot be understood or resolved.

In addition, while lobbying as an organization is important to the political process, individual lobbying as concerned constituents is another powerful way to voice the benefits and importance of developmental education. Mitchem’s experience as a lobbyist demonstrates that Congressmen and Senators are interested in how they can positively impact their state or district. Thus, developmental educators must deliver a message that allows legislators to believe that “It makes my state, my district, my country better if we somehow take care of developmental education interests” (Mitchem, as quoted in Tierney, 1991, p. 20).

Thus, making the leap from within the walls of the academy to the K-12 system, and also into the political realm, is critical for developmental educators who face a time of resistance even though the changing demographics of this country suggest that the need for developmental education is likely to grow. Finally, public institutions must ground their policies for admitting underrepresented groups with regard to their larger responsibility to serve the people of their state. “Public education has a responsibility greater than admitting those who score highest on a standardized test. Public higher education is a public good” (Tierney, 1997, p. 192). If developmental educators hope to see this ideology into fruition within higher education, the need for stepping out of the comfort zone into the fray of politics has never been more critical.

References


Toward a New Conversation:
Multiculturalism for Developmental Educators

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Abstract

Developmental educators have largely avoided becoming embroiled in intense debates over multiculturalism, knowledge, and power that have raged within higher education. But the alternative we have chosen—relative silence about the framing of the issues at stake in the multiculturalism conversation—is also unsatisfactory. This chapter assesses the current conversation about multiculturalism in higher education, offers a theoretical model for a better conversation, and discusses exemplary efforts to implement new conversations.

Developmental education, though marginalized, has historically been able to maintain and even expand its presence in the academy. Today, however, an educational climate of closing doors and cutbacks, anti-affirmative action lawsuits, and widespread misunderstandings of educational achievement threatens our legacy of survival and success. In addition to directly threatening our programs and students, this climate undermines the development of multicultural perspectives that represent a major potential resource for our programs. Outside of developmental education, the conversation about multiculturalism is often trapped by its own rhetoric. Inside our field, the conversation has not really begun. In each of these cases, without the ability to really communicate across differences, “we are seeing the vision of equality moving away from us” (Marable, 1996, p. 95).

The discussion that follows analyzes conversation among scholars about multiculturalism. In order to clarify the lessons to be learned from broader conversations I use feminist critic Iris Marion Young’s (1997) concepts of symmetrical and assymetrical reciprocity to show how the issues have been framed and to explain the inadequacies of such framing. Building on my analysis
of current debates, I offer a vision of a more productive conversation for developmental educators rooted in attention to context and position. I conclude by suggesting practical applications of Young’s concept of asymmetrical reciprocity to conversations of multiculturalism within developmental classrooms and programs.

**Multiculturalism: Answer or Process?**

A political philosopher, Young (1997) has recently developed the notion of asymmetrical reciprocity as an antidote to the impasse that obstructs many efforts to communicate across differences. The impasse Young identifies and questions is miscommunication arising from the communicative ethic of symmetrical reciprocity that undergirds many conversations about difference. In simplest terms, symmetrical reciprocity names the act of imaginatively reversing positions with those different from oneself in order to see issues, policies, and practices from other people’s perspectives. “The purpose,” Young explains, “is to give an account of how we can understand one another, so that we can take one another’s perspective into account when making ... judgments” (p. 52). Because current curricular and policy conversations often focus on recognizing differences while maintaining excellence, the ability to imaginatively reverse positions is an unspoken assumption at the heart of multicultural policies, practices, and the conversations that create them (McCarthy, 1995).

But the belief that positions are reversible—that we can step out of our perspectives and see as others see—creates huge problems according to Young (1997). Too often, the effort to imaginatively trade places with others results in misrepresentations of those others’ views, experiences, needs, and desires. Young gives the example of the recent conversation in Oregon about health care priorities where state officials determined that “the lives of people with disabilities are less important.” They based this conclusion on the results of a telephone survey that asked “able-bodied people ... to put themselves in the situation of a person in a wheel-chair, or a blind or deaf person. The majority of respondents said that they would rather be dead than wheelchair-bound or blind” (p. 42). Rather than enabling communication, the effort to reverse positions here exacerbates miscommunication. The difficulty that causes this miscommunication is that perspectives are relational rather than autonomous points in a field. Able bodied people imagining their lives in a wheel chair does not enable them to develop a perspective of a disabled person. Thus, Young concludes, “respect between people entails reciprocity between them, in the sense that each acknowledges and takes account of the other. But their relation is asymmetrical in terms of the history each has and the social position they occupy” (p. 41). Truly recognizing difference involves attending to the irreversibility of perspectives that results from the historical roots and social relations that shape perspectives. But current conversations about multiculturalism tend to reproduce the faulty symmetrical mode of reasoning about difference. In conservative, radical, and centrist positions on multicultural policies and practices, the over-reliance on symmetrical reciprocity is the source of impasse.
Conservative Talk

Though they differ in terms of content, positions within the current debate share the strategy of representing their opponents as extremist threats to the common good. This way of constructing others enacts symmetrical reciprocity by imagining all positions as symmetrical and reversible with respect to some neutral ground or common good that all reasonable persons see in the same way. Conservative critics of multiculturalism have held steadfastly to this assumption and have thus played an important role in short circuiting meaningful engagement of the differences that exist among positions. Critics such as Allen Bloom (1987), Dinesh D’Souza (1997), and Alvin Schmidt (1997), among others, represent multiculturalism as a movement that will undermine rather than enhance “the prospects for citizens of different backgrounds living together and adjudicating differences in a rational and civil manner” (D’Souza, p. 1). Advocates of multiculturalism often question the definitions of rationality and civility that are intended to equally include all. They point out how those definitions legitimate the power and the world views of dominant groups while silencing certain perspectives and arguments from subordinate groups. Conservative critics have tended to leap from multiculturalism’s questioning of received truths to the conclusion that advocates do not believe in any truths or in any judgments about right or wrong. They position advocates of alternative ways of seeing as attempting to “tear down, discredit, and destroy the shared story that has made us a people and impose on us a different story which tells us our civilization and past history are essentially evil” (Auster, 1990, p. 11).

Auster (1997) and D’Souza (1997) demonstrate the way that conservative critics in general have fallen into the trap inherent to trying to see from another’s perspective. Representing Americans to be a unified “we” who all tell the same “shared story” about what has made us a people, Auster imagines all individual experiences to be symmetrical in the sense that we all tell a single “shared story that has made us a people.” Auster assumes that everyone is essentially like him—invested in the same “truths” about who we are and where we have been. Such a perspective obviously elides significant differences. Inhabiting such a perspective, individuals risk ignoring how their views of others and the social world are shaped by their own complementary representations of themselves and their location in that world (Young, 1997, p. 48). Even most radical advocates of multiculturalism would not give up the significance of shared stories about what makes us a people. But the lesson of Auster’s overblown talk of “we” is that these shared stories and consensual judgments must be dynamic rather than fixed and connected to ongoing deliberations that invite multiple perspectives and histories.

D’Souza’s (1997) emphasis on “rational and civil” grounds for “citizens of different backgrounds living together and adjudicating differences” (p. 1) may seem a less extreme goal than Auster’s (1990) effort to restore universal commitment to a single shared story of Western cultural greatness. But historically rationality and civility have been defined around an ideal of symmetry rather than asymmetry. The most powerful groups have created conventions of rationality and civility that have served to protect their power by representing serious challenges to existing relations of power as irrational or uncivil.
Radical Talk

Toward the other end of the political spectrum, radical left critics of multiculturalism challenge conservative and centrist positions for offering a narrow understanding of power and social life that overemphasizes individual attitudes and discounts the effects of institutionalized relationships of social group power. For radicals, these very significant relations of group power are invisible elements in what appear to be neutral practices like curriculum and the definitions of reason, civility, and truth they contain. Within such a context where group power and privilege is invisible and subtle rather than blatant, radicals argue, the equality among persons that all sides claim to desire should be understood less in terms of having than in terms of doing; all individuals may have equal access to the institution but be unequally supported in making full use of their access. In this argument that in important institutions we need to change the terms of participation that benefit currently dominant groups including Whites, heterosexuals, able-bodied, middle class males, and radicals have much to contribute to developmental education.

But in their representations of conservatives and moderates as enemies of democracy interested in eliminating dissent, radicals can at times appear to want to replace one set of essentialist, timeless truths with another “right answer” disconnected from real people and real lives. In this way, similar to conservative rhetoric, radical critics’ representations of their opponents are often trapped by the ideal of symmetry and reversibility. For example, as radical critic David Trend (1995) has represented them, conservatives are “no longer content to play the role of defender of conservative values, the Right has moved to eliminate dissenting opinion with a more direct assault on democracy and cultural diversity” (p. 8). Centrist or moderate positions fare little better. Radicals represent moderates as sharing with conservatives a fundamentally assimilationist agenda and accordingly, at best, aware of the racism and sexism rampant in our social institutions, but . . . still advocating accommodationist resolutions to those with a non-“ethnic” and even anti-“minority” mindset that perpetuates these social ills, Euro-American privilege, and the presumed superiority of “Western Civilization.” (Guerrero, 1996, p. 49)

In each of these cases, radical critics interpret opponents as people with whom they share vantage points on social issues and problems, but who simply refuse to compromise their privileges. As Barry Kanpol (1997) has phrased this concern with respect to multicultural educational theory, “transformative intellectuals run the risk of their zealous commitment acting as final truths, without understanding that the commitment may be a form of essentialism” (p. 156) that alienates those it is directed at liberating. In contrast, critical contributions to the conversation of multiculturalism must combine historically and socially informed critique with a recognition that in a democracy the right answer involves multiple perspectives rather than deciding which single view is true for all times.

Moderate Talk

It might seem that, by definition, centrists should take a conciliatory position that recognizes and values different perspectives on topics as significant and volatile as multiculturalism. This, however, is not the case. Though they often concern themselves with the fact that “societies and
communities that stand for the freedom and equality of all people rest upon mutual respect for reasonable intellectual, political, and cultural differences” (Gutmann, 1992, p. 24), centrists too often go on to characterize others’ positions as polar opposites each locked in an equally rigid notion of truth.

In her introduction to a collection intended to “stimulate more constructive discussions of the issues surrounding multiculturalism than those that now dominate public discourse” (p. 12), Amy Gutmann (1992), for example, characterizes the public debate over multiculturalism as a two sided battle in which “essentialists” and “deconstructionists” “create two mutually exclusive and disrespecting intellectual cultures in academic life, evincing an attitude of unwillingness to learn anything from the other or recognize any value in the other” (p. 21). Although I would agree with Gutmann that current conversations are inadequate, her characterization of those who espouse different views of the issues at hand does little to invite those views into a dialogue with her own or each other. The implicit conceptual framework of symmetry makes it difficult for her to appreciate or value the irreversibility of perspectives—that they may have value but not be parallel or interchangeable, or even grappling with identical problems.

Operating on the assumption of symmetry, Gutmann (1992) accepts the conservative representation of multicultural advocates as deconstructionists who presume all positions equally indefensible. On the other hand, she accepts the standard radical representation of conservatives as essentialists who worship, rather than defend, a cultural core that they believe all should share. In so doing, Gutmann herself refuses to recognize the ambiguities and values in the “sides” that make them not so much sides of a coin as situated perspectives on a continuum. In other words, to characterize right and left challengers of a moderate unity as dangerous threats to that unity—as if an acceptable common ground already existed or could be defined in the absence of a real dialogue among groups—leaps from a constructive insight that the sides are not really listening to each other to an exclusionary conclusion that they are justified because there is nothing to hear. When moderates like Gutmann conceptually reduce positions to symmetry while refusing to question the relations among the views or the histories and implications of those relations, they fall into the traps of misrepresentation into which both conservatives and progressives have fallen.

The impasse among radicals, moderates, and conservatives within current conversations derives from the common assumption of symmetrical reciprocity on all sides. In the conversation about multiculturalism, perspective seems to be committed to the view that theirs is the one and only correct view. They call on others to see the issues from the one right perspective. Contributors assume the ability to imaginatively inhabit others’ perspectives, doing so in ways that fail to account for the historical and social situatedness of perspectives and that thus misrepresent the views. What all positions share is the assumption that because of the imaginative ability to reverse positions with others, they can speak for others and represent others’ perspectives. As I have argued, rather than creating common ground this communicative practice tends to reify differences.
Towards a New Conversation: Asymmetrical Reciprocity

The criticism that I have offered of the current conversation about multiculturalism does not mean that I do not value exchanging ideas and considering others' perspectives as a central project of education. Instead, I have tried, following Young (1997), to demonstrate a fundamental inadequacy in the way that we have understood and practiced exchanging ideas and considering others' viewpoints. In short, considering others' perspectives has been understood as enabling all individuals to exercise autonomy from the influence of their own historical contexts and the group relations in which their perspectives are formulated. One need not look very far beyond the conversation about multiculturalism to find more cases where this way of functioning gets us in trouble. Understanding sexual harassment, contending with homelessness, addressing school attrition, reforming welfare, in each of these cases when problem solvers put themselves in others' positions, they tend to fundamentally misrepresent those positions as they are understood by people in them. I turn now to a more detailed discussion of the theory and practice of this better conversation built around the notion of asymmetrical reciprocity.

Asymmetry challenges our ideal of equality established through neutrality. It suggests that communication across difference is less a matter of sifting all views through a common filter than it is a process of developing awareness of the differences among the views and the relations between them. Calling our assumptions into question, asymmetrical reciprocity highlights and transforms the ways that “when privileged people put themselves in the position of those who are less privileged, the assumptions drawn from their privilege often allow them unknowingly to misrepresent the other’s situation” and to simultaneously “reinforce a complementary image of themselves” (Young, 1997, p. 48). Nowhere is this unintended mistake of communication more vividly exemplified than in policies and practices contending with students characterized as at-risk or underprepared. In our explicit or implicit understanding of differences as deficiencies, privileged persons have given expression to a complementary image of our ways of knowing.

Applying the notion of asymmetrical reciprocity to an engagement with multiculturalism in developmental education encourages us to pay attention to the ways that our discussion might improve upon the current debate. In terms of deliberations about the meanings and implications of multiculturalism, this refers to seriously attending to the social location, historical sources, and consequences of different views. Rather than trying to create relations in which individual perspectives are made interchangeable by a common rationality, or a common core, critically caring about others as individuals worthy of respect and consideration involves taking account of the ways that persons and positions are uniquely located in relations of power. Further, understanding another across difference comes to mean not exchanging positions but working to create relations that institutionally affirm the legitimacy of different respectable views. Such goals require questioning and listening as primary activities rather than arguing and defending and imagining positions to be interchangeable.

Asymmetrical Theory in Practice

Developmental educators are well positioned to introduce an ethic of asymmetrical reciprocity into conversations about multiculturalism among students and among colleagues. For
many years, we who work with particularly vulnerable student populations have understood our
role as helping students develop opportunities, resources, and skills and dispositions for
participating in the academic community. In terms of writing, my teaching specialty, this has
meant creating opportunities for students to join academic conversations about public issues. We
have sought to help students learn to take positions, defend opinions, and contend with opposing
arguments in keeping with the conventions and expectations of academic argumentation.

It is common practice to assign students to read and write about current issues. Often, in
keeping with the model of symmetrical reciprocity, students are invited to take sides in debates
and defend opinions as objective views in part by putting themselves in the place of their
opponents and refuting arguments. Such writing provides a context for coaching students in
meeting the conventions that mark participants in academic conversations. But such an approach
does not enable students to really reflect on the consequences of the ways of communicating they
are using or the choices they can make in negotiating those ways of communicating. Bringing
asymmetrical reciprocity into our understanding of what we want students to do with writing
would mean helping students learn the academically valuable skill of assessing written
communication for how it represents or disguises its own situatedness and for how it enables or
disables open deliberation of issues through the validation of different perspectives.

Laurie Grobman (2001) has recently written about a developmental writing course that
encourages students to pay attention to positionality and the relationships among perspectives.
Her approach models one shape that classroom practice built on asymmetrical reciprocity might
take. Grobman explains that her students in basic writing “examined the rhetorical construction of
youth in print journalism and popular culture, and students (re)wrote youth constructions
through asserting the meaning they see in pop culture and by speaking to their peers in an
interview essay” (p. 9).

What is particularly valuable about Grobman’s (2001) approach is that it offers young
students an issue that is at least nonthreatening, if not empowering, through which to appreciate
asymmetry of positions and to reflect on the implications of asymmetry for writing and
deliberating. Grobman accomplishes this by presenting students an opportunity to assess and
challenge a conversation that marginalizes them and makes unwarranted assumptions about their
perspectives and attitudes. This introduces students to the importance of positionality and to
institutionalized group power, which can later be expanded to cases where they themselves may
be privileged actors benefiting from policies and perspectives that claim neutrality.

One of the ultimate outcomes of a pedagogy like Grobman’s is student writing that
communicates an awareness of its own positionality, an awareness of how people’s perspectives
are shaped by who they are in relation to others. This kind of awareness would represent a
significant improvement over multicultural curricula that encourage students to “walk in the
shoes of others” because it is attentive to the impossibility of seeing a perspective with complete
objectivity and thus calls attention to the complexity of policies that claim to be neutral.

Grobman’s example suggests practical applications of Young’s theoretical model of
reciprocity. It has helped me shape a unit for my basic writing class focused on the construction of
developmental students in popular media and teacher talk. The unit will ask students to read and
respond to the ways that their experiences, realities, needs, and desires are represented by others.
The students will read Frank Gannon’s (2001) article, “English 99: Literacy Among the Ruins,” which appeared recently in *Harper’s Magazine*, and will participate in an on-line chat with each other, hashing out responses to the article. They will then read several responses to Gannon’s article that appeared on a basic writing listserv for teachers. The idea of the unit will be for students to make sense of the article, and to come to recognize how their own perspectives overlap with and differ from the perspectives of teachers as represented on the listserv. I am hoping that by examining the ways that differently situated perspectives represent developmental learners like themselves, students will become more aware of the power of language to create knowledge about groups and its power to intervene in the processes of creating that knowledge. Ultimately, I am hoping that my students will see writing as an opportunity to join the conversation that is constructing them and that they will become more self-conscious of their uses of writing to construct relations with others.

In addition to laying the communicative foundation for students to think more critically about the importance of positionality to the knowledge writing creates about issues and people, another powerful potential in this kind of multicultural curriculum is that it destabilizes difference. A currently widespread way of incorporating multicultural content into existing curricula has been through an affirmative approach that celebrates difference. A key danger of such an approach is that it risks reifying the popularly held assumption that groups are separate and distinct, each with their own unique and independent characteristics. This oversimplification of groups and their relations is exactly what multiculturalism wants to transform. But the affirmative approach fails to recognize the ways that groups are defined by their relationships with other groups, the ways that a category like “disabled” is meaningless without categories like “able bodied.” Also, exclusively affirmative multicultural curricula fail to pay attention to the ways that individuals are actually members of many, sometimes contradictory, groups. The multicultural curriculum of asymmetrical reciprocity described above encourages students to see how categories like “youth” or “developmental writing student” are defined in relation to other groups like “adult” in the first case or “regular students” in the second. This approach also encourages students to see themselves as members of various groups and not just as males or people of color, though race and gender matter, too.

In addition to implications for classroom conversations, reformulating the debate over multiculturalism along the lines of asymmetrical reciprocity has implications for developmental educators as we participate in conversations with colleagues. One of the most important ways that we communicate with colleagues is through research. Yet, to date, developmental educators have published virtually no research critically examining the diversity of opinions among us about our work in and outside of the classroom. Instead we have tended to focus on researching students. Rather than a handicap, this legacy of classroom-based research is a resource to draw from. Penelope Herideen (1998), among others (e.g., Lundell & Collins, 1999), has recently argued that too often this research has perpetuated an individual cognitive “psychological frame of reference … designed to compensate for individual deficiencies” (Herideen, p. 22). Certainly individual psychologies do play a role in classrooms and student successes. But equally important is attention to the ways that “students’ educational careers reflect socioeconomic inequalities along class, race, and gender lines” among others (Herideen, p. 23). I read Herideen as calling for new
conversations about multiculturalism that see diversity in individual terms but also in terms of groups and structures of social power.

Using the notion of asymmetrical reciprocity to imagine new research conversations among developmental educators and others in higher education draws attention to the need for a posture of questioning and listening. Student-centered research informed by asymmetrical reciprocity might, like the work of Marilyn Sternglass (1997), document the dissonances between the work, family, home culture, and economic realities our students face on one hand, and school culture defined by policies and curricula that propose themselves to be universal and equally accessible to all on the other. One purpose of such research is to create more responsive critical pedagogies. Another is to pry the monolithic discourse of education and excellence in higher education open to make a space for voices that can challenge the unintentionally antidemocratic biases of current policies.

But in addition to looking at and listening to students, a new conversation about multiculturalism among developmental educators will demand that we look at and listen to each other. The principles of asymmetrical reciprocity will serve us well in such work by encouraging reflection on the extraordinary diversity of circumstances in which we all work. These circumstances of course load, student demographics, institutional supports, material conditions, and others, profoundly shape our perspectives on problems. A meaningful conversation must try to make sense out of the various circumstances and the influences they have on perspectives.

An exemplary effort in this respect is Becoming and Unbecoming White: Owning and Disowning a Racial Identity, a collection of essays in which “White multicultural educators detail their experiences and the processes of transformation in their racial identity as White Americans” (Clark & O’Donnell, 1999, p. 2). In their introduction to the volume, Christine Clark and James O’Donnell highlight a needed shift on the part of antiracist educators from a focus on other people’s racism to a focus on understanding and explaining our own positions within the construction of race. Rather than trying to inhabit others’ perspectives on issues of race and power, these scholars are sharing with others their own sense of where, how, and why they inhabit racial dynamics of social life. This way of contributing to a conversation about race implements asymmetrical reciprocity by encouraging people to make sense of their own position and to listen to the sense that others make of their own positions. Such talk resists the temptation to blame others for large social problems like race and provides an opportunity to know the phenomena holistically by listening to and deliberating the aggregation of self-representations. Rather than enabling individuals to position themselves outside of race, this kind of investigation “ultimately forces us to embrace ourselves as both racist and antiracist” (p. 2).

Developmental educators have a special stake in conversations about multiculturalism. Questions of how best to talk about multiculturalism are important to developmental educators because widespread inability to deliberate multiculturalism has already contributed to, and will in the future reinforce, a policy shift towards an individualistic rather than holistic interpretation of educational success and failure. The motion away from developmental education already has demonstrated the frightening vulnerability of policies and programs that pried the doors of higher education open for students of color, first-generation students, economically disadvantaged students, and underprepared students. Witness the elimination of so-called remedial programs within the California and City University of New York systems, where
admissions policies and developmental education programs have historically been progressive. As the current climate makes clear, it is not enough to recognize diversity among our students; we must develop a conversation about social power and higher education that more fully recognizes that different views are grounded in different social circumstances, that our positions may be irreversible, and that we must therefore learn to listen.

References


Conflicting Expectations: The Politics of Developmental Education in California

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Abstract

The current debates over the placement of basic writers have demonstrated a gap between equality and excellence. This gap is illustrated through policy documents that demonstrate an approach toward learning as well as through students' histories and contexts at the time they are accepted into the university. This chapter focuses on a recent plan for remediation reduction at the California State Universities.
lead a person to be in the position to make that choice in the first place. In addition, I take
excellence to signify a high level of achievement, though my definition will evolve over the
course of the essay to demonstrate the problem with a singular definition of excellence and
standards. To explore the relationship between these concepts, I will look at the developmental
education policy at California State Universities (CSU) to analyze more specifically the
construction of policy and its enactment in a concrete institutional setting. In focusing on CSU, I
want to be clear that I am trying to consider the system analytically; though I will be focusing
mostly on CSU policy as it relates to the students and teachers, I wish to also suggest that CSU is
situated in a complicated relationship of its own. Its decisions are based on what the community,
other universities, the media, and the state and federal governments expect from this educational
system. It is under its own set of pressures and must act within them. But CSU represents a
powerful institution, and as such has an effect on teachers and students who work and learn
within the boundaries it has created. Thus, CSU needs to take responsibility for the way it
structures its education, to consider where the relationships between equal access to an
education and excellence in teaching and learning interact, overlap, and contradict each other. In
thinking about these two interrelated and controversial terms, I would like to propose that
equality and excellence need not be binaries, but instead should be viewed as parts of the same
goal. To do this, I will focus mostly on the situation of the student, the stakeholder whose
presence is most absent in the policy documents on developmental education.

A Snapshot of CSU Current Remediation Policy

The California State University is a statewide system including approximately 359,000
students across its 22 campuses, so it is no surprise that CSU is one of the nation’s largest
systems of higher education (Selingo, 2000, p. 1). In addition to the size of the school system,
CSU also enrolls a diverse population of students. According to the CSU public affairs office
(1999b), “Minority groups represent more than half of the CSU student body, double the national
average.” Because of California’s history as well as its large immigrant population, cultural and
linguistic diversity are commonplace in education systems throughout the state (ESL
Intersegmental Project Members, 1998, p. 5). This diversity creates pressure on CSU to maintain a
certain level of standards for its graduates. CSU would like to be recognized as meeting
standards set by other universities across the nation, while also taking pride in the diversity of
the institution as well as the access it provides for its students. The question is, how do these
standards consider the challenges faced by many students who are accepted for admission at
CSU and their desire to attain educational excellence?

In 1997, the year the current remediation policy was implemented, 47% of students entering
the California State Universities needed developmental education in English and mathematics
(California State University Systemwide Remediation Rates, 1997). These numbers represented a
problem for the reputation of CSU. The university administration then decided to take action, to
do something about the students who were not prepared to do college level work, and who
would not therefore represent the intellectual standards of the university. In response to these
placement numbers, the Chancellor and the Board of Trustees implemented a five-year plan to
reduce remediation, the third plan implemented in the last 20 years. The point of the policy was not to eliminate developmental courses altogether but to reduce the need for developmental education at the university level:

The trustees approved a strategy designed to reduce the number of freshmen who need remediation in English and/or mathematics by ten percentage points by fall 2001, and to reduce the need for remediation to not more than ten percent of regularly admitted new freshmen by 2007. The policy does not call for the elimination of remedial and developmental studies but seeks to reduce substantially the number of students requiring remediation. (Committee on Educational Policy, 2000, p. 2)

On the surface, this policy seems reasonable. Because CSU is trying to reduce the number of students who need developmental education and because they are not eliminating it entirely, their goal is to help students to be better prepared for college. In addition, because developmental education courses do not count toward degree requirements, this policy decision becomes necessary because students can save money and time by preparing before they enter the university.

The problem with lowering the number of developmental courses becomes apparent when we focus on the actual policy and think about the consequences that policy will have on students. The former Chancellor of the CSU system, Barry Munitz, issued Executive Order 665: “The Determination of Competence in English and Mathematics” in February of 1997. Summarized by the California State University, Fresno (CSUF) registrar, Executive Order 665 stipulates, “Students who require remediation should be placed in remedial classes during their first term of enrollment and should demonstrate proficiency by the end of the first academic year” (Biddell, 1998, p. 14). Students have one year to achieve university standards. Those students who do not demonstrate proficiency in English or mathematics during their first year could face disenrollment. As we look more closely at the policy and think about its implications for students, what we find are mandates with no outreach. In other words, there is no language in the policy that suggests students will get help meeting these policy requirements, nor are there alternatives for students who do not show said proficiency in their classes within one year. It sounds like a sink or swim attitude, as if the policy makers have suggested that a degree from this university simply means pulling oneself up by his or her bootstraps.

An interesting caveat to the current remediation policy is that students who are accepted for admission at CSU do so with educational experience sanctioned by the university. The Master Plan for Higher Education mandates California State Universities to accept the top one-third of high school students in the state (Armstrong, 1999, p. 1). If the state accepts the top one-third, and half of the students need developmental education, there must be some overlap in students who are successful in high school but who get placed in developmental classes at the university. This caveat was recognized by the administration, but they did not provide a solution until two years after the implementation of Executive Order 665:

The 1999-2000 budget provides $9 million to CSU to work collaboratively with selected California high schools that send the most students to CSU who need remediation in English or mathematics, or both. A total of $5 million was appropriated to establish CSU – High
School Faculty-to-Faculty Alliances and $4 million for learning assistance programs. (Committee on Educational Policy, 2000, p. 2)

The learning programs funded by this money included literacy centers in high schools for students to meet with writing tutors; to create partnerships between the university and the high schools for communication between teachers and professors about learning expectations to meet university standards; to develop teachers' pedagogical approaches to teaching English and math; and finally, to teach students how to take the placement tests required of them before enrollment. If CSU was really interested in reducing the number of students needing developmental education, then why was the sink or swim policy implemented first and the plans for partnership and outreach two years later? Thus, there was a period of two years during which students could have already faced disenrollment.

Disenrollment seems to be the solution to changing the number of students who need to take responsibility for their educational experiences. So what is so bad about disenrollment? Does not disenrollment provide students with the necessary push to get the education they need while also keeping university standards high? I will answer this question shortly, but first, let us look at the numbers for that first year. According to Armstrong (1999): “Altogether 19,237 fall 1998 incoming freshman needed remedial education, and 15,240 got the assistance they needed in their first year. Another 1,298 were given exceptions, and 1,440 were disenrolled until they could show proficiency in English and math” (p.1). The problem with disenrollment, as I see it, is that students will most likely not get the education they need. When an authoritative institution sanctions a student’s failure and tells him or her to go somewhere else, students will potentially feel that they do not belong at the university or will think that education is not right for them. Their choices, as I see them, are to either find a job or to go to a community college with possible intentions of transferring back to the university. The disenrollment of students, essentially, pushes them to place themselves outside of university education in vocational training and blue collar jobs. Should the university and policy makers decide students’ future ability to attain a higher education? If students are passing other classes but still need developmental work, should they still be eliminated from the university? In addition, what happened to these students, the 1,440 that were disenrolled until they could show proficiency? How many of these students, who started out with the dream of higher education, will really come back to the university to finish their degree?

In the end, CSU will not reach their first goal of reducing the number of developmental education courses by 10% by 2001. In fact, three years after the current remediation policy was implemented, the number of entering students who need developmental courses has stayed about the same at 46% (Fall 2000 Freshman Remediation: Systemwide). This raises the question of whether disenrolling students really made a difference in CSU’s goal for reducing remediation. Changing the quality of an institution’s education does not successfully happen with gatekeeping policies that take away student access to education and students’ responsibility for their own achievement. Instead of insisting on standards, policy makers should consider students’ lives and the challenges they face, teacher’s situations and opinions about education, and finally, policies that do not ax student’s attempt at higher education. To begin to do this, we must consider how policy makers view education.
The Missing Link: Student as Deficient

What is central to the question of developmental education policy as well as the discussion about standards and access is a definition for literacy and learning. As Barton (1994) suggests, there are several metaphors for literacy that determine structures for teaching and learning as well as defining attitudes toward knowledge and practice. The rhetoric that situates literacy as a set of skills that students have or do not have defines students as either deficient or not. Barton argues “It [literacy] is treated as a thing, almost an object which is given and received; shifting the metaphor slightly, empty people are filled up with literacy. He [Freire] contrasts this traditional view with ones of literacy as empowerment, as a right, as something which people do, a process rather than as a thing” (p. 12). When looking more closely at Executive Order 665, what we find is that students are constructed as deficient instead of as students who have a wide range of literate practices to draw upon depending on the rhetorical situation. Focusing on students’ literacy as a skill learned or as an empty vessel waiting to be filled limits the possibilities for students to demonstrate what literacies they do bring to the university and limits the possibilities for teaching and learning.

Mandates from Executive Order 665 focus on literacy as a skill, a definition that suggests literate practices are based on a set of functions a person must master in order to be a competent member of society: “Campuses shall ensure that students who do not demonstrate requisite competence are required to enroll in appropriate remedial or developmental programs/activities during the first term of enrollment and each subsequent term until such time as they demonstrate competence” (California State University Systemwide Remediation Rates, 1997) The use of the word “competence” suggests that literacy is a set of skills, not a set of practices, and that learning this form of literacy is a matter of practicing certain “activities,” instead of engaging in intellectual work or developing certain forms of knowledge. Students must “demonstrate,” or act out, what they know, signifying the importance of memorization instead of actual problem solving. A skills based definition of literacy focuses on isolated pieces of knowledge that can be easily tested and that seem neutral.

If literacy is a skill, a set of rules a person must follow to show that they have a certain kind of knowledge, then, according to policy, the job of the university is to police that knowledge. Executive order 665 goes on to state:

This executive order requires campuses to assess student proficiency in English and mathematics after admission and prior to enrollment, to establish and enforce limits on remedial activity and advise students who are not making adequate progress in developing foundational skills to consider enrolling in other education institutions as appropriate, and to permit students to continue for a second year of remedial education on a case-by-case basis. (Committee on Education Policy, 2000)

It is the responsibility of each campus to “enforce” limits to the “activity” of developmental education, essentially suggesting that developmental education is a deviant activity that must be monitored. Campuses also have the ability to “permit” students to continue with their education; students must ask and gain permission, if they do not go somewhere else first. Policing students
and their literacy gains approaches students first and foremost as deviant, as less than acceptable, as learners who should be watched closely rather than as people who are interested in learning.

Students are not the only ones being discussed rather than being involved as active participants in the discussion; teachers of developmental education must also face assessment by this executive order: “Campuses shall conduct periodic evaluations of their writing skills programs to ensure that deficiencies in student writing skills are corrected as efficiently and expeditiously as possible” (1997). In this case, teachers are affected by the policy as well, to make sure they are “correcting” students’ “skills” in an “efficient” manner. This order does not consider who teaches developmental courses across the state (mostly teaching associates or adjunct faculty.) Nor does it provide a space for teachers to have goals other than teaching skills and being efficient. This language suggests that teachers simply teach the students the set of practices they need to show proficiency without considering how teachers would want students to develop the ability to think critically, to take risks, to like writing, and to engage in meaningful work. This order constructs policy around teachers, the ones who work with the students and who best know their students’ capabilities. It ignores teachers’ expertise and experience, making their voices absent and silent.

The university’s goal for excellence influences the measures that the institutions must set, and that students particularly, but teachers as well, are forced to live up to. The goal for equal access to an education is not even considered if students are not “prepared” when they enter into the institution to begin with. Focusing on students as deficient and as deviant does not position them as engaged learners who desire, like many other students who enter the university, to get an education and improve their chances at a better quality of life. Placing pressure on teachers and writing programs to move students quickly through the system, making them memorize rules instead of engaging them in learning, positions the teachers of developmental education in a conflicted space. In this space, they must decide how to structure learning to fit within these mandates, while also approaching their students as people who bring with them a range of learning experiences and funds of knowledge. Excellence in education would make a space for teachers to approach students from where they are situated and to make a space for teachers to build on the knowledge students already have. This approach provides access for students to the learning environment and encourages teachers to find ways for their students to represent excellence in students’ learning and thinking. As it currently stands, the policy emphasizing a deficit model toward learning values one set of practices over another, practices all students may not be able to demonstrate for complicated reasons.

Cultural and Linguistic Conformity:

Since 1985 the California State Universities have as part of their mission statements a commitment to cultural awareness and diversity, not only for the culture of the state but also for the learning of CSU students. Two of their missions state as goals: “to advance and extend knowledge, learning, and culture, especially throughout California; to prepare students for an international, multi-cultural society” (California State University Public Affairs Office, 1999b).
These statements would lead a person to believe that California might be on the cutting edge of educating diverse populations, yet, when it comes to developmental education, the policies and the proposed mission of the Universities disconnect.

To understand this gap better, I turn to Stuckey’s (1991) concept of the “violence of literacy.” The violence of literacy refers to the myth that literacy is a set of value neutral skills that students simply acquire. In fact, the concept of the violence of literacy signifies the values attributed to certain kinds of practices and the role of teachers and students and institutions in structuring those values: “Becoming literate signifies in large part the ability to conform or, at least, to appear conformist. The teaching of literacy, in turn, is a regulation of access” (Stuckey, p. 19). I draw on Stuckey’s concept to consider the role of diversity in the placement and elimination of students in the developmental writing program. Does CSU’s policy on remediation value one set of literacy practices over others? What potential do these policies have for prejudice and exclusion? How can policy change to value a wide range of literacy practices?

To start to answer some of these questions, I turn to the mechanism that places students into the developmental education program to begin with. The English Placement Test (EPT) is a multiple choice reading skills and composing skills test that also includes a timed essay section. This test must be taken by all students who have been accepted to the university before they enroll in classes, with a few exceptions. The reading skills portion of the test includes three types of questions: (a) analyzing ideas in a short passage, (b) choosing words that best fit within the context of the sentence, and (c) finding logical relationships between two sentences or phrases. The composing skills section has four types of questions: (a) rephrasing sentences with a new construction, (b) rephrasing underlined portions of a sentence using knowledge about syntax and usage, (c) selecting sentences that most logically fit into the missing space of a paragraph, and (d) finding a sentence that most logically supports the topic given (Noreen, 1989-1999). This test, like most standardized tests, takes writing out of its normal context and asks students to situate themselves in a test written by a committee. The EPT assumes that a student will come to the test knowing certain vocabulary, will understand certain cultural situations and their outcomes, will have experience practicing privileged logical relationships, and finally, will have the ability to perform well in a short period of time. The English Placement Test represents the standards set by the university, the quantified excellence represented therein; the EPT score represents the absolute minimum needed to achieve access to the university, equality for those who can reach a certain score.

The EPT is the starting point for placement into developmental courses, so let us examine the outcome of placement through percentages by race, to consider how placement in developmental programs is connected to race. Interestingly, the percentage of students who need developmental education correlates significantly with students who are of a race other than Caucasian. Of the students who are residents of California, African Americans, Mexican Americans, and Asian Americans are the three largest groups who need developmental education in English at a proportion of about 65% of the students from each group. In comparison, White students only have a 28% remediation placement rate (Fall 2000 Freshman
Remediation: Systemwide, 2000). According to these statistics, race plays a role in the placement of high school students in developmental college classes.

One factor for students’ placement rates could be fluency with Standard English. In fact, according to California Pathways (ESL Intersegmental Project Members, 1998), students who do not speak Standard English may struggle more than those whose native language is English. California Pathways, a professional document defining the second language speaking population, explains the diverse challenges second language speakers face and explicates the linguistic differences of the second language populations in California. This document states, “It can easily take ten years to learn a second language well enough to succeed academically” (ESL Intersegmental Project Members, p. x). Linguistic fluency can be a major factor in the academic success of students, as indicated by the statistics on remediation by race. Because race may be connected to the language a student speaks, the statistics underscore a correlation between language, race, and developmental program placement.

Though linguistic fluency is important and may be a key factor in placing students in the developmental program, we must also consider the academic contribution students are asked to make in order to pass the program requirements. The academic expectations for students who speak English as their second language is different from those for native speakers of English. The second language student population in California must not only work to learn the language, they must succeed academically in another language. The ESL Intersegmental Project Members (1998) suggest, “L2 [second language] learners are often at a disadvantage because they are faced with the task of acquiring and using English at the same time they are trying to learn academic subjects” (p. 20). Speakers of English as a second language, unlike native speakers of English, must not only understand the school work, they must also be fluent in two languages, expectations California does not have for its native English speakers. In addition to this struggle, these students may not be able to rely on their parents or other family members for assistance because the student’s family members may not speak Standard English. Without the help of parents or a central language community, students may encounter difficulties meeting the academic and linguistic expectations of the schools.

Learning academic, Standard English may not be the only avenue toward accessing the university community. In fact, language is just one factor in the literate and community practices that are valued in the university. Gee (1996) explicates the factors for community participation; he focuses on the interrelationship between Discourse, the linguistic code acceptable in different social situations; and ideology, a tacit theory of appropriate thinking, feeling, and behaving. In an educational environment, Gee suggests that language is not the most important factor involved in a person’s ability to be successful. He argues, “what is important is language plus being the ‘right’ who doing the ‘right’ what. What is important is not language, and surely not grammar, but saying(writing)-doing-being-valuing-believing combinations” (p. 127). In other words, a student must know how to use the English language at a sophisticated level as well as be able to show membership in the university community. Being accepted as a member in a learning community, I would contend, is more important to the success of the student than
learning isolated skills or linguistic abilities in and of themselves; being a member of a community means a person belongs and makes a contribution to the work of this community.

In the end, if CSU desires to include awareness and knowledge of diversity in their mission and goals for student learning, then why are so many diverse students being placed in the precarious position of the developmental classroom? If community membership is an important aspect of a student’s success as well as his or her linguistic ability in the language valued at the university, how are CSUs remedial policies implicated in its goals for educational diversity? Should all students be “equally” held to all policies when equality is, for students who do not belong to the valued university community, an illusion? Considering the statistics by race, what potential do these policies have for prejudice against diverse students, and what is the potential for privileging the English speaking, White families and communities who already have access? What these issues show is that excellence defined by CSU is shaped according to one set of values that privilege native English speaking students over others. What also emerges is a question about access: could university policy change to value a broad range of literacy practices? What would such a policy look like?

Revising Practices:

The current CSU developmental education policy does not leave much room for the diversity of students who are accepted into the California State Universities, nor does this policy provide much space for the students to be successful. These academic guidelines have been imposed because university administrators want their institution to represent academic excellence. As I think I have shown, academic excellence, according to CSU, is based on a set of values that privileges skills rather than engagement with learning or critical thinking and problem solving abilities. Though CSU has made an attempt to be inclusive by giving students one year to complete their developmental coursework, they have not considered how the elimination of these students shuts the doors of access to individuals who want an education. Cannot the university’s academic excellence be attained without purging those who seek academic excellence for themselves?

When we look closely at the ways success and remediation are discussed in these documents, we see that the students and their circumstances are completely absent. First of all, there are assumptions that students come into the university from similar and equal backgrounds. Second, the definitions for learning used in the documents focus on skills, foundational knowledge, and demonstrating competence. Third, there is no discussion about how the “standards” discussed are based on one set of standards that privileges one group of people over others. This deficit model of approaching learning, focusing on the missing information students need to be given to be caught up with “everyone” else, does not make for a quality learning environment and also limits the ability for access. Instead of viewing the possibilities developmental education has to provide students access and to be a space for active and engaged learning and thinking, these classes and programs are not even considered as a portion of an excellent university education.

Bridging the gap between equality and excellence is not a simple matter. Policy makers need to recognize the realities of actual students’ lives, while reflecting on their decisions for access to
education. Policy needs to change so that those who are most affected by policy (i.e., students and teachers) are considered and consulted when establishing broad policy guidelines in the future. Including stakeholders in the decision making process will lead to a more democratic and equal system of higher education, where all those affected by the policy have a voice in the creation and implementation of the policy guidelines; in addition, providing a space to discuss the possibilities for an excellent education could lead to the opportunity for all to have access to knowledge and learning.

References


The Fates of Developmental Education
Students at Two-year and Four-year Colleges

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Abstract
Retention rates for developmental education students are greater at four-year colleges than at two-year colleges. At all institutions, White students in developmental education programs are more likely to be retained than students of color. The largest disparity among retention rates at two-year and four-year colleges occurs for African Americans, who are almost two-times more likely to be retained at four-year colleges than at two-year colleges. These results indicate that two-year colleges may disproportionately hinder the academic progress of students of color. The General College at the University of Minnesota offers an alternative model for developmental education that is based on credit-bearing courses in which traditional disciplinary content is integrated with the development of learning skills.

Developmental education programs are becoming an increasingly important part of many colleges and universities, primarily because of the large numbers of students who continue to graduate from high school underprepared for college. For example, the most recent National Assessment of Educational Progress showed that 31% of seniors scored “below basic” in math; 23% also scored “below basic” in reading. These deficiencies were even worse in urban districts and in schools having high enrollments of poor and minority students (Olson, 2001). Similarly,

1. Although the percentage of high school graduates who need college preparatory courses has dropped since 1900 (Brubacher & Rudy, 1976), 29% of all first-time college freshmen take at least one remedial course; this represents an increase of four percentage points since 1985 (National Center for Education Statistics, 1996). At public two-year colleges, more than 40% of
first-year students enroll in remedial courses, whereas at public four-year institutions only 22% of first-year students take remedial courses. During any academic year, about 3,000,000 students are in developmental education programs (Boylan & Saxon, 1998).

2. More than three-fourths of colleges and universities that enroll freshmen offer remedial courses; this number has not changed significantly during most of the twentieth century (Abraham, 1987; Boylan & Saxon, 1998). Remedial courses are especially common at public two-year institutions (90 to 100%) and institutions having high enrollments of minority students (94%). Smaller percentages of public four-year institutions (64%) and private four-year institutions (approximately 50%) offer remedial courses (National Center for Education Statistics, 1991, 1996). The most common remedial courses are mathematics, reading, and writing (Wambach & delMas, 1998).

3. Enrollments in remedial courses are increasing at 40 to 50% of institutions that offer remedial courses; enrollments are decreasing at only 14% of universities; at the remaining universities, enrollments in remedial courses have remained unchanged. Increased enrollments in remedial courses are most common at public two-year institutions (National Center for Education Statistics, 1996).

4. Remedial course offerings and enrollments are highest and remedial course pass-rates are lowest at public two-year institutions and other institutions having high enrollments of students of color (National Center for Education Statistics, 1996).

5. At institutions enrolling mostly White students, 27% of freshmen take at least one remedial course. At institutions enrolling mostly minority students, 55% of freshmen take at least one remedial course (National Center for Education Statistics, 1996).

6. In states such as Minnesota, more than 30% of high-school graduates take at least one remedial course when they enroll in college. More than half (i.e., 56%) of these students take remedial courses in mathematics, with smaller percentages in writing (26%), reading (14%), English as a second language (2%), and study skills (2%) (Lonetree, 2001).

Faculty recognize underprepared students. For example, 85% of faculty at four-year colleges believe that freshmen are poorly prepared; at two-year colleges, 90% of the faculty concur (Lederman, Ribaudo, & Ryzewic, 1985). In many two-year colleges, 30 to 40% of the entering students read below a seventh-grade level (Roueche, Baker, & Roueche, 1984). What becomes of these students?

**What Happens to Underprepared Students?**

I analyzed data gathered by the National Center for Developmental Education (Boylan, Bliss, & Bonham, 1993) from a survey of more than 5,000 students at various two-year and four-year colleges. The data did not consider whether students were accurately placed in developmental courses. Retention rates for students at two-year institutions were defined by graduation or continuous enrollment at the end of 3.5 years. At four-year institutions, retention was calculated at the end of 5.5 years. There were few statistically significant differences in the admissions
criteria of White and minority students in developmental education programs at the same type of institution. Differences in performance cannot be due simply to entry characteristics between White students and students of color (Boylan, Bliss, & Bonham, 1993).

**All Institutions**

Table 1 lists retention rates of developmental education students at two-year colleges, four-year colleges, and all institutions. Approximately two-thirds of students in developmental education programs are White (Boylan, Bonham, & Bliss, 1994).

Table 1
Retention Rates of Developmental Education Students at Various Types of Two-Year and Four-Year Institutions

<table>
<thead>
<tr>
<th>Type of institution</th>
<th>White</th>
<th>African-American</th>
<th>Hispanic</th>
<th>All</th>
</tr>
</thead>
<tbody>
<tr>
<td>Two-year</td>
<td>31.3</td>
<td>17.4</td>
<td>22.4</td>
<td>27.4</td>
</tr>
<tr>
<td>Four-year</td>
<td>40.3</td>
<td>32.9</td>
<td>36.5</td>
<td>37.2</td>
</tr>
<tr>
<td>All</td>
<td>36.2</td>
<td>27.4</td>
<td>31.3</td>
<td>33.1</td>
</tr>
</tbody>
</table>

Derived from data gathered by the National Center for Developmental Education (Boylan, Bliss, & Bonham, 1993).

Overall, one-third (i.e., 33.1%) of students in developmental education programs are retained. White students are retained at a higher rate than the national average (i.e., 36.2%), whereas Hispanic (31.3%) and African American (27.4%) students are retained at lower percentages than Whites and the national average. These conclusions support those of Tinto (1986), who reported that the retention of minorities in higher education lags behind that of nonminorities. These results are also consistent with the report (Boylan, Bliss, & Bonham, 1993) that there is about a 10% difference in the overall retention rates of White and African American college students (i.e., all students, not just those in developmental education). Thus, the differences in retention rates of White and African American students may not necessarily be due to the students’ participation in developmental education programs because similar differences also occur in students not enrolled in developmental education programs. Indeed, African American students in developmental education programs at private institutions are retained at higher rates than White students (Boylan, Bliss, & Bonham, 1993).

**Two-Year Institutions**

The overall retention-rate for developmental education students at two-year institutions is 27.4% (see Table 1). Virtually identical results have been reported by Tinto (1986). This rate of retention is less than that of all institutions, as indicated in Table 1. This disparity may result
from the fact that students who attend two-year institutions are more likely to have families, to attend school part-time, or work while in school, and are less likely to receive systematic counseling (Allen, Epps, & Haniff, 1991).

Enrollments of African American and Hispanic students in remedial courses at two-year institutions are proportionally greater than those of White students (Roueche & Roueche, 1993). However, White students at two-year institutions are retained at higher rates (31.3%) than Hispanic students (22.4%), who are retained at higher rates than African American students (17.4%). These results indicate that there is a disproportionate elimination of minority students in developmental education programs at two-year colleges — that is, at the colleges in which their enrollments are greatest. In these colleges, the disparity in retention rates between White and African American students (i.e., 31.3 - 17.4 = 13.9) is larger than the 10% disparity common nationwide (Boylan, Bliss, & Bonham, 1993).

**Four-Year Institutions**

Table 1 shows that the overall retention rate for developmental education students at four-year institutions is 37.2% (Boylan, Bliss, & Bonham, 1993). Virtually identical results have been reported by the U.S. Office of Education (1993). This retention rate at four-year colleges is higher than that of two-year institutions as well as the average for all institutions. This means that, on average, developmental education students have a better chance of obtaining a college degree if they attend a four-year college rather than a two-year college. The same is also true for students not enrolled in developmental education programs (U.S. Office of Education, 1993). Although some of the students from two-year institutions might not have been admitted to four-year institutions, simply relegating developmental education students to two-year institutions does not help these students, especially those from underrepresented groups (see Table 1).

Whites in developmental education programs at four-year institutions are retained at higher rates (i.e., 36.5%) than Hispanics, who are retained at higher rates than African American students (32.9%). Disparities in retention rates among these ethnic groups at two-year institutions (31.3% and 17.4%, a difference of 13.9 percentage points) far exceed those at four-year institutions (40.3% and 32.9%, a difference of 7.4 percentage points). Thus, the chances that a minority student obtains a college degree more closely resemble—but still lag behind—those of White students at four-year rather than at two-year colleges.

Developmental education students—that is, the group that often includes disproportionate percentages of Blacks and Hispanics (National Center for Education Statistics, 1996; Smetanka & Baden, 2001)—attend four-year colleges at about half the rate of more affluent White students. Once there, the graduation rate of these minority students is almost 40%. Although this graduation rate lags behind the 45% graduation rate of all students who attend such institutions (U.S. Office of Education, 1993), developmental education students who attend four-year institutions have a substantially greater chance of retention and graduation than do developmental education students who attend two-year institutions, regardless of the students’ ethnicity (Table 1). For example, White students in developmental education programs have the highest retention rates at two-year institutions, whereas African American students in
developmental education programs have the lowest retention rate at four-year institutions. Nevertheless, the retention rate of African American students in developmental education programs at four-year institutions (i.e., 32.9%) exceeds that of Whites at two-year institutions (i.e., 31.3%). The retention-rate of African American students at four-year institutions is almost double that of African Americans at two-year institutions (i.e., 32.9 versus 17.4%, respectively).

Retention and Educational Policy

As Tinto and Riemer (2001, p. 1) have noted, many educators argue that “if ‘remedial’ education in higher education is to exist at all . . . it should be located in the ‘lower levels’ of the higher educational system, in particular in the two-year junior and community colleges of our nation that are best situated to serve ‘remedial’ students” (Stratton, 1998). For example, McCabe (1992) argues that community colleges “could well be [our] best hope for radically improving the social and economic conditions that threaten America with an established underclass dominated by minorities . . .” (p. 14) However, an analysis of data in Table 1 shows that for minority students the opposite is true: African American and Hispanic students in developmental education programs at two-year colleges have much lower rates of retention and graduation than White students (Table 1). This means that two-year colleges disproportionately eliminate minority students in developmental education (Table 1) and that the segregation of developmental education students—especially minorities—in these colleges disproportionately reduces their chances of success (Stratton, 1998). In these programs, remedial courses function as a “filter” that selectively eliminates minorities rather than a “pump” that helps all students succeed. As noted by Hunter Boylan, the relegation of developmental education students to two-year colleges “is not an educationally sound idea” (Stratton, 1998, p. 27).

Most colleges and universities place developmental education students in “remedial” and “skills” courses with the hope that these courses will later help “mainstream” the students (e.g., Duffy, 2001). However, this approach often blocks the participation of developmental education students in mainstream courses. For example, Richardson, Fisk, and Okun (1983) reported that stand-alone skills courses are a dead-end for many students, and Broughan (2000) found that more than half of the developmental education students enrolled in more than one remedial course never earn even one credit-hour. Also, some researchers argue that (a) remedial courses often result in less learning because the courses are less challenging and produce lower and more negative expectations by teachers, and (b) grouping students in remedial courses adds to, rather than diminishes, preexisting academic inequalities because this “labeling” further lowers teachers’ expectations and perceptions, further lowers students’ self-confidence, and often leads to poor teaching (Lavin, 1996; Samuda, 1986). Ability grouping based on norm-referenced assessments in remedial courses is especially damaging to minority students because it often perpetuates the ethnic and socioeconomic segregation and imbalances characteristic of many educational programs (Atwater, 1994). Shor (1997) claims that the lowering of academic aspirations—for example, by some two-year institutions—has continued since it was first identified in mass higher education several decades ago. Similarly, Marriott (2001) notes that low teacher expectations, combined with students’ poor preparation, often help students “learn”...
their learning disabilities. Samuda (1986) refers to this labeling—including the notion that all students must be judged according to the same standards, values, and procedures regardless of class or cultural differences—as structural racism. It is difficult to imagine how placing students in remedial courses can be a better alternative to the opportunity to succeed in traditional courses.

The disproportionate elimination of ethnic minorities in developmental education programs at many colleges and universities helps explain the disproportionate college graduation rates of White students as compared to minority students. For example, in 1999, (a) the nationwide college graduation rate for Black students was 38%, whereas that for Whites was 59%, and (b) only 15.5% of all Black adults have graduated from college, whereas 27.7% of White adults have graduated from college (see “Good News,” 2001; “Why Aren’t There Blacks,” 2001). This reduced access of minority students to college degrees has tremendous implications. For example, Black graduates having a four-year college degree have salaries that are more than double those of Blacks with only a high school diploma (“The Power of Higher Education,” 2001). Obtaining a college degree is also a major factor in closing the Black-White income gap. Today, as for the past 30 years, the overall median family income of Blacks in the U.S. is 61% that of Whites. However, Blacks with a college degree now have a median income that is 89% of that of Whites with a college degree (“The Power of Higher Education,” 2001). The disproportionate elimination of ethnic minorities by developmental education programs often consigns these students to low-paying jobs with declining real wages.

The disproportionate elimination of minorities from graduating from college also contributes to the startling lack of diversity in many professions (“You Need a Microscope,” 2001). For example, women and ethnic minorities have long been marginalized, and sometimes excluded, from science, and especially from disciplines such as engineering, physics, and computer science (Moore, 2001). The disproportionate elimination of minorities by two-year colleges reduces the numbers of these students in the “pipeline,” which, in turn, produces a dearth of minorities in the profession. Although Blacks and Hispanics constitute 10% and 7%, respectively, of the employed labor force in the United States, each represents only about 3% of all employed scientists and engineers (National Science Foundation, 1990).

**Standards and Access**

Many institutions, especially four-year institutions, do not want developmental education students on their campuses (Boylan & Saxon, 1998; Pedelty, 2001). Policymakers at these institutions use a variety of questionable arguments to justify their exclusion of developmental education students, the most common of which is economic. The argument (e.g., Hardin, 1998; Howard, 2001) goes like this: why should the state pay for instruction that duplicates that already supposedly provided in high schools? In fact, however, remedial courses at most four-year institutions account for relatively insignificant percentages of budgets. In Minnesota, for example, remedial courses cost only about 1% of the state’s instructional budget for public colleges and universities. This represents a small cost to ensure that many more students, especially many more minorities, will graduate from college.
The claims by Carter in 1978 about developmental education students remain true today, specifically that arguments to segregate developmental education students in two-year institutions are often “used by the four-year institution to avoid its responsibilities” (p. 97). There is little question that many elite institutions and others wanting to be elite do not want developmental education students because they believe that these students erode academic quality and do not belong at “elite” institutions (Pedelty, 2001). Even land-grant colleges, “the people’s colleges,” which were created to extend educational opportunity to all, “resemble the aristocratic colleges to which they were supposed to provide an alternative” (Zwerling, 1976, p. 56).

There are alternatives to traditional developmental education programs. To enhance the access to and success of developmental education students in college, I suggest an alternative approach.

**An Alternative Approach**

The University of Minnesota’s General College is a developmental education program aimed at helping students graduate from college rather than labeling students and “remedying” alleged problems. In General College, credit-bearing courses having traditional disciplinary expectations of content and vigor also include pedagogical techniques that emphasize and develop academic skills such as writing, reading, and critical thinking. These courses are supported by a network of academic advisors who work closely with faculty to anticipate students’ problems and, when necessary, intervene. Also available in General College are academic services in which individualized help with writing, mathematics, and technology is available every day for students. Faculty in General College conduct and publish research about developmental education (e.g., Wambach & delMas, 1996a, 1996b, 1998) and sponsor a research center.

As would be predicted, the percentage of students of color in General College (i.e., approximately 32%) is almost triple that of the rest of the main campus (Smetanka & Baden, 2001), and the admissions scores of these students are lower than those of students in other colleges at the university. However, students who enroll in General College have a better chance of graduating from college than do many of their classmates who do not. Consider these results:

1. More than 40% of the 1995 high school graduates who entered the University of Minnesota as new College of Liberal Arts students in Fall 1995 had received a Bachelor’s degree as of Summer 2000; for comparison, 49% of students who first entered General College and subsequently transferred to the College of Liberal Arts in Fall 1995 had received Bachelor’s degrees as of Summer 2000 (University of Minnesota General College, 2001).

2. More than half of the College’s students transfer into other colleges and graduate within six years; for example, 60% of the at-risk students from the 1988 cohort were still in college or had graduated after five years (Wambach & delMas, 1996b; Smetanka & Baden, 2001).

3. Whereas 35% of General College freshmen transferred within the University of Minnesota, only about 8% of full-time community college students did so (Wambach & delMas, 1996a).
These results suggest that the General College model provides a higher rate of access to the University of Minnesota than does the state’s community college system.

4. Typically, approximately 65% of General College freshmen reenroll at the University of Minnesota during their second year of college, and 70% or more remain in college beyond the first year. The transfers from General College to other colleges within the University of Minnesota are disproportionately students of color (Wambach and delMas, 1996a, 1998).

The results produced by the General College model have been recognized. For example, in 2001 General College received the award for outstanding developmental education program from the National Association for Developmental Education, received a Retention Excellence award at the National Conference on Student Retention, and was named one of five national sites for innovative performance in the field “Best Practices in Developmental Education” (Ghere, 2001). General College was the only university-level program chosen for this award; other nominees included the University of California at Berkeley and the University of Texas (Ghere, 2001). These data and awards support the notion that developmental students can be successful in four-year institutions and that the credit-bearing first-year courses can promote skill development without eroding academic standards. The future of developmental education in four-year institutions may depend on developmental educators’ ability and willingness to explore alternative models that do not require students to enroll in non-credit “remedial” courses.

References


FATES OF DEVELOPMENTAL EDUCATION STUDENTS


Education Law and Student Access: Why Isn’t Education a Fundamental Right?

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University of Minnesota

Abstract

The idea for the article was generated out of a discussion with students in a developmental education course concerning San Antonio School Board v. Rodriguez (1973). Rodriguez is a Supreme Court opinion that ruled education is not a fundamental right. Student critique of the case has made the author rethink legal training on the topic and question the Court’s decision on policy and legal grounds. The article discusses access policy and current court developments. The author argues that developmental educators have an important role to play in redefining “adequate” education and that the new definitions should include increased access to higher education.

In 1973 the United States Supreme Court upheld the Texas system of school financing in the case San Antonio Independent School District v. Rodriguez. The Texas system of financing public education was similar to most states’ funding of schools and relied on local property taxes to supplement state and federal funds. As a result, the expenditure per pupil varied within the state from district to district, with some districts receiving more than double the amount per pupil than other districts. The United States District Court for the Western District of Texas had overturned the Texas financing system and ruled that it violated the Equal Protection Clause of the U.S. Constitution (Rodriguez, 1971). The U.S. Supreme Court reversed the district court and ruled that the Equal Protection Clause is not violated by revenue disparities based on school districts’ fiscal ability. In reaching this result, the Supreme Court held that education is not a fundamental right under the federal Constitution (Rodriguez, 1973).

The Rodriguez case has been severely criticized by legal and education policy experts (Bitensky, 1996; Fuller, 1982; Kozol, 1991). Edward Foley (1998), who argues that Rodriguez was decided correctly, acknowledges that the ruling “provoked immediate and vehement criticism”

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that in the intervening years has “continued unabated” (p. 476). Students in my developmental Law in Society course read and discussed an excerpt of the case, and their critique of the case echoed much of the current scholarship. Their outrage, however, at the fact that the U.S. Supreme Court did not view education as a fundamental right, caused me to rethink what I had learned about the topic during my legal training and prompted me to analyze the impact of current litigation on developmental education. In the first section of this chapter I will go through the classroom applications to explicate the Rodriguez case and explain equal protection analysis. In the second section I provide an analysis of recent state court decisions to explore equity and adequacy in education. The impact of recent legal challenges for developmental education and access will be discussed in the third section. Finally, I will argue that litigation strategies and educational policy promoting access are important arenas for developmental educators.

Classroom Applications of the Rodriguez Case

I have been teaching a developmental Law in Society course for the past two years. The course focuses on individual rights, societal rights, social justice, and how these concepts are reflected in law and society. The ultimate goal is to provide a better understanding of how social and legal institutions interact and to explore alternatives.

To meet the course goals, the class explores the concept of equality and the emergence of the equal protection clause in the U.S. Constitution after the Civil War. Students read Plessy v. Ferguson (1896), the infamous Supreme Court decision that ruled “separate but equal” state facilities did not violate notions of equality under the equal protection clause of the Constitution. In 1892, as part of a litigation strategy to challenge a Louisiana law that separated the races in railroad cars, Mr. Homer Adolph Plessy, who described himself as seven-eighths Caucasian and one-eighth African, sat in a seat reserved for White passengers. Mr. Plessy was arrested and put in jail. His case went all the way to the U.S. Supreme Court. The Court ruled that the state law was “reasonable” and that the Equal Protection clause does not require a legislature to overcome “social,” as opposed to political, prejudices. I use the case to provide a context for later race discrimination cases and also to illustrate the traditional test used by the courts to decide discrimination cases.

The traditional equal protection test is referred to as the “rational basis” test. Using this test, judges ask if the challenged discrimination is rational. The judge must decide whether the state acted reasonably to achieve a legitimate government objective. Plessy v. Ferguson (1896) underscores to students that when judges use the rational basis test, most state laws are considered to be constitutional. The opinion and the slippery distinction the Court makes between social and political rights outrage students. They realize how easy it can be for a state to discriminate if the rational basis test is used to determine whether discrimination has occurred.

After reading Plessy v. Ferguson (1896), we watch the video Simple Justice (Kroyt-Brandt & Head, 1993) and discuss the National Association for the Advancement of Colored Persons’ (NAACP) legal strategy to overturn the separate but equal doctrine. Some students are surprised
that legalized segregation under the doctrine resulted not only in segregated schools, but also in all forms of public accommodation including cemeteries. We create a timeline or map of how the Court’s definition of equality changes from Plessy to the landmark Supreme Court decision in Brown v. Board of Education (1954).

Brown v. Board of Education (1954) is considered by many legal scholars to be the most important court decision in the 20th century. In Brown, the Court held that segregation of public schools on the basis of race violates the equal protection clause of the Fourteenth Amendment because “[s]eparate educational facilities are inherently unequal” (p. 495). Chief Justice Warren, writing for a unanimous Court, notes the following:

[t]oday, education is perhaps the most important function of state and local governments. Compulsory school attendance laws and the great expenditures for education both demonstrate our recognition of the importance of education to our democratic society . . . In these days, it is doubtful that any child may reasonably be expected to succeed in life if he is denied the opportunity of an education. Such an opportunity, where the state has undertaken to provide it, is a right that must be made available to all on equal terms. (p. 493)

The Brown v. Board of Education (1954) case illustrates for students the importance the Court places on public education and how the Court changes the definition of racial equality. In Brown, the Supreme Court applies what is now referred to as the “suspect class” or “strict scrutiny” test. This test is used when a state discriminates on the basis of a criterion the court has declared inherently suspect (e.g., a criterion may be suspect because it is irrational) or when there is a claim that a fundamental right has been violated by a state. Brown provides an excellent example for students, demonstrating that when a judge applies the strict scrutiny test, he or she will presume that the state law is unconstitutional and the burden is on the state to provide a compelling state interest.

Once the students understand that the rational basis test makes it easier for a state to treat similar people differently and the strict scrutiny test makes it very difficult for a state to discriminate, we are ready to analyze San Antonio School District v. Rodriguez (1973) and what test the Court applies to social class and education.

The plaintiffs in Rodriguez were Mexican-American parents whose children attended public schools in Edgewood, one of the poorest districts in Texas. The Texas system of financing public schools is similar to most states in that it relies on local property taxes to supplement state and federal funds provided to school boards. Because property values varied by district, the amount of per pupil expenditure varied as well. The Rodriguez plaintiffs compared the $356 per pupil expenditure in Edgewood to the $594 per pupil spent in the neighboring district of Alamo Heights. They argued, and the federal district court agreed, that the unequal funding violated the Equal Protection Clause of the Fourteenth Amendment. The district court found that education is a fundamental right and declared the Texas system unconstitutional using the strict scrutiny test. The district court also determined that social class is a “suspect classification” and struck down sections of the Texas constitution and education code relating to financing. The court ordered the state to adopt a program that “does not make the quality of public education a
function of wealth other than the wealth of the state as a whole” (Rodriguez, 1971, p.16). The school district appealed the case to the U.S. Supreme Court.

The first decision before the Court was what test to apply to the Texas school finance system. The appellees (members of the Rodriguez class) initially urged the Court to apply the suspect class test to discrimination on the basis of wealth. The Supreme Court ruled, however, that residence in districts that have less taxable wealth than other districts does not make the appellees an identifiable group subject to a history of unequal treatment, or relegated to a position of political powerlessness (San Antonio School District v. Rodriguez, 1973). Further the Court stated “where wealth is involved, the Equal Protection Clause does not require absolute equality or precisely equal advantages” (p. 24). In refusing to apply suspect class status to wealth, the Court distinguished between absolute deprivation of education, which would be unconstitutional, and a poorer quality of education, which the majority of Justices determined was not an Equal Protection violation.

During a mock rehearing of the case, students tended to agree with the Rodriguez class members that social class should be considered a suspect or irrational category that treats people differently. They disagreed with the Court that wealth is not identifiable and recounted stories of the first time they realized, usually at age four or five, that they were of a different social and economic status than a friend. As Fussell (1983) argues, we are all constantly making class distinctions. In a related exercise, students were able to “read” the clothing, residence, speech, and other characteristics of friends and classmates to determine socioeconomic class. Several students pointed out that the federal poverty guidelines also “identify” persons on the basis of class.

Based on that knowledge, students argued that the Court erroneously determined that class is socially dynamic. Students pointed to statistics that show people in the U.S. are not moving up the economic ladder and that the best indication of class status remains the parents’ status (Mantsios, 1998). Finally, students criticized the Court for saying that there has not been a history of oppression against the poor in the United States and supported the argument with examples of poll taxes and debtors’ prisons.

The most vehement student protests, however, were reserved for the Court’s decision in San Antonio School District v. Rodriguez (1973) that education is not a fundamental right under the Constitution. Once the Court had determined that class was not entitled to suspect status, the Justices still had to determine if education was a fundamental right. As the appellees correctly argued, strict scrutiny, the highest level of equal protection, applies both to suspect classes and when a state has deprived its members of a fundamental right. The Rodriguez majority opinion cites language in Brown v. Board of Education (1954), in which a unanimous Court recognized that “education is perhaps the most important function of state and local governments” (p. 29) and argues this statement shows a historic dedication to public education.

The majority opinion, however, goes on to state that “the importance of a service performed by the State does not determine whether it must be regarded as fundamental for purposes of examination under the Equal Protection Clause” (Rodriguez, 1973, p. 30). The Court rejects the
appellees’ argument that education has a close relationship to the “effective exercise of First Amendment freedoms and to intelligent utilization of the right to vote” (p. 35). Therefore, the Court decided education is not a fundamental right.

Justice Powell, writing for the majority, asserts that the Court has never presumed to have the authority to guarantee “the most effective speech or the most informed electoral choice (p. 36, emphasis in original). Although these might be desirable goals, according to Justice Powell, the majority refuses to find a fundamental right to education under the federal Constitution. Because the majority refuses to apply suspect class analysis to wealth, and refuses to find that education is a fundamental right, the rational basis test is applied. Seeing as this is the same test utilized in Plessy v. Ferguson (1896) to uphold the separate but equal doctrine, it is not surprising that the Court upholds the Texas system of funding public schools as rationally related to a legitimate state interest. Justice Powell notes that there is need to reform state education systems that rely too heavily on local taxes. He further argues, however, that state legislatures are the appropriate venue for reform.

Many students agreed with the dissenting opinion of Justice Thurgood Marshall. Prior to being appointed to the Supreme Court, Justice Marshall was the head of the NAACP Legal Defense and Educational Fund and successfully argued Brown v. Board of Education (1954). Justice Marshall asserts that every person has the right to an equal start in life where a state service as important as education is concerned. In his Rodriguez dissent Marshall states,

I, for one, am unsatisfied with the hope of an ultimate “political” solution sometime in the indefinite future while, in the meantime, countless children unjustifiably receive inferior educations that “may affect their hearts and minds in a way unlikely ever to be undone” (p. 71, citing Brown v. Board of Education, 1954).

The students’ critiques of the majority opinion mirror the legal and scholarly debate on the topic. Although equalizing per pupil expenses would not resolve issues in rural or urban schools where education costs may be higher, most agreed that equity was a good place to start and the Supreme Court erred when it refused to give fundamental right status to education.

A book many students read in a basic writing class informed their critique. The dramatic differences Jonathan Kozol (1991) presents in Savage Inequalities between education in inner city and suburban schools resonated for many of the students. Students linked Kozol’s account with their own experiences and compared schools in their home communities. Their conclusions were that money does make a difference in the quality of education received, and that education is, to them, the most important way to bring about positive social change.

Students often comment that this is one of the most satisfying sections of the course, perhaps because they are able to concretely link their experiences to class discussions. In turn, I have learned a lot from my students and colleagues about how to teach legal concepts of equality in a first year developmental education course. As Higbee, Ginter, and Taylor (1991) advocate, I present the information in the equality section of the course utilizing methods that are congruent with my students’ learning styles. Print (reading cases), aural (lectures, audiotape of Supreme Court oral arguments), interactive (debates, mock hearings and trials), visual (timelines, maps,
videotape of Simple Justice, and power point slides) and kinesthetic (movement during mock
trials) learning styles are incorporated into the unit. More importantly, I have learned from my
students what equality and justice in education really means. I have had to rethink my own
narrow legal training, step outside of the Supreme Court’s rational basis versus strict scrutiny
analysis, and think critically about the ramifications of inequality in our schools.

In rethinking my legal training, I began researching legal challenges to college preparatory
programs and standardized tests to highlight the impact recent cases and legislation have on
developmental education and student access to higher education. To explore fully the impact on
access, a short summary of recent state court decisions is useful.

**Rethinking Rodriguez: Analysis of Recent State Court Decisions**

Once the Supreme Court ruled that education is not a fundamental right under the federal
reform turned to state courts to assert claims under state constitutions. Unlike the U.S.
Constitution, every state constitution includes a public school provision (Alexander &
Alexander, 2001). Because a state constitution may provide more protections than the U.S.
Constitution, challenging educational systems using state constitutional protections has proven
to be a successful strategy in several states. Most commentators categorize state constitution
cases as challenges either on the basis of equity or on the basis of adequacy (see discussion in

Litigation and legislative strategies that focus on equalizing per-pupil expenditures
characterize equity challenges. In Serrano v. Priest (1976), an illustration of an early successful
equity challenge, the school finance plan was overturned based on the California Constitution’s
equal protection provision. The California Supreme Court ruled that wealth differentials among
school districts involve a suspect classification under the state constitution and that education is
a fundamental right in California. Using strict scrutiny analysis, the California Supreme Court
struck down the state finance system because the reliance on local property taxes resulted in
unequal distribution per pupil.

According to Alexander and Alexander (2001), 14 other states have also ruled that education
is a fundamental right and overturned state finance systems that provide disproportionate
amounts to school districts based on wealth (see also discussion in Mills & McLendon, 2000).
However, according to Alexander and Alexander, 13 state courts including the Supreme Court of
Illinois, have determined that education is not a fundamental right and disparities in funding are
rationally related to a legitimate state goal (Committee for Educational Rights v. Edgar, 1996).

Florida voters included new language in the state constitution declaring “the education of
children is a fundamental value to the people of the State of Florida” after the state supreme
court had ruled in Coalition for Adequacy and Fairness in School Funding, Inc. v. Chiles (1996) that
education was not a fundamental right. Although Mills and McLendon (2000) argue that the new
language should overturn the 1996 Florida Supreme Court ruling, the issue has yet to reach the
Florida is an intriguing example of voters defining equality of education after an unfavorable ruling by a state court. It will be interesting to see if other states also pass constitutional amendments to clarify that education is a fundamental state right.

State court litigation strategy began to challenge the adequacy of education and starting in the 1989-1990 term, state courts struck down school finance systems on the grounds that the states in question were not providing adequate education. Instead of challenging the equality of per-pupil expenditures, advocates question whether or not the expenditures are adequate to meet constitutional requirements (Patt, 1999; Verstegen, 1998; Verstegen & Knoeppel, 1998).

Ohio provides an interesting example of a successful challenge to inadequate education. After a lengthy trial, the district court concluded and ultimately the Supreme Court of Ohio agreed that Ohio’s school finance system violated the Equal Protection Clause and the Education Clause of the Ohio State Constitution (*DeRolph v. State*, 1997, hereafter referred to as *DeRolph I*). The Ohio Constitution includes a provision requiring a thorough and efficient system of education, as do many other state constitutions (Alexander & Alexander, 2001). In declaring the Ohio system of education unconstitutional, the court not only pointed to gross disparities in funding among districts, but also focused on the horrendous conditions of some of Ohio’s public schools and the failure of the curriculum to prepare students for higher education. The court in *DeRolph I* ordered the legislature to revamp the Ohio system to ensure it would provide an adequate education to all students. After the legislature enacted several proposals, the case again went to the Ohio Supreme Court, and in *DeRolph v. State* (2000), referred to by commentators as *DeRolph II*, the Ohio Supreme Court ruled that the legislature had failed to provide for a thorough and efficient system of education. In her article, “Déjà Vu: The Status of School Funding in Ohio after *DeRolph II*,” Suzanne Drummond (2000) provides a thorough discussion of the court’s rulings in *DeRolph I and II*, as well as the political reaction in Ohio.

Robert Jensen (1997) provides a breakdown of the successful and unsuccessful school finance suits. He argues “that adequacy pulls more weight and is vital to the courts’ decisions. Equality arguments have alternatively become appendages to adequacy arguments, using educational disparities to aid in the proof of poor quality” (p. 43). Deborah Verstegen and Robert Knoeppel (1998) provide further analysis:

Originally, the notion of an equal educational opportunity was taken to mean access to schooling; later this was expanded to mean access to an educational program that would satisfy minimum standards. Currently the concept of equal educational opportunity is being transformed in the context of the global economy and knowledge society to mean access to a quality education for all children at all schools, not merely a basic educational program. In this, the issue of adequacy or the sufficiency of the funding system to support a quality education is conjoined with the issue of equity, that is, the fairness of the distribution of educational benefits and burdens for all children and society at large. (p. 556)

As Verstegen and Knoeppel (1998) document, when adequacy is defined as a minimal basic education, state courts tend to uphold school finance systems, even though the quality of education varies from district to district. Where state courts invalidate education finance
systems, they define adequacy in terms of the information necessary to prepare a student to live in today’s global economy. Changing attitudes about education in the United States, according to Patt (1999), are the real reason courts have begun to rule that more than a basic education is required. The mandate that appears to be emerging is that an educational system must provide to all children—rich and poor alike—the opportunities available to students who attend the most affluent school systems.

As legislators and courts determine if states are providing equal, adequate education or both, developmental educators are in a unique position to provide useful analysis. If other states follow the lead of Ohio, New Jersey, Vermont, New Hampshire, Kentucky, Massachusetts, Montana, and Wyoming, and emphasize “equality of quality” to achieve an equitable financing scheme, information on best practices will become increasingly important for policy makers and judges. Further, if adequacy issues are successfully addressed on the state level, student access to higher education should increase. An area that needs particular attention is college preparation and the availability of Advanced Placement (AP) classes. College preparatory curriculums have a particular impact on the future of developmental education and student access to higher education.

Impact on Developmental Education and Student Access to Higher Education

Is there a link between per-pupil expenditures and student achievement? According to Robert Slavin (1999), after a funding-equity victory, there is no guarantee schools will improve and student achievement will increase. It is key that schools adopt effective programs, and Slavin recommends early-childhood programs, one-on-one tutoring, and extensive staff development. Hanushek (1989) reviewed 187 studies and determined that the amount of money spent per pupil was not necessarily related to improved student performance. Verstegen and King (1998), however, report a clear funding-achievement relationship emerging from 35 years of production-function research. According to their study, money does matter in educational achievement. Factors such as class size and teacher experience can increase the cost of instruction, but increased funds are necessary to operate efficient schools. Odden and Picus (1992) also point out that new money needs to be spent on pedagogical strategies that work. Ongoing research into the benefits of smaller class sizes, specialized curricula, mentors, teacher training, and multicultural education will provide additional insight for policy makers and the courts.

Advanced Placement classes are an important element of the access debate. During the 2000-2001 school year only 60% of the public high schools in the U.S. were offering college level courses (Viadero, 2001). The number of students, however, who took AP exams to earn college credit has doubled since 1990. The AP program, according to Viadero’s article in *Education Week*, is seen by many policy makers as a way to avoid traditional college and non-college tracks, and rather prepare all students for postsecondary study. AP programs are being promoted as a quick and reliable way to prepare all students for access to higher education.
However, AP classes are not offered in all schools. The Ohio Supreme Court in *DeRolph I and II* (1997, 2000) based part of its conclusion that Ohio schools were inadequate and unconstitutional on the fact that not all of the state’s public high schools provided AP classes. Ohio, according to the court, is well below the national average in offering AP opportunities. Using the Ohio Supreme Court reasoning, adequate education also includes opportunities for access to higher education.

A recent case filed in Los Angeles challenged the lack of AP classes directly. The American Civil Liberties Union (ACLU) represented a group of high school students in *Daniel v. State of California*, filed in Los Angeles County in 1999. The complaint alleges that the State of California is denying students equal and adequate access to AP courses. The allocation of AP classes in California is grossly unequal according to the ACLU, and as a result, African-American and Latino students are disproportionately disadvantaged. ACLU staff attorney Rocio Cordoba said, although California has been in the forefront nationally in offering AP courses, such courses must be made equally available to minority and poor students who have the capacity and drive to achieve in higher education. There is no reason why students should be denied access simply because their school did not provide an adequate AP program. (ACLU, 1999)

As the AP debate demonstrates, race, place, and poverty are intertwined. I agree with Denise Morgan (1998), who argues that courts should not arbitrarily separate race, place, and class. Concentrated poverty is one of the most significant causes of low academic achievement. As Morgan points out, “[u]nfortunately, for the most part, neither federal nor state courts have taken this confluence of circumstances into account in deciding education litigation cases” (pp. 279-280). Despite the reality that race, place, and poverty are intertwined, most courts consider each aspect separately. Morgan cites *Dowell v. Board of Education* (1991, 1993) as an example of how federal courts have ruled that “plaintiffs in desegregation cases are entitled to a remedy only if they can prove that the racial isolation in their schools is caused by racial prejudice—separate and apart from class prejudice” (pp. 281-282).

**Litigation Strategies and Educational Access Policy**

According to Morgan (1998), the Connecticut Supreme Court’s opinion in *Sheff v. O’Neil* (1996) provides one hopeful sign on the litigation front. The Connecticut Supreme Court ruled:

[the public elementary and high school students in Hartford suffer daily from the devastating effects that racial and ethnic isolation, as well as poverty, have had on their education. Federal constitutional law provides no remedy for their plight . . . We hold today that the needy schoolchildren of Hartford have waited long enough. (p.3)]

In refusing to separate class and race, the Connecticut Supreme Court recognizes the importance of concentrated poverty and educational attainment.

Another hopeful sign may be the *Daniel v. State of California* case. The case recognized the link between race, place, and class and documented the low number of AP courses in low income, predominantly Latino and African American public high schools by geographic area in
the state of California. Ultimately, working with experts from the University of California at Los Angeles (UCLA) Department of Education, a comprehensive plan, including legislation incorporating many of the experts’ recommendations for increased access to AP classes, was introduced in the California legislature. The settlement appears mindful of Gary Orfield’s (1994) assertion that policies must raise standards in schools serving poor youth and remove barriers that stratify educational opportunity on the basis of race and class. By incorporating race, place, and class, the settlement of the Daniel case may attain “equality of quality.”

**Conclusion**

As developmental educators, our policy strategies also need to consider concentration of poverty and how poverty and race are often intertwined. Our legislative and litigation strategies should incorporate concentration of poverty analysis. As developmental educators, we should be aware of the federal and state court challenges to equality and adequacy in public schools, as well as the impact on developmental education and our students and incorporate questions of access into our policy work.

In my Law in Society class, students discussed Mantsios’ (1998) thesis that “[s]chool performance (grades and test scores) and educational attainment (level of schooling completed) correlate strongly with economic class” (p. 210). If equality of quality is the new definition of adequate education in the U.S., and if the term includes access to education, developmental educators must continue to disseminate information on best practices to legislators and advocate not only for increased access to higher education, but for the role of developmental education in providing access. My hope is that in providing a summary of federal and state case law, and new developments in access to higher education, this chapter will spark a dialogue within the field concerning developmental education’s role in furthering access policy.

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The New Center for Multidisciplinary Studies: No Longer an Experiment

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Abstract

The purpose of this chapter is to discuss the history, mission, and philosophy of the New Center for Multidisciplinary Studies (NC-MDS) at Minnesota State University Moorhead (MSUM), Moorhead, MN. The program began as an experiment in 1972 when President Roland Dille was awarded a start-up curriculum grant from the Minnesota State College Board. The program will celebrate 30 successful years in 2002. Students admitted to the program show the potential to succeed in a higher education setting but did not meet the university’s automatic admissions requirement of graduating in the upper 50th percentile of their graduating class or scoring 21 or better on the ACT. Approximately 18 to 20% of the incoming freshmen at MSUM begin in the NC-MDS. Seventy-one percent of the courses on the curriculum have liberal studies credit. Five of the courses are college-level developmental education courses focusing on improving student study skills or skills in reading, writing and computer literacy, and there is one pre-college course in mathematics.

The New Center for Multidisciplinary Studies (NC-MDS) is an academic alternative-entry liberal studies program at Minnesota State University Moorhead (MSUM). The program is for freshmen and sophomores. One hundred seventeen students first entered the program in the fall of 1972 when Roland Dille was the President of MSUM, then known as Minnesota State College (MSC). Six faculty members and the Director, Dr. David Johnson, began the curriculum with six core courses and a study skills course to assist students in skill development. The six core courses were The Communication of Ideas, The Development of Democracy, The Individual and Society, The Physical Universe, The Human Mind and Body, and The Search for Meaning.

During the 1970s, colleges were faced with a drop in enrollment. It appeared that there were more college graduates than positions available. Minnesota State College (MSC), primarily a
teacher’s college, was directly impacted by this trend, especially in light of the U.S. Department of Labor’s estimates: “If present patterns continue, about 4.2 million new teachers will be graduated in the 70’s, . . . there will be openings for only 2.4 million of them to fill” (CC & I Rejects, 1971, p. 2). The Department of Labor also estimated that “20% of the jobs made available in the decade [1970s] will require a degree” (Moorhead State College, 1971, p. 3). In addition to this national trend, there was also a nationwide push for open enrollment. A college within a college, such as the New Center, could meet this need and assist with the issue of the declining enrollment. Additionally, the state of Minnesota had agreed to provide open admission institutions within 20 miles of a city with a population of 10,000 or more. The junior college was the response to this state decision. This opportunity existed everywhere in Minnesota except in Moorhead. The New Center for Multidisciplinary Studies would provide an open admissions entry for MSC, would be a college within a college, and would address the issue of declining enrollment for MSC. The New Center would not be the answer to every need, but it would address some of them.

President Dille strongly believed that all students should have access to a college education, even the underprepared, students who did not attain a 21 on the ACT nor graduate in the upper 50th percentile of their graduating class. Dr. Dille had a vision that is now a success story.

As stated in a 1992 article, “Giving Beginning College Students a Chance for Success: A Report of a 20-Year Experiment with a Non-Traditional Education in a University Setting,” (Bolton, Hanna, Tiedt, & Wesley):

The New Center has filled an important need for the University. By creating a de-facto two tiered admission system, the New Center enables Moorhead State University to meet its open-access responsibilities as a people’s university, and do so in a responsible way. MSU [MSUM now], has made careful and thoughtful provision for high-risk admittees, while at the same time shielding its traditional programs from the quality problems that a flood of such admissions could cause. Thus the university can pursue excellence, while maintaining its availability. Compared to other approaches, or non-approaches, this solution to high-risk admissions are [sic] far more honest and responsible. It takes fair and full account of both individual and institutional needs, and places the university in a strong ethical position, for whatever future roles develop. Moorhead State University (MSUM) has clearly proven its concern for all people of its service area, by two strong decades of strong commitment to [The New Center]. In addition, that gives the university a moral authority, which is lacking in institutions that merely talk about their concern, or relegate it to small tacked on programs. (pp. 4-5)

“New” Center is a misnomer, as the program will celebrate 30 years as an alternative entry program for underprepared students in 2002. Students entering the program show the potential to succeed in college; however, they did not meet MSUM’s minimum automatic admission criteria. Specifically, they were not in the upper one half of their graduating class or they did not achieve a composite score of 21 or above on the ACT, a PSAT verbal and math combined score of
Students not meeting the automatic admission guidelines are forwarded a “New Center Questionnaire” and are invited to apply for admission to the alternative entry program. New Center faculty do not determine whether an applicant could be admitted or denied entrance to the program. The admissions staff reviews all of the materials and then determines whether the student would be admitted to the program.

The New Center’s curriculum includes 45 courses, 71% with liberal studies credit. There are courses offered as electives; however, the majority of the curriculum meets the University’s 45 credit requirement for a broad foundation in English Composition and Literature (Category A of the Liberal Studies requirement), Natural Sciences and their Processes (Category B), Behavioral and Social Sciences (Category C), Western Tradition: Humanities and Fine Arts (Category D), Communicative and Symbolic Processes (Category E), and Cultural Diversity and Non-Western Traditions (Category F). (Moorhead State University, 1999, p. 8)

The liberal studies courses offered in the New Center meet B.A., B.S., and A.A. graduation requirements. Student learning outcomes include, but are not limited to,

- Gaining an understanding and knowledge of the liberal studies; Improved skills in reading writing and mathematical problem solving; Improved critical thinking skills; Appropriate confidence in their abilities to succeed in college; An historical perspective; An awareness of ecological concerns; Consulting with a faculty advisor to learn to plan and implement appropriate courses of study or to choose other postsecondary alternatives; Demonstrating competent academic achievement for transferring to a major; For those who transfer to a major field at MSUM, demonstrating competence in their major by earning a bachelors degree. (Minnesota State University Moorhead, 2001, pp. 12-13)

As a “multidisciplinary” department and program, the 10 faculty members come from a variety of academic disciplines and hold tenure track appointments in the Division of Education and Human Services. Currently four of the faculty members are from the English, Literature, and Humanities disciplines; two are from the Natural Sciences; three are from the Social Science disciplines; and one is from Mathematics. All 10 of the faculty positions in the NC-MDS are tenure track positions, affording faculty members the opportunity for advancement in rank. The Director administrates the program, advocates for the program, and teaches in his or her area of expertise. Dr. Del Corrick served as Director of the program for 17 of the 30 years. Presently, this is an appointed position with a renewable three-year term. The Dean of the College of Education and Human Services is the identified “supervisor” of the program. The main purpose of the program is twofold, to offer an integrated curriculum of liberal studies courses and to provide supportive services for the student.

President Dille, in response to the legislature’s directive that all students should have access to at least two years of college within a 35 mile radius of their homes, responded to the place-
bound, underserved students who did not qualify for the open admission program to be offered entrance through the New Center program. In the fall of 1972, the first 117 students were admitted to the program. President Dille had established four program goals for the New Center. The goals he discussed included providing certain aspects of a community college atmosphere and curriculum for individuals within commuting distance of a university, providing selected career-oriented programs that require less than the baccalaureate degree and are not duplicated in the university service area, increasing the humanizing aspects of career-oriented education, and also providing a new medium for experimental education at the college (Dille, 1971).

The New Center for Multidisciplinary Studies began with a curriculum grant from the Minnesota State College Board. What began as an experimental program now enrolls approximately 235 students each academic year, which appears to be about 18 to 20% of the incoming freshman class. The retention rate is similar to the mainstream campus retention rate of 70%. Students tend to transfer into their major area of study their sophomore year and to begin the transition to the mainstream campus often in the second semester. To date, we are not aware of any program in the area or region that replicates the NC-MDS program. In the beginning the focus was on curriculum development and course design. Each course proposal had to be approved by the appropriate university committees to be accepted as part of the liberal studies requirement, and the process continues to be the same today.

The NC-MDS has a specific educational mission, philosophy, and approach to learning. The program is competency based, focusing on variable-credit mastery learning and has a noncompetitive pass/no credit grading system. Concurrently, when the program was first discussed as an option to open enrollment, William Woolwine, an Assistant Professor in the English Department at MSC, proposed a revision to the English curriculum, which included a pass/no credit grading system. Dr. Dille supported this proposal as being the “most sensible, the most exciting, and the most educationally sound” (Rowell, 1971, p. 1). The New Center continues to use the mastery learning variable credit grading system. Students contract with the professor for mastery of material.

The NC-MDS mission statement and philosophy assist the faculty in meeting the tenets and goals of the program.

**The Mission of the New Center for Multidisciplinary Studies**

The New Center for Multidisciplinary Studies is an alternative, entry academic program for freshman and sophomores offered by Minnesota State University Moorhead. The New Center’s mission is to provide educational experiences, grounded in liberal studies, through which students learn and integrate knowledge, skills, and values. Students are encouraged to identify their goals and to assess their strengths in order to make informed choices about their degrees or other alternatives. Students who are selected for Multidisciplinary Studies demonstrate the potential to succeed in college but may lack the skills or confidence to begin in the larger setting and would most often be excluded from Minnesota State University
Moorhead by the University’s traditional admissions requirements. (Minnesota State University Moorhead, 2001, p. 9)

Karen Branden, a former NC-MDS student, now a doctoral candidate, focused on students’ self esteem and skill development for her master’s thesis in 1994. Data indicated “that both students’ self esteem and their academic skills in reading, writing, and mathematics improved over the time they were students in the New Center program” (Faculty of the New Center for Multidisciplinary Studies, 1997, p. 9).

New Center Philosophy

Education should be holistic, empowering the students to learn and to integrate knowledge, skills, and values. It should assist students to appreciate their own and each other’s humanness and uniqueness, to discover the potentials of themselves and others, and to make choices, which will help them to effectively and responsibly participate in their total environment. Education should enable people to successfully perform various social roles and to accept diverse cultures and lifestyles. It should foster commitment to self, to others and to life-long learning. (Minnesota State University Moorhead, 2001, p. 9)

There are 13 tenets of the New Center philosophy. They are:

1. The wisdom of the past transmitted through the liberal studies and contemporary skills and knowledge are equally essential to higher education.
2. All individuals should have the opportunity to develop their potentials.
3. A person best develop knowledge, skills, and appreciation when striving to improve upon successes.
4. Since learning styles vary among individuals, alternate routes to the road of higher education should be made available.
5. When a supportive atmosphere and appropriate instruction are available, past performance in academic pursuits, as evidenced by high school grades or entrance examinations, is less significant for success in college than present commitment to learning.
6. Realistic understanding of abilities, motivations, interest and values increase [sic] the likelihood of progress toward goals and of personal satisfaction.
7. Integration of knowledge takes place within the learner; therefore, an instructional approach that places the student at the center and incorporates several disciplines is especially valuable.
8. Active learning produces meaningful, long-lasting effects upon behavior.
9. Understanding one’s values and the values of others is an essential part of education.
10. Education should encourage responsibility to both self and society.
11. Holistic education should be life-long.
12. Individuals learn better is a setting where cooperation and esprit de corps make part of the community enjoyable and helpful.
13. Student/faculty interaction is an important factor in student motivation, involvement and retention and should be facilitated by ongoing advising and opportunities for informal discussions. (p. 12)

The mission, philosophy, tenets, and goals are all found in The New Center for Multidisciplinary Studies Student Handbook, 2001-2002. Each summer the handbook is updated and material is revised as needed. Students are encouraged to purchase the handbook, and many faculty require the handbook for their MDS 109: Introduction to Higher Education class. The goals of the program for the students and for the New Center are for students to gain an understanding and knowledge of the liberal studies, and to gain an ability to do abstract, analytical, and creative thinking. Students also will be provided the opportunity to demonstrate competent academic performance after transferring to a major. Because many of the students enter the program with low self-esteem, another goal of the program is to assist students in developing the confidence in their abilities to succeed in college, to enhance skills in reading, writing, computing, speaking, and listening. Faculty tend to integrate material into courses related to diverse cultures and lifestyles so that students will come to appreciate and understand some diverse cultures and lifestyles. Many of the courses provide students with a historical perspective as well. In consultation with a faculty advisor, students develop a plan and a way to implement appropriate courses of study that will assist the student in acquiring the skills and interests that will enhance life-long learning. The New Center also provides an environment for students to examine, clarify, and choose personal values while learning to respect the values of others. Students often develop an appreciation for the arts, gain an awareness of ecological concerns, develop skills in working cooperatively, and develop a global perspective of a variety of issues.

The New Center faculty contribute to students in the development of these skills by encouraging and supporting faculty development as well as continuing to explore innovative teaching methods. Faculty also assist admissions with maintaining an admission policy consistent with its goals and resources. Because of the mission of the New Center and its strong focus on students and student competency, faculty maintain a strong emphasis on student advising. Faculty participating on the New Center Academic Progress Committee monitor student progress and keep students informed of their academic standing at the end of each semester. The New Center faculty strive to present an integrated liberal studies curriculum, by reviewing the curriculum and developing new courses when needed. Faculty, through a variety of pedagogy, stress learning and thinking processes.

Faculty in the program are involved in a variety of community service experiences. The Student Activity Committee (SAC) and its faculty advisors tend to be more involved in community service and often the experience is a form of service learning. One goal is to maintain a sense of community among students and faculty.

The New Center for Multidisciplinary Studies is an exemplary program approaching 30 years of meeting the needs of the underprepared student. Much of the success is due to the approach to learning the program embraces. Students are graded on a noncompetitive, pass/no
credit system. The system focuses on outcome based mastery learning with a variable credit philosophy. Students may register for a four-credit social science course, for example, and attain only three of the credits in the semester with an opportunity to master the fourth credit that would then facilitate the grade change to a Pass/4 credits. Courses are integrated and multidisciplinary in content. The student-centered approach fostered by the faculty members focuses on teaching, improving teaching effectiveness, and strong faculty-student interaction that is academic, social, and advisory. Students admitted to the program are required to take the MDS 109: Introduction to Higher Education course in their first semester of college. The faculty member the student has for this class becomes his or her academic advisor. The class meets weekly for one semester and assists students with making the transition to college and identifying appropriate resources and encourages the development of a mentoring relationship between the advisee and advisor. Of the 45 New Center courses, 44 count for full college credit, and non-New Center students can take these courses for full college elective credit.

The New Center for Multidisciplinary Studies is not a certified developmental education program. Currently, five courses in the program are college-level developmental courses designed specifically to improve students’ study skills, reading, writing, and computer literacy, and there is one pre-collegiate mathematics course. Many of the developmental education goals are embraced by the program. When one considers the definition of developmental education adopted in 1995 by the National Association for Developmental Education, which includes the phrase that developmental education “promotes the cognitive and affective growth of all postsecondary learners, at all levels of the learning continuum” (Higbee & Dwinell, 1999, p. v), then the New Center for Multidisciplinary Studies could be defined as a program that embodies the definition and all six of the goals of a developmental education program.

As an alternative entry program for the underprepared student, the program does make educational opportunities available for all. Mastery learning addresses the second developmental education goal as each student has the opportunity to master the material, to learn the skills, and to develop an attitude in a supportive environment that would assist with the “attainment of academic, career, and life goals” (NADE, 1995). The admissions standard at MSUM addresses goal number three, as students admitted to the program would be appropriately placed in the program based on the open admission criteria. The program is a competency based learning program integrating mastery learning and the variable-credit grading option; therefore, the program addresses goal four. Because of the faculty’s strong focus on advising, maintaining an open door policy, and having all admitted students enroll in MDS 109: Introduction to Higher Education, a supportive, student-centered environment is created that is stimulating and conducive to learning which enhances retention.

As previously stated, the retention rate of the program tends to align with the mainstream campus retention rate. Faculty in the program understand student learning styles and the differences between them. Curriculum and syllabi are developed to allow students to learn from a variety of teaching styles as well as learning styles. Faculty often integrate cognitive and affective learning theories as well as cooperative learning experiences in their classroom
interactions. Faculty may use peripheral enhancements augmenting lecture material, small group and large group experiences, or a modified jigsaw method.

The New Center for Multidisciplinary Studies began as an experimental program in 1972 and is now a thriving program admitting 18 to 20% of Minnesota State University Moorhead freshmen annually. The program embraces the goals of developmental education, and will celebrate 30 years of academic excellence serving students who would otherwise not have had the opportunity to attend college. The program focuses on assisting students to develop their academic potential as well as assisting the students as they invest in their human capital. The program is a holistic approach to education committed to life-long learning and is no longer defined as an experiment.

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Bridging into Business Studies

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Abstract

This chapter considers the question of how to facilitate the transition into mainstream tertiary (i.e., postsecondary) education for underprepared students. The critical issue is how to assist students to navigate the intersection between their familiar discourses and the discourse of tertiary study. Preservation of the gender, culture, and class identity of nontraditional students and minimisation of the colonising effect underpin this discussion. The work of James Gee in the field of social literacies is proposed as a framework for guiding teaching practices in business studies. It is proposed that the outcomes of these teaching practices must be evaluated in a way that identifies grades and pass rates as well as the impacts on the maintenance of the diversity of students. It is suggested that the strong presence of diverse perspectives may act as productive challenges to existing thinking and hence act as catalysts for invention and innovation.

Bridging” or “developmental” education is concerned with assisting underprepared adults to access mainstream tertiary education (Payne & Lyman, 1996). Bridging Education is: (a) the institute-wide provision of programmes, courses, and strategies that address the issues of access to tertiary education; (b) the establishment of processes and systems to ensure that bridging students succeed; and (c) the monitoring of provisions, processes and systems to inform development (Anderson, 2001). Higbee (1996) reviews Chickering’s (1969; Chickering & Reisser, 1993) seven developmental tasks for college students: developing competence, managing emotions, developing autonomy, developing mature interpersonal relationships, establishing identity, developing purpose, and developing integrity. She sees the role of developmental educators as concerned not with remediation but with fostering the evolution of students. Smith and Commander (1997) note in their study of the lecture room behaviours of students that many did not understand the “culture of college” (p. 30). They lacked tacit or “official” knowledge of the academic environment (Apple, 1993).
Students who present for Bridging Education have generally failed at Secondary School or have not had the opportunity to reach the credentialing or certification stage of schooling. These students have formed the desire to participate in mainstream tertiary education. The difficult tasks of Bridging Education include making it possible for students to acquire the appropriate skill base, making it possible for students to build enough self-assurance to continue on to mainstream courses, and providing acceptable credentials so that students become viable applicants for the course of their choice. Perhaps most difficult is the task of resolving the problem of how to ensure students retain their individual class, culture, and gender links while accessing the power base of a different class, culture, or gender. Resistance to “Colonising” (Lankshear, 1998) is an expression that usefully describes this concern. The necessity to teach students how conform to the established norms of student behaviour in order to achieve passing grades may need to be balanced by a determination to preserve individual identity. For the student, this is an issue of acceptance in the new environment of study along side maintenance of acceptance in the family and community environment of home. For the institution, this is an issue of student performance as well as capturing value for the institution. A “conforming” student may be more manageable but a student with a strong sense of the value of difference may be a catalyst for thinking beyond the existing square for fellow students and for lecturers.

Foucault (1972) describes “the great, incessant and disorderly buzzing of discourse” (p. 18). He speaks against systems of constraint that in every society control this “dangerous mass of spoken things” (Eribon, 1993, p. 219). Constraint occurs in external forms of exclusion, delimitation within the discourse, and in the rituals of inclusion. Therefore, if we teach students to participate in the established discourse of academia, are we behaving on the side of constraint, reducing the incidence of disorder, failing to value what “disorder” can bring to the entrenched behaviours of the powerful? Or is change only possible from a position within a discourse environment (Foucault)?

Dealing positively with growing numbers in groups who have been traditionally excluded from economic and social power is a substantial challenge for educators. Implementation of the “deficit” model has maintained inequity and delayed the economic and social benefits of valuing diversity. Under the deficit model, assimilation prevails with all its attendant exclusions. Exclusion operates to confound individual attempts to alter the life chances available where a deficit model judges individuals against the values of the owners of the mainstream. Until the mainstream has diversity as its core feature, access will depend on balancing the acceptance of mainstream characteristics with retaining nontraditional cultures (Kalantzis & Cope, 1995).

The question, then, is how do we teach students in bridging courses to participate in this new discourse without stripping them of their uniqueness? The answer may be in seeing participation in a new discourse as a conscious act in which the established patterns of conduct are not only learnt but are also changed in the learning. The more diverse the participants the more change can take place.

The literature offers many strategies for teachers to use to approach this problem. Gee (1998), in a recent paper posted on the Internet, proposed the following in the light of “current work in
cognitive science and sociocultural literacy” (p. 15). His “necessary” elements for teaching and learning are adapted to the context of bridging into tertiary business studies.

1. A Low Affective Filter: Establish a classroom atmosphere that generates confidence and self-belief among the students so that there are no emotional barriers to accessing the new academic discourse. This process can be achieved by linking the experiences students have had with the new frame of business studies (e.g., the management of a household on a tight budget with the development of a business). It is also important to ensure that this lowering of the emotional barriers is not done to such an extent that students abandon their sense of difference. If the students become too emotionally comfortable they lose the sharpness of their understanding that there is a real conflict between their origins and the values of the institution, a conflict in which they can very easily be positioned as being patronised.

2. Situated Practice: Plan for authentic practise within the discourse, which in this case includes working with real rather than simplified texts, using lecturers who speak the language of business from their own participation in the discourse, and setting assignments that send the students out to visit businesses and talk to the people working in them. Alongside this, discussion about the similarities and differences between student values and experiences and the values of the business world is vital for students to develop their critical faculty.

3. Automaticity: The goal of practise is to reach a level where skills become automatic or unconscious. This process needs to be carefully managed and staged so that the difficulty level of initial tasks is set to link with students’ entry level knowledge and skills and progresses. Thus, base level skills such as familiarity with the jargon of business studies are established first to make it possible for students then to focus without distraction on higher level skills such as analysing systems or making predictions.

4. Functionality: The motivation to succeed in acquiring a discourse comes, in part, from seeing that one will eventually participate in that discourse. The functionality of learning to pass examinations in business studies as a route to becoming a successful participant in tertiary level business studies and eventually the world of business must be illustrated to students through case studies of their predecessors including visits and discussions.

5. Scaffolding: “Modelling, guidance and coaching” (Gee, 1998, p. 15) are essential to ensure that practice is not just practising errors. Scaffolding in the apprenticeship style in the field of academic business studies includes using lecturers who can draw attention to critical experiences, be models of the discourse themselves, and be able to link theory with practice. Hence, lecturers must be authentic participants in the discourse who carry out their role “automatically” and who can talk about their actual experiences.

6. Meta-awareness of what is already known: Especially for adult students who come to a new discourse later than is common, it is necessary to develop a useful vocabulary and set of understandings that will allow them to become consciously aware of the structures of their current discourses as a bridge to understanding a new discourse. This involves some analysis of situated examples of both discourses and needs to be seen as a task that highlights the
complexity of current discourses to avoid devaluing the discourses students bring with them. Identifying these and choosing those that have some attitudes and values similar to those in the business environment provides opportunity to make comparisons that will be positive and aid the induction process. Central to this process is the development of a language that will make it possible for students to participate in critical discussions fluently, without constantly struggling for terms of reference.

7. Critical Framing: Critical framing takes the process of comparing discourses in regards to their languages into social critique. Again, this is best carried out by establishing a vocabulary and set of understandings that will provide a framework for analysing the value systems within discourses. The most useful lesson for students at this point is to look at the failures in business and in education of students from minority groups and develop understandings of why this occurs. Then look at how their experience can be different, not from the standpoint of optimism and opportunity but from the standpoint of realistic potential for minute but incremental change in the positioning of marginalised groups. The history of the positioning of women and how this has changed provides a productive parallel.

8. Transformed Practice: To become the innovators and producers in a new discourse and thus be able to change that discourse, learners must transform their practise from superficial “colonised” behaviour into confident command, overlaid with a capacity to critique the new discourse. For those coming to business studies late and from a nontraditional background it is essential that their lecturers induct them into the politics as well as the practice of the discourse or else bridging education becomes nothing more than an exercise in cloning the already powerful and denigrating the discourses of those who are not (i.e., failing to contribute to the evolution of the discourse). Latecomers need: (a) As much mastery of the discourse as we can get (which is rarely the fluency of the privileged); (b) Mushfake (i.e., strategies to compensate for lack of fluency and to offset gatekeepers and guardians of the discourse); and (c) lots of meta-knowledge about how power and Discourses work in society (c can help lead to b) (Gee, personal communication, 1998).

There is a risk that application of these guidelines will be minimalised into positive relationships with lecturers, the use of participatory methods, and situated practice to the neglect of the key element, which is severe and accurate critique of the position of nontraditional students in study and employment where they are routinely underrepresented and in discourses where they are outsiders. There is a fine line between valuing diversity and patronising diversity. Two factors may mitigate against this effect: the use of case studies and the development of targeted evaluation. An example of a case study follows, and evaluation is discussed in the next section.

A Case Study Approach

Introduce the core principles, language, and practices of the relevant aspects of business studies to the class and then work on the following case: Choose a local area that has links with the student group and has potential for business development but is currently depressed. Visit
the area with the class. Have the class gather information about its business activities from observation, interviews, reports, and documents. Share the information gathered and critique it against the textbook material already studied. Design a development plan for the area as a shared class and group activity. Critique the plan with members of the community and lecturers. Assess the work using self, group, and lecturer techniques based on parameters agreed on prior to the exercise (Maich, 1999). This brief outline offers a beginning, the essential ingredient is the tone and intent of the related dialogue among students and lecturers working within the guidelines offered above.

This approach has the strength of offering ways of ensuring that bridging students have the opportunity and skills to analyse and critique their participation in their studies in relation to the world of their homes and communities and to the world of academia. However, the ultimate effectiveness of this approach and the collective strategy of bridging can only be gauged through evaluation processes that are as yet underdeveloped.

**Evaluation**

The task of inducting Bridging students into mainstream tertiary education is most frequently evaluated by considering pass rates and the rate of acceptance to subsequent courses or programmes. If we are to acknowledge that the task of bridging educators is also to ensure that our students can be participants in the new discourse but also be catalysts for change, diversity, and creativity, then we must be looking for ways to evaluate whether our students have been colonised or have become agents for change. Tracking students has the benefit of providing information about whether the programme has been successful in moving students towards their career goals, but does not provide information about the quality of their participation in the destination programme. Has the bridging programme contributed to diversity of participation or has the bridging programme just contributed to the numbers? This consideration has the capacity to drive a considerable research agenda as we search for ways to inform critique of the practice of bridging (Anderson, 2000). This research is urgent so that methods of teaching for bridging programmes along the lines described above can be fully evaluated. Studies that may contribute include: (a) longitudinal studies that trace the changes in students and in the educational environments in which they participate to test for a reciprocal effect; (b) assessments of students’ meta-knowledge and application of that knowledge; and (c) participatory studies tracing attitude and value changes in students. Each of these lines of research is aimed at finding ways to evaluate the success of bridging programmes not just as feeders but as pathways to informed participation.

In conclusion, bridging programmes provide staircases into colleges and universities. Success is essential if our tertiary institutions are to benefit from the capacity to effect change, which is one of the greatest values of nontraditional students entering the previously closed discourses of academia.
References


Success Breeds Success:
Jacksonville State University’s Learning Services

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Abstract

Since 1977, Learning Services, formerly the Center for Individualized Instruction, at Jacksonville State University has combined developmental studies and advanced skills building courses in the Department of Learning Skills with academic support services to encourage all students to develop their academic skills. All learning strategies and instructional procedures are empirically evaluated and revised on the basis of student learning and performance. Strategies and procedures are based on individualized instruction, including Direct Instruction and Precision Teaching. Students are tracked in subsequent courses to determine their success. The Learning Services model is easily transferable to other colleges and universities.

Learning Services, known as the Center for Individualized Instruction (CII) from 1977 through 1998, assists undergraduate and graduate students in developing competence in basic and advanced academic skills. Funded by a United States Office of Education Title III: Strengthening Developing Institutions Program Grant from 1977 to 1982, the former Center for Individualized Instruction, an academic support activity, was the only component of the multi-services grant that was continued by Jacksonville State University funding. Additional funding was provided from Title III between 1983 and 1988 as the Center developed persistence enhancing strategies. Exxon Education Foundation also assisted with funding from the mid-eighties forward. The CII was listed in the National Directory of Exemplary Programs in Developmental Education (Spann & Thompson, 1986) and cited as exemplary in its research efforts in Teach Your Children Well (Maloney, 1998). In 1998 Title III again provided five years of partial

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funding for Learning Services to develop seamless, comprehensive academic and personal support services for students from entrance through graduation.

Since its first courses and services were offered in January 1978, Learning Services has supported academics in a number of ways, serving over 40,000 students. As an open admissions institution until 1991 and a liberally selective one since, Jacksonville State University placed developmental studies under the Learning Services umbrella. Other services were specifically chosen to minimize any perceived stigma of needing academic support by student clients. An observer entering would be unable to tell the graduate student researching effective learning strategies from the freshman with poorly developed reading skills, from the graduating senior who did not pass the English Competency Exam required for graduation, or from the student worker hired for her software design skills.

Over the past five years total credit hours produced in Learning Services has averaged 5800 per year. Of these, 2900 credit hour equivalence was earned yearly for peer tutoring. Of the 2900 credit hours earned each year through Learning Skills courses, 1700 hours were classified as developmental studies.

Also from its beginning, Learning Services has relied on positive reinforcement and language in all its endeavors. Guidelines, instead of rules, are posted. Grades are based on repeated performance attempts without penalties, rather than mistakes. All errors are treated as learning opportunities. Students are encouraged by peers who have already succeeded on subsequent units or in subsequent courses. Reliance on student workers for daily implementation of its goals makes Learning Services a peer support activity.

Program Components

1. Department of Learning Skills: The Department offers developmental courses in basic skills of reading, writing, studying, critical thinking, and quantifying, as well as courses in more advanced skills of freshman adjustment and success, career exploration, multicultural appreciation, and job search. The Alabama Association for Developmental Education, an affiliate of the National Association for Developmental Education, awarded Learning Services the Outstanding Developmental Education Program in Alabama designation in Fall 2000, the first program ever awarded this recognition.

2. Tutoring in the General Studies Curriculum: Students may volunteer or be referred to work with an upper level undergraduate or graduate student tutor free of charge to develop their skills in required general studies courses. Other options include Cooperative Study Groups or Structured Study Sessions.

3. Experiencing Success in Education and Life (ExSEL): Students who lack confidence in their college readiness or who do not meet Jacksonville State University’s admission requirements may attend ExSEL, a six week summer intensive skills building program (McDade, 1993b). If ExSEL students are successful in reaching competence defined by the program or in attaining
sufficient ACT scores on retake, they may enter JSU conditionally. ExSEL was nationally recognized with a 1996 Retention Excellence Award from Noel-Levitz/USA Group.

4. English Competency Exam Remediation: Students must pass an English Competency Exam (ECE)—a 500 word essay with no more than three major grammatical errors—to graduate from Jacksonville State University. Those who do not master the exam must develop their writing competencies in Learning Services by mastering six out of nine essays using the English Department’s ECE standards.

5. Academic Support of Jacksonville State University Courses: Students may augment their classroom experience in selected courses with video or computerized modules available with expanded hours and user friendly software.

Unique Program Features

1. Individualized: All courses and services are individualized to meet the unique needs of each student. Many students with learning differences discover their most preferred learning styles and strategies through this individualization.

2. Competency-Based: In 1990 the former Center for Individualized Instruction took the bold step of requiring more than mastery—competency in each skill developed. Individual competencies are set at high levels, so that after a period of no practice, the student can still perform the skill proficiently.

3. Positive, Success Oriented: In every course or service, a diagnostic instrument evaluates the entering level of functioning of the individual student. A specific task is then practiced until mastery, so the student’s success is engineered. Once the student succeeds, more difficult tasks are practiced to mastery and later to competency. For students with negative educational experiences in their backgrounds, this positively designed experience leads to Learning Services’ motto: Success breeds success. Students who have taken LS courses often teach other students how to use the proven learning tools for any discipline.

Instructional Delivery Systems

1. Personalized System of Instruction (PSI): Developed by Fred Keller (1968), the Personalized System of Instruction requires students to master small units of material at some criterion determined by the instructor before they are allowed to progress to more complex material. By emphasizing performing the skill, rather than just hearing about it, PSI requires students to work problems, practice sheets, computer modules, or other curriculum materials to mastery. Pacing is individualized, so students progress quickly through units they can correctly perform and take longer to develop skills they do not bring with them.

2. Precision Teaching (PT): Pioneered by Ogden Lindsley (1972, 1991) and developed by Claudia McDade (1989b) and others (McDade & Olander, 1986, 1987), Precision Teaching requires students to reach high levels of fluent and accurate performance, which they monitor
multiple times per week on a Change Chart. This graphic feedback allows students and their learning services’ staff or faculty to make necessary interventions to enhance performance. True mastery is reached when students can maintain high levels of proficient accuracy over time without practice and can apply the resulting skills in new ways (McDade, 1993a).

3. Direct Instruction (DI): Designed by Siegfried Engelmann and Doug Carnine (1982), Direct Instruction systematically analyzes composite skills into their prerequisite and component skills and presents them to the learner in carefully sequenced units. These are presented in short sessions (i.e., no more than 10-15 minutes) allowing for ample practice opportunities. DI relies on establishing critical discriminations, individualized correction procedures, sequential pacing, and cumulative review.

4. Computer-Based Precision Learning Systemª (CBPL): Combining the individualized procedures described above, the Computer-Based Precision Learning System presents carefully sequenced modules to students whose performance is precisely timed as they develop skills in any discipline (McDade, Brown, & Goggans, 1993; McDade & Goggans, 1993). As course authoring software, the CBPL allows any instructor to choose mastery criteria, practice formats, test formats, and feedback conditions. Large, randomized item pools are developed to allow repeated use without penalty until competency is reached and maintained.

Research: A Human Operant Laboratory

From its inception, Learning Services has been empirically based with over 35 individual research studies assessing motivational strategies, learning strategies, and computer-assisted instructional strategies (McDade & Goggans, 1993).

1. Motivational Strategies: To encourage students to work daily on developing their best performances on both in-class and out-of-class assignments, 3 to 10 performances are recorded each day on a Change Chart (technically known as the Standard Celeration Chart). Students may also record the number of individual performance sessions per day or the number of minutes studied (Pennypacker, Koenig, & Lindsley, 1972). Either fluency aims or celeration aims motivate students to reach high performance levels (Haughton, 1972). Typical fluency aims for mathematical “tool skills” (i.e., prerequisite for proficiency in computation) originally developed

<table>
<thead>
<tr>
<th>Channels</th>
<th>Fluency Aims</th>
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<tr>
<td>SEE &lt;, &gt; / SAY “less than,” “greater than”</td>
<td>100-120 correct signs per minute</td>
</tr>
<tr>
<td>HEAR “less than,” “greater than” / WRITE &lt;, &gt;</td>
<td>130-150 correct signs per minute</td>
</tr>
<tr>
<td>SEE 3-number equation / WRITE isolate unknown</td>
<td>130-150 correct numbers, letters, signs/minute</td>
</tr>
<tr>
<td>SEE 3-number equation / WRITE solution of</td>
<td>130-150 correct numbers, letters, signs/minute</td>
</tr>
</tbody>
</table>
at Morningside Academy, Seattle, WA (Johnson, 1992) have been modified within Learning Services. Table 1 presents examples of these.

For vocabulary items a typical fluency aim is SEE definition and then SAY term at 40 to 50 corrects per minute. For multiple-choice items on a computerized module, a typical fluency aim is SEE question and alternative and then CLICK correct alternative at 20 corrects per minute.

Celeration aims require students to improve their performance by at least doubling their fluencies each week (McGreevy, 1983). Greater than doubling improvement is usually rewarded with early completion of the course. All students can easily see their progress on the Change Chart, their living report card, to modify their pacing to complete the skills required for course completion. Performance projections can show students how long they will take to finish if they speed up or stay constant. An example of a Change Chart of a student’s progress in reading is shown in Figure 1.

Learning Services’ celeration aims of x2 improvement per week encourage technical reading students to improve their reading rates to a terminal fluency of 500 words read silently per minute in five to six weeks (McDade, Rubenstein, & Olander, 1983). Celeration aims are also very useful for students with disabilities who may not be able to perform a task at the same rate as others. For example, a student with cerebral palsy who can only say 20 words per minute cannot be expected to SEE definition and then SAY term at 40 correct per minute, but could be encouraged to improve with a celeration aim of doubling his or her performance each week.
2. Learning Strategies: The most effective learning strategy demonstrated for over 23 years in Learning Services is practicing an accurate performance until fluency is reached. Fluency is the rate of correct performance necessary for a skill to remain proficient after a significant period of no practice. Typing or riding a bicycle are familiar examples of fluent behaviors that once attained are not forgotten. Fluency aims in Learning Services might appear exceedingly high, beyond performance levels normally expected, but time without practice reduces these rates of performance to easy remembrance. How high is high enough for a given skill is an empirical question that must be addressed for each skill. For example, studies at the University of Washington (White & Haring, 1983) have demonstrated that reading fluency for success with college level textbooks requires 500 words per minute read silently and 250 words per minute read orally.

3. Learning Channels: Precision Teaching has demonstrated that learning is very specific for a given task and does not generalize automatically. HEAR word and then SPELL ALOUD is not the same task as HEAR word and then WRITE word (Lindsley, 1972, 1991, 1998). To ensure that students can perform a task in multiple learning channels, LS instructors present multiple channel learning opportunities, mixing inflows and outflows. Examples of learning channels are presented in Table 2.

4. Computer-Assisted Instructional Strategies: Fluency aims are met by students regardless of whether they practice with computerized modules or with other forms of instructional delivery (McDade, Brown, & Olander, 1988). Fluency is the aim, so cheating is virtually eliminated from computer assisted testing. One simply does not have time to consult crib sheets or peers for answers. Fluency aims with no penalty for repeated testing until mastery is reached also encourage students to complete units quickly, freeing computers for other students’ use.

5. Curriculum Materials: A number of texts and software packages have been developed within Learning Services and are being implemented at other sites as well. Write Away, Too!
(Brown, 1999) is a self-contained, self-paced writing manual to produce grammatically correct writing skills. *Exploring Correct English* (Brown, 2000) is a shorter text, focusing on essay structure, detail, and the seven deadly errors in writing English correctly. Sequenced fluency building practice in basic mathematics skills is provided by MathTimed (Beckett, 2000). LearnSoft (Camp, 2000) also presents fluency building exercises, adaptable to any discipline. These are currently being adapted for Blackboard presentation over the Internet. By Fall 2002, students throughout the world can access these programs to develop and practice fluent writing and composition skills.

**Outcomes Assessment**

1. Satisfaction Measures: Student ratings of Learning Services courses and services are the highest on the Jacksonville State University campus. Student assistants within Learning Services receive thorough training in instructional delivery and comprehensive experience with varieties of students and learning styles, including significant numbers of students with learning disabilities and physical challenges. Student staff members typically leave with strong letters of recommendation from their contributions.

2. Tracking of ExSEL Students: Since Experiencing Success in Education and Life (ExSEL) began, classes have been compared with the entering cohort of first time freshmen from Fall, 1993. Persistence, end of freshman year grade point averages (GPA,) and overall GPA are higher for ExSEL students than the 1993 entering cohort. Of ExSEL students, 56% are currently enrolled with a mean GPA of 2.3 (out of 4.0), while 18% have already graduated. Among minority (i.e., students of color) ExSEL completers, 68% are currently enrolled with a mean GPA of 2.3.

3. Retention of Skills Over Time: Both psychology and nursing majors who developed skills in Learning Services courses (i.e., personality theories and pathophysiology, respectively) have been re-evaluated for their accuracy and fluency levels between one semester and two years after course completion. These retention evaluations indicate highly accurate and fluent student performance with fairly tight ranges, confirming that fluency results in long term remembering (McDade, 1998; Olander, Collins, McArthur, Watts, & McDade, 1986).

4. Curriculum Leaps: Students who develop fluency on rudimentary skills can often perform higher level skills without specific instruction on them (Johnson & Layng, 1992). These curriculum leaps have been demonstrated in developmental writing and quantification courses, as well as a psychology course. For example, students who were unable to write grammatically correct sentences are able to compose three paragraphs with no grammatical errors after instruction on usage and mechanics, but no instruction on rhetoric. Developmental quantification students learn to solve word problems without direct instruction, but with fluency building of computational skills. Psychology students are able to classify personality theorists and their concepts into the major orientations of psychology after developing fluency on the theories (McDade, 1998).
5. English Competency Exam Results: During the 1999-2000 academic year, 84% of students who remediated for the ECE in Learning Services passed the test on their next attempt. Over half of these students were English as a Second Language students who could barely write a simple, grammatically correct sentence when they began remediation.

Table 3.
Persistence at Jacksonville State University for 2nd and 3rd Fall Semesters, 1985—2000

<table>
<thead>
<tr>
<th>Cohort</th>
<th>Enrolled for 2nd Fall</th>
<th>Enrolled for 3rd Fall</th>
</tr>
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<tbody>
<tr>
<td>1985</td>
<td>49.70%</td>
<td>37.00%</td>
</tr>
<tr>
<td>1995</td>
<td>67.60%</td>
<td>51.30%</td>
</tr>
<tr>
<td>2000</td>
<td>68.80%</td>
<td>52.60%</td>
</tr>
</tbody>
</table>

6. Grades in Subsequent Courses: Tracking of students earning a C or better in developmental writing and quantifying courses within Learning Services indicates that 89% earn at least a C in the next composition class and 73% in the next mathematics class.

7. Cost Effectiveness: Learning Services accomplishes its mission for less than $72 per credit hour. Most of its employees are students with two adjunct instructors, three full-time instructors, and a two-thirds-time director.

8. Retention of Students within the Jacksonville State University: Persistence of students within Jacksonville State University has improved over the past 15 years, as Table 3 indicates. These improvements are due to many enrollment management strategies, including Learning Service activities, at Jacksonville State University. Tracking of freshman success course completers indicates that these students earn higher GPAs, are more likely to persist, and show greater satisfaction with JSU than students who do not take the course.

Application of Learning Services Model to Other Institutions

At least three factors contribute to the success of Learning Services that can be applied to other institutions: (a) assisting students in developing competence, (b) mentoring and networking, and (c) developing self-confidence through constant, positive reinforcement for successful learning behaviors. True mastery of a skill requires accuracy plus fluency plus endurance plus application (Johnson & Layng, 1992; McDade, Brown, & Goggans, 1993). Learning Services requires true mastery before a student is certified as skilled. Combinations of its instructional delivery systems using a mixture of learning channels adjusted to fit the unique needs and skills levels of each individual student provide genuine, effective individualized instruction.
Every student within Learning Services receives individual attention and mentoring from faculty, staff, and student assistants. Emphasis is on development of the whole person with follow-up and tracking of student progress after leaving the Services. Many students continue to use Learning Services for academic advisement throughout their Jacksonville State University careers. Group assignments and reinforced multicultural mixing foster teamwork and cooperative learning in classes and services, so students develop networks for success. Learning Services study and learning techniques trickle down to other students. For example, residence hall students often teach others in their lounges to study by Learning Services techniques. Student assistants in ExSEL have gone on to use LS techniques in their teaching careers. Two current JSU English Department faculty began as LS student assistants and continue to use these techniques in their classrooms.

Self-confidence is the natural by-product of all Learning Services activities. Students with developmental and learning disabilities often experience academic success for the first time in their lives. Student assistants develop their content and pedagogical skills, as well as their social and management skills. Learning Services students learn firsthand that success breeds success.

References


McDade, C.E., & Olander, C.P. (1986). *Where has all the learning gone?* Invited address at the First National Conference of Exemplary Programs in Developmental Education, Atlanta, GA.


Abstract

This study compared the effects of Internet use on outcomes for college students enrolled in Intermediate Algebra. In the first phase of the project the course included assignments requiring Internet use. In the second phase of the project the course was offered online. Data analyses revealed no significant differences in mathematics achievement, faculty-student interaction, or student interest between students in the computer-enhanced class and other students. Faculty-student interaction measured by seven principles (Chickering & Gamson, 1987) items was significantly higher for students in the web-enhanced class. Mathematics achievement for students in the online class was not significantly different than that of their peers. There were no significant differences in student evaluations measuring faculty-student interaction or student interest. Of the students in the online class, 54% completed the course compared to 67% for the comparison class.
2001). James Stukel, President of the University of Illinois, noted in a letter to his faculty (University of Illinois, 1999) his notion that the Internet would rank as the third major revolution in modern higher education following the land-grant movement of the 19th century and the rise of the community college in the early 20th century. The race to launch online courses and degree programs is fueled by pressure from aggressive governing boards, college administrators, corporate donors, and mass media that glamorize the Internet and its attendant technologies. Gilbert (2001) predicted that the pace at which higher education adopts these new technologies is not likely to slow in the near future.

When developmental studies practitioners design web-based instruction, it is important to incorporate the specific needs of their clientele and to gather data, both qualitative and quantitative, on a variety of outcomes. This chapter discusses five years of ongoing classroom research designed to infuse Internet technology into the developmental mathematics curriculum and then offers suggestions for creating online versions of developmental mathematics courses. This information will assist policy makers and practitioners in developmental mathematics as they make decisions about the role online instruction will play in developmental education's future.

**Description of the Project**

Fifteen years ago, Chickering and Gamson (1987) distilled decades of research about the academic experiences of college undergraduates and delineated seven principles effective undergraduate programs should strive to promote. They listed contact between faculty and students, student cooperation, active learning, prompt feedback, time on task, high expectations, and respect for diversity as the essential ingredients for promoting excellence in a variety of outcomes of the collegiate experience. The seven principle philosophy has stood the test of time and is still appropriate for planning curricula in the new millennium. In fact, Chickering and Erhman (1997) suggested strategies for incorporating computer technology into the seven principles framework. Armed with funds from a small technology grant, the author designed a pilot section of intermediate algebra built on the seven-principle framework and structured with required computer activities designed to increase student involvement.

**Phase One**

The first phase of the project involved intermediate algebra students at a Southern urban university during the fall 1997 semester. Students at this university who present college entrance examination scores below a designated cutoff point are required to take a battery of placement tests that place them into college level mathematics or into one of three levels of developmental mathematics courses: basic mathematics, elementary algebra, or intermediate algebra. The study population consisted of 57 students who either placed into intermediate algebra on the basis of their placement test scores or completed the prerequisite course in the developmental mathematics sequence. One course section, the web-enhanced class, consisted of 28 students. The comparison section, taught by the same instructor at a different time, enrolled 29 students.
Students in both sections were predominantly traditional age. Of the students in the web-enhanced class, 60% reported their age as less than 23, and 64% of students in the comparison section were younger than 23 at the beginning of the semester. Males comprised roughly one-fourth of the students in each class section, and about one-third of the students in each section represented ethnic minorities, primarily African American. At the beginning of the semester, most of the students were not eager computer consumers. Half the students in each class reported that they generally used a computer two hours or less each week. The features of the web-enhanced class included e-mail correspondence to the instructor, assignments using algebra drill and practice software installed on the campus network, and Internet searches for sites related to intermediate algebra. Students completed four e-mail assignments designed to stimulate student-faculty interaction. They detailed their mathematical backgrounds and attitudes; assessed their progress and made a study plan for correcting their mistakes; made suggestions about course activities or strategies they believed the instructor should start, stop, or continue; and critiqued algebra web sites using a rubric the class created. Students completed five weekly quizzes on assigned topics using the drill and practice software that accompanied their textbook. The software provided immediate feedback to the students by letting them know at the end of the computer session which problems they had answered correctly. A private newsgroup afforded opportunities for students to collaborate by reading and responding to postings about algebra problems and questions throughout the semester. Students in the web-enhanced class spent portions of four class sessions in a computer lab setting up accounts, navigating the campus local area network, acquainting themselves with e-mail and newsgroups, and learning basic Internet search strategies.

The students in the comparison section completed neither computer training nor web-enhanced assignments. During the three hour per week class meetings, the instructor presented course material to each section in a traditional lecture-discussion format; occasionally she paused during a lecture to ask students to work problems like those she had modeled. Students in both sections completed four identical paper and pencil tests and a comprehensive final examination. Outcomes for both classes were assessed using three criteria: a teacher-constructed comprehensive final examination, the Seven Principles for Good Practice in Undergraduate Education (Seven Principles Resource Center, 1990), and university-wide student evaluations.

Phase Two

Launching one online section of intermediate algebra during the spring 2000 semester marked the second phase of the ongoing project. The university's printed class schedule promoted the class as “mostly online,” and the course was open to any student who had either placed into the course on the basis of the required placement test or successfully completed the prerequisite elementary algebra course. Flyers describing the course were distributed to students prior to the registration period. Course requirements designed to incorporate Chickering’s and Gamson’s “Seven Principles for Good Practice in Undergraduate Education” (1987) included weekly quizzes to be completed online, postings to a discussion board, participation in a chat
room, and completion of three paper-and-pencil unit tests and a comprehensive final examination. The weekly assessments provided students an active learning experience and provided prompt feedback. Discussion board and chat room activities afforded opportunities for cooperation among students and with the faculty member. Student resources for the course included a commercial textbook, CD-ROM tutorial, and videotapes of ten major concepts covered in the intermediate algebra curriculum. These materials were bundled together for sale to students in the campus bookstore. Other resources included materials the instructor placed on the course web page she had prepared using a commercial web course platform.

Twenty-six students initially enrolled in the online section of intermediate algebra, and 27 enrolled in a traditional lecture-discussion section taught by the same instructor and chosen as a comparison class for the project. The demographics displayed by these two classes were similar to the student characteristics reported for the fall 1997 classes. None of the students enrolled in the online class had ever taken an online or distance education class before, and all were concurrently enrolled in at least one other on-campus course at the university. On a survey online students completed at the beginning of the semester, one-fourth of the students reported choosing the class because they knew they would not have to attend class on campus on a regular basis, and 15% chose the class because it was something they had not done before. More than 10% reported that, in spite of the instructor’s campaign to publicize the online nature of this course section, they did not know it was an online class when they registered.

During the first two class meetings, conducted in a computer training laboratory, students introduced themselves, examined the course syllabus and other documents that were posted on the course web site, practiced online quizzes, scrutinized the CD-ROM tutorial, posted comments to the discussion board, and participated in the chat room. After those two initial meetings, students studied on their own and completed weekly assignments and quizzes. The weekly assignments were designed to encourage students to use the array of resource materials available to them. For example, one assignment required students to watch a videotape and answer questions about the concepts it explained. Another assignment requested students to explore a topic using the CD-ROM tutorial. Contact with the instructor was available via e-mail, telephone, scheduled office hours on campus, and “virtual office hours” in the chat room. Four times during the semester, students met in a classroom to take paper-and-pencil tests and the teacher-constructed, comprehensive final examination. Test reviews were conducted on the discussion board, and an optional on-campus review was held prior to each scheduled test.

Students in the comparison section of intermediate algebra completed no computer activities and received no computer instruction in class. Their textbook and a set of videotapes housed in the reserve area of the campus library constituted their resources. During their scheduled class time, the students listened to lectures interlaced with opportunities for practice, participated in several collaborative algebra activities, and completed a total of 13 graded quizzes and assignments. They also took paper-and-pencil unit tests and the same teacher-constructed comprehensive final examination that assessed the learning of students in the online class.
In addition to the final examination scores, the outcome assessments included student evaluations of the course using the university student instructional rating system instrument, course completion rates, and a final survey administered to the online students.

Results

Phase One

Intermediate algebra final examination. Mean scores of outcome measures for the students who participated in phase one of the project during the fall 1997 semester are presented in Table 1. One-way analysis of variance (ANOVA) employed scores on the placement test as a covariate to control for prior learning of course skills and concepts. The final examination score was the dependent variable, and treatment was the absence or presence of web-enhancements to the course. With an alpha level of .05, the main effect of the treatment was not statistically significant, \( F(1, 43) = 0.214, p = 0.646 \). Therefore, one may not attribute the difference in final examination mean scores for the two groups to either the students’ entering knowledge of algebra or the instructor’s method of teaching.

<table>
<thead>
<tr>
<th>Outcome Measure</th>
<th>Web-class</th>
<th>Comparison</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Examination</td>
<td>58.8</td>
<td>11.43</td>
</tr>
<tr>
<td>Student-Faculty Interaction</td>
<td>1.58</td>
<td>0.62</td>
</tr>
<tr>
<td>Student Interest</td>
<td>1.67</td>
<td>0.68</td>
</tr>
<tr>
<td>Seven Principles: Faculty-Student Interaction</td>
<td>20.46</td>
<td>4.89</td>
</tr>
<tr>
<td>Seven Principles: Student Cooperation</td>
<td>19.18</td>
<td>4.09</td>
</tr>
<tr>
<td>Seven Principles: Active Engagement</td>
<td>17.18</td>
<td>3.06</td>
</tr>
<tr>
<td>Seven Principles: Prompt Feedback</td>
<td>19.64</td>
<td>4.7</td>
</tr>
<tr>
<td>Seven Principles: Time on Task</td>
<td>12.73</td>
<td>3.04</td>
</tr>
<tr>
<td>Seven Principles: Respects Diversity</td>
<td>12.72</td>
<td>3.41</td>
</tr>
</tbody>
</table>

Seven principles inventory. The Seven Principles for Good Practice in Undergraduate Education Student Inventory (Seven Principles Resource Center, 1990), developed to assess student
engagement in higher education, is based on the “Seven Principles for Good Practice in Undergraduate Education” (Chickering & Gamson, 1987). Students in both the web-enhanced class and the comparison class completed the survey by responding “very often,” “often,” “occasionally,” or “rarely” to a series 49 statements about their college courses and activities. The items in the assessment are arranged in seven psychometric categories or factors aligned with the seven principles. Scores for each of the seven categories are determined by summing student responses to each of the items for that category. Because of the way choices are coded in the instrument, lower scores translate into higher levels of engagement. The seven outcomes are all designed to measure various aspects of the student involvement construct, so the means were analyzed using multivariate analysis of variance (MANOVA). Multivariate analysis compensates for the inflated error rate that can result from using seven separate analyses of variance. With an alpha level of .05, the multivariate test of significance revealed that the difference in at least one of the pairs of means could be attributed to the method of instruction (Wilks’ = 0.603, p = .046). Follow-up analyses of variance with alpha set at .05 showed that of the seven pairs of means, only the means for the student-faculty contact category were significantly different for the computer-enhanced class and the comparison class, F(1, 33) = 5.027, p = .032. Students in the web-enhanced class reported higher levels of contact with the instructor than their counterparts in the traditional class.

Student evaluations. Students completed evaluations of the course using an assessment employed in courses campus-wide. To each of a series of statements, students responded “strongly agree,” “agree,” “have no opinion,” “disagree,” or “strongly disagree.” The items factor into five constructs: instructor involvement, student interest, student-instructor interaction, course demands, and course organization. Because of the coding of student responses, lower scores represent greater student satisfaction with a course. Students completed the checklist anonymously, and it was machine scored; results were returned to faculty members after the semester concluded. The two factors of interest for this investigation were student-faculty interaction and student interest. When compared using t-tests, the means for student-faculty interaction, t(37) = -0.200, p > .05, and student interest, t(37) = -0.338, p > .05, were not significantly different.

Phase Two

Intermediate algebra final examination scores. Table 2 displays mean scores of outcome measures collected for the online class and the comparison class during the spring 2000 semester. With alpha set at .05, ANOVA revealed that the final examination grades were not significantly different for the online class and the comparison class, F(1, 31) = 0.012, p = 0.913.

Student evaluations. The means for student interest and faculty student interaction for the online class and the comparison class were compared using t-tests. The results, t(27) = 0.574, p > .05 and t(27) = -0.005, p > .05, respectively, showed no statistically significant differences in the student evaluations for the two classes.
Course completion. Students were considered course-completers, for this investigation, if they attended throughout the semester and sat for the final examination. Of the original 26 students, 14 sat for the final examination in the online class. Six officially dropped the course, and the remaining six stopped taking quizzes or completing assignments and on-campus tests. For the comparison class, 18 students reported for the final examination. Of the nine who did not complete the comparison course, one withdrew through official channels, and the rest stopped attending class. Of the online students, 54% completed the course compared to 67% of the students in the comparison class.

Final survey. Over half the students (54%) who completed the final survey for the online course believed that they would not have made the same grade if they had taken the course in a traditional lecture format. Most students wrote that they thought they would have made a better grade in the course if they had enrolled in a traditional lecture-discussion section of the course. Of the online students, 64% reported that they believed their paper and pencil test grades revealed what they actually knew about algebra, but only 46% believed that their weekly online quiz grades reflected what they actually knew about algebra.

Conclusions

Phase One

Results of the analyses of the data collected in this project showed reliable differences in only one of the outcomes measured. Algebra achievement was neither significantly compromised nor enhanced by the introduction of computer assignments. And, on the university course evaluation, students in the two courses did not rate their interest in the courses or their interactions with the faculty member differently. However, students in the web-enhanced class did report significantly higher levels of interaction with their instructor in response to items in the Seven Principles for Good Practice in Undergraduate Education Student Inventory (Seven Principles Resource Center, 1990).

<table>
<thead>
<tr>
<th>Outcome Measure</th>
<th>Online M</th>
<th>SD</th>
<th>n</th>
<th>Comparison M</th>
<th>SD</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Examination</td>
<td>61.29</td>
<td>10.48</td>
<td>14</td>
<td>60.78</td>
<td>14.65</td>
<td>18</td>
</tr>
<tr>
<td>Student-Faculty Interaction</td>
<td>1.61</td>
<td>0.75</td>
<td>11</td>
<td>1.64</td>
<td>0.56</td>
<td>18</td>
</tr>
<tr>
<td>Student Interest</td>
<td>2</td>
<td>0.58</td>
<td>11</td>
<td>1.86</td>
<td>0.67</td>
<td>18</td>
</tr>
</tbody>
</table>
Phase Two

The lack of a statistically significant difference in algebra achievement for online and comparison group students repeats the results of the web-enhanced experiment from 1997 and affirms results reported by Weems (2001), who compared elementary algebra test grades for online and lecture classes. More than half the students in this study who enrolled in the online course completed it, but a greater percentage completed the comparison course. The rate of completion is cause for concern. However, a report on distance learning conducted by the World Bank revealed that distance students are much more likely to drop out before completing a course, with dropouts ranging from 19% to 90% and an average rate of 40% (Cox, 1999).

Discussion

The results of data analyses presented in the two phases of this research reveal that use of Internet resources had no effect on algebra achievement as measured by a final examination or on student-faculty interaction measured by a university instrument. More than 355 studies examined by Russell (1999) did not uncover significant differences in measures of achievement for distance learners.

One must use caution in generalizing the results of this investigation to the entire population of developmental mathematics students for several reasons. First, although care was taken to control extraneous variables, the study did not randomly select participants and randomly assign them to treatments. Phipps and Merisotis (1999) cited failure to control for spurious results as one of the weaknesses of outcome research for distance education. Due to the nature of distance education and the students who choose such courses, controlling for research design flaws remains problematic. Second, the sample sizes were small, in the neighborhood of 30, and were reduced by students who either withdrew or failed to complete the course. Because many policy makers currently restrict enrollment in online courses to less than 30, randomly selecting large samples of students is not feasible.

Apparently all online courses are not created equal. A significant factor in assessing the effectiveness of online courses for students, particularly if the students are developmental learners, is the lack of a commonly agreed upon definition for an online class. Much of what is currently promoted as online education entails no more than placing a course syllabus on a web page. Cummings, Bonk and Jacobs (2000) evaluated the content of all the syllabi for the courses housed in the World Lecture Hall and found most of the courses to be unidirectional; they did not allow for any communication among students and faculty members. When an online developmental algebra course consists of a posted series of assignments and online quizzes with no accommodations for communication or collaboration with faculty and peers, it is the equivalent of an electronic correspondence course, not a vehicle for eliciting positive changes in mathematics performance and study behavior. Bonk, Cummings, Hara, Fischler, and Lee (1999) theorized that student participation and interaction are the keys to success for students in online courses.
Suggestions for Creating an Online Developmental Mathematics Course

When developmental educators offer an online mathematics course, marketing and screening are critical components for a successful online experience. Most of the 200 distance education practitioners surveyed by the American Federation of Teachers (2000) rated themselves as successful when teaching online when they have, among other variables, “mature, highly motivated students with appropriate equipment and training” (p. 6). Boylan’s (1999) discussion of the characteristics of developmental learners omits any reference to high levels of maturity and motivation. Prospective online math students should be advised of the requirements for the course and the amount of time that may be required. Instructors might offer prospective students a list of characteristics of successful online algebra students and let them decide whether an online course is the best choice for them at that point in time. Additional suggestions include the following:

1. Plan a strategy for developing an online course. Choose a theoretical framework upon which to build the course. The “Seven Principles for Good Practice in Undergraduate Education” (Chickering & Gamson, 1987) are a good general starting point, or one might select a cognitive based strategy for high-risk college students (Stahl, Simpson, & Hayes, 1992). Determine which teaching and learning strategies work well for developmental learners in mathematics courses, and adapt them for Internet use. Bonk et al. (1999) offered a continuum of ten categories of online instruction. Co-authors Caverly and MacDonald (1999a, 1999b; MacDonald & Caverly, 2000) suggested three phases for incorporating technology into developmental curricula.

2. Weave faculty-student interaction into the fabric of the course. Perhaps the most salient finding of this research is that students who communicated with their instructor outside of class primarily using electronic media in phase one of the project reported significantly more student-faculty interaction than students in a comparison class who interacted only face-to-face with the instructor three hours weekly. In the online class discussed here, weekly assignments required students to use the discussion board and chat room. It is important not to just make resources for communication available for students but to instruct students in how to use the technology and then to require the use of the technology on a frequent basis. Student-faculty interaction means, measured by one factor in the Seven Principles for Good Practice in Undergraduate Education Student Inventory (Seven Principles Resource Center, 1990) were significantly different for the two classes in the 1997 investigation reported here. Examination of responses to individual survey items suggests that students who completed the web-enhanced course developed affective skills to a greater degree than the students in the comparison class. One item in the Seven Principles Inventory invited students to report how often they discussed their learning with their instructor. More than 44% of the students in the comparison class reported that they rarely or never had such discussions, but fewer than 30% of the students in the web-enhanced class reported the same result. When the instructor required students in the web-enhanced class to complete a test assessment and submit a study plan in the form of an e-mail letter, she may have opened the door to other interactions, both face-to-face and online, with students about their progress.
Providing discussion boards and a chat room is not sufficient; faculty must require students to use these communication tools frequently.

3. Compensate for the special challenges online mathematics presents. When students in an online developmental composition course send an e-mail message to their instructor for clarification of a point the instructor has made on a draft of a paper, they practice the skills and concepts the course attempts to improve. When students communicate online with their developmental algebra instructor, they do not have symbols on their computer keyboard to transmit exponents, radicals, or complex fractions. One alternative is to teach students to use the same symbols they use when they input expressions into a graphing calculator. Investigate the ways mathematics software developments can assist students in Internet courses (MacDonald & Caverly, 1999).

4. Foster transformation of students in an online mathematics course. Brothen (1998) noted that the best way for technology to have a transformational role in developmental education is for it to be effective in transforming students. Students at risk for failure in college-level mathematics lack well-developed skills and concepts and have other characteristics, such as underdeveloped study behaviors, that can impede success in higher education. The agenda for developmental education proposed by Stahl, Simpson, and Hayes (1992) urged practitioners to assist students to become autonomous, self-regulated, and independent learners.

5. Consider making a developmental mathematics course partially online. Because algebra skills are cumulative, students who exercise poor study habits may fall behind quickly. Those who do not master factoring, for example, will be lost when they have to simplify or perform operations with rational expressions. Weems (2001) researched online instruction for elementary algebra students and suggested that some combination of online and onsite instructional strategies might serve developmental students better, especially with difficult topics such as factorization of polynomials.

The challenge of using technology appropriately in higher education, whether the subject matter is composition, algebra, or psychology, requires a new kind of learning for faculty, the “deep learning” (p. 22) described by Gilbert (2001). Gilbert suggested that in the constantly evolving milieu of technology, faculty need support from a variety of sources to determine appropriate models of instruction and to practice using new intellectual tools. For faculty whose students are developmental learners, the challenge extends beyond appropriate uses of emerging technology; it requires knowing enough about at-risk students to determine the appropriate use of technology. Most developmental mathematics students do not possess the motivation and study behaviors required to be successful in a totally online algebra class, but they can benefit from communicating with their instructor electronically. Owston (1997) observed that neither the Internet nor any other instructional medium by itself is likely to improve learning in a significant way. It is the job of developmental education policy makers and practitioners to choose appropriate technology, time its use to the needs of the students, and provide for communication and feedback to assist in the transformation of their students into lifelong learners.
References


Making Progress: Implementing Innovative Pedagogy in a College Literacy Program

Barbara Green
Hofstra University

Abstract

Instructors in a community college were concerned about the repetitive nature of the noncredit reading courses that were offered in their department. Although students were exposed to more difficult texts as they completed the sequence of courses, each one focused on similar reading, study, and vocabulary skills. When instructors were introduced to a reading workshop approach in which students read books of their choice and write literary letters in response to them, they decided to pilot it in some sections of their courses. This study examines the department’s process of implementing this innovative change over the course of six semesters.

College reading teachers are under pressure to get their students “prepared” to handle college coursework. Teachers sincerely want to help their students master the academic literacy skills they will need to handle all the reading they will face in college. Many of us recognize that our students are running out of time and we often wonder, as Malinowski (1988) states, “How can I accomplish in fifteen weeks what has not been accomplished in 12 years of education or in the student’s lifetime” (p. 23). The traditional textbook-based approach reflects the conviction that skills can be taught. On the other hand, I strongly believe we have to address the fact that for our students, this has not been accomplished in 12 years of education and that we need another approach. I am convinced, as others have written, that we become skilled readers by having many meaningful transactions with text (Bartholomae & Petrosky, 1986; Henry, 1995).

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As a new doctoral student in the fall of 1995, I worked as an adjunct instructor at the university teaching a reading course to freshman students. Although I felt somewhat satisfied with the accomplishments that my students made during one semester, I had serious concerns about my strategy-based reading course. I questioned if it made my students better readers and helped them with their other studies. I suspected that they used few, if any, of the skills or strategies I taught them in their other academic pursuits and realized that for many of them, reading was not a significant part of their lives. For those students, practicing academic literacy skills and reading essays from their anthology was not enough.

Frank Smith (1988) discusses the “literacy club” and how young children learn to read and write by actually reading and writing. He writes that we learn about how the world uses language through demonstrations—we observe literacy in our homes, communities, and schools. He stresses the importance of having meaningful, positive demonstrations of literacy in school—particularly for students who may not have had many literacy experiences outside of school.

For children who are not interested in reading and writing, it is even more important that activities in the classroom are made interesting and accessible for them. They need more demonstrations that there are worthwhile uses of literacy, and more collaboration in engaging in those uses themselves. (p. 215)

I believed that my college students needed to become members of the “literacy club” and to experience reading as part of their daily lives, not just something that they had to do for school.

By the spring of 1996, I was considering changes that I would implement in the fall semester. I had decided that I would incorporate some elements of leisure reading in my curriculum in addition to the textbook that all of the teachers used for this particular college reading course. It was then that I met Jeanne Henry and learned about how she had adapted reading workshop (Atwell, 1987) for her developmental college students. During the summer of 1996, I read Jeanne’s book: If Not Now: Developmental Readers in the College Classroom (1995). When Jeanne joined our department in the fall of 1996, I was pleased to have the opportunity to implement reading workshop with my undergraduate students. In the spring of 1997, faculty members in the Reading and Basic Education Department of Nassau Community College (NCC) decided to pilot reading workshop in their Basic Education Program. Over the course of three years, the pilot grew to full departmental implementation of reading workshop in fall 1999. I was a participant in this pilot and implementation process, and it became the topic of my doctoral dissertation.

Reading Workshop

Reading workshop is grounded in transactional and sociopsycholinguistic theories of reading (Goodman, 1996; Rosenblatt, 1978, 1995; Smith, 1988). The emphasis is on the construction of meaning. These theories recognize the active role of the reader, the negotiability of meaning, and the social nature of the reading process. The meaning does not reside ready-made in the text or in the reader, but happens during the transaction between reader and text. In
reading workshop, students are given opportunities to engage in what Edelsky (1996) refers to as “non-exercises” (p. 87). Students read to pursue their own intentions and construct their own meanings, rather than solely for the purposes of instruction and evaluation. The students are also positioned as “literate-person-as-Subject” (Edelsky, p. 101), where they have some control and freedom of choice with reading. Although a large portion of class time is dedicated to uninterrupted individualized student reading or writing about their reading, direct instruction takes place during mini-lessons and in literary letters. Henry (1995) wrote about “leading from behind” (p. 129) and how she assessed and responded to her students’ learning needs through the literary letters they wrote to her and in her responses to them. “Instead of determining what students should learn, when they should learn it, and if they had learned it, I was on call” (Henry, p. 129).

The Decision to Pilot Reading Workshop

“Island Community College” created its Basic Education Program (BEP) in February 1987 in response to the Middle States Association of Colleges and Schools’ request that it provide support for the ever-increasing population of students in need of preparatory coursework. At NCC, students are placed in the Basic Education Program on the basis of their standardized placement test results in reading, English, and math. Students in the Basic Education Program are required to enroll in and successfully complete noncredit courses in reading, English, and math before they are allowed to take credit courses leading toward their major. They receive additional support from counselors, learning disabilities specialists, and tutors. They are encouraged to use the Learning Center, which offers computer assisted instruction, word processing programs, and access to the Internet. During each fall semester, the department offers an average of 35 sections of the Basic Education Reading course, with approximately 12 students in each class. They also offer some sections of the course during the spring semester.

According to the college catalog, the Basic Education reading course was “designed to provide instruction in reading fundamentals: improving vocabulary, locating key concepts, reading for study, making inferences, and reading critically” (NCC Catalog, 1998, p. 92). Most of the instructors used a common textbook in order to teach the skills the students would be required to demonstrate on the departmental final exam. A novel study was also included in the course curriculum, and most instructors chose the same novel for their classes.

When students successfully complete the Basic Education Reading course, they may be required to take up to two additional noncredit remedial reading courses: Reading 001, Reading 002, or both. Those subsequent courses also focus on teaching the students reading and study skills such as recognition of main ideas and details, outlining, mapping, underlining, summary writing, critical reading skills, and vocabulary improvement. In both courses there is a required textbook; some instructors also opt to include a vocabulary skills notebook. Students are required to complete a library research project as one of their assignments, and there is a midterm exam and a departmental final exam. These course descriptions are typical of what Laine, Laine, and Bullock found in their 1995 survey of members of the National Association for
Developmental Education (NADE) who offered developmental reading programs. According to the results of the survey, most programs use commercially prepared textbooks, which include topics on reading, vocabulary, critical thinking, and study skills; however, many of the respondents also reported an increasing use of fiction and nonfiction trade books in their classes.

Due to the repetitive nature of the three noncredit reading courses at NCC, some of the faculty members felt that there was a need for change in the 090 course. Although the students were exposed to more difficult text along the sequence of the three classes, the strategies they were using to work with that text were incredibly similar. According to one of the instructors, “this caused dissatisfaction among the teachers and dissatisfaction, to say the least, among the students who were required to take all three of the noncredit bearing reading courses.” Some faculty members were also concerned that students had very few opportunities to apply the skills and strategies that they were being taught in the Basic Education Reading course because they could not take other credit-bearing courses until at least their second semester at the college.

Although the BEP instructors recognized the need for a change in the content of the course, they were not certain about what kinds of changes they wanted to make. They had always incorporated a literature component in the course because they were concerned that many of their students did not include reading in their lives. One faculty member discussed a belief held by many of the instructors that “students do not perceive of themselves as readers or writers.” This is a very common finding in the field of college reading. Many students in college developmental reading courses did not experience much success in high school and have very negative attitudes toward reading (Bartholomae & Petrosky, 1986; Dillard, 1982; Duchein & Mealey, 1993; Gillespie, 1993; Henry, 1995; Mason, 1994). According to Maxwell (1997), they may also feel ashamed and stigmatized when forced to take a developmental college reading course, which can serve to increase their resistance to reading. The faculty members were also very concerned about their students’ lack of motivation and self-esteem. As the department chairperson, Leslie often met with many students on an individual basis and she found it disturbing that “many of these students feel that they are less than or incapable learners.”

One of the most significant factors that led some of the full-time instructors to pilot reading workshop in the fall of 1997 was the enthusiasm of one colleague. Beth was my fellow doctoral student and had learned about reading workshop through Jeanne Henry and me. She read Henry (1995), passed it around to several colleagues, and they began to discuss the possibility of trying it in their department. They invited Jeanne to talk to them about reading workshop near the end of the spring semester and she provided them with a variety of materials and ideas that would help facilitate their initial implementation of reading workshop in their course.

Leslie was able to obtain money from the college administration’s “sweeping the codes policy,” where if there are funds left over in a budget area that have not been spent, a department can apply for the money and use it for another purpose. During the summer two faculty members used those funds to purchase a wide selection of books for the students to read in anticipation of the fall semester. They also organized them on book carts, as Henry (1995) and her colleagues did at Northern Kentucky University.
In preparation for their initial foray into reading workshop, the instructors all read Jeanne’s book and some of them also read all or parts of Atwell’s (1987) *In the Middle: Writing, Reading, and Learning with Adolescents*. They met together a few times during the summer in order to discuss ideas and plan the course. Some of the instructors also reported that they read selections from the book carts in anticipation of what the students would be reading.

These instructors, all of whom had been teaching for several years, were about to try something very different. One faculty member discussed the nervous anticipation she had felt at the beginning of the first semester: “I was frightened, I was nervous about it. I think the idea of losing that control was a little bit frightening.” Another instructor discussed the reasons why she had felt nervous at the prospect of teaching reading workshop: “Nervous because you did not have the confidence of a traditional classroom, which I had been in for 30 years in one way or another.” Although many of them felt nervous about teaching this new course, they were “also very excited.”

**The First Year**

During the 1997-98 academic year, the first year in which reading workshop was introduced at NCC, a core group held monthly meetings during which we shared experiences, discussed questions and concerns, and exchanged ideas about reading workshop. We often shared mini-lessons that we found to be successful in our classes. During that first academic year, one of the most positive observations the faculty members made was that students were engaged with text, often for the first time in their lives. Most of the instructors reported that both they and the students were surprised by how much reading the students accomplished during the course of one semester. One instructor stated that her students “made a tremendous amount of growth in terms of reading more and being involved with what they read.” Another instructor emphasized her students’ accomplishments in terms of how reading workshop had a positive effect on their attitudes: “The biggest thing that they learned throughout the semester is that they could enjoy reading; that it could be a pleasurable experience.” They were also excited about the interactions that were evolving around text—that literacy and learning had become social events.

The instructors acknowledged that one of the reasons their students were more actively engaged in reading was that they were given the opportunity to choose what they were going to read. Both Atwell (1987) and Henry (1995) identify this student self-selection of books as one of the key elements of reading workshop. The instructors at NCC found this a very positive experience for their students. Learning was becoming more student-centered in their reading workshop classes because students were able to make choices about what they would read and how they would respond to that reading. Instructors were also able to respond to individual students’ needs. Roxanne, the learning disabilities specialist, talked about why she believed reading workshop was an appropriate pedagogical approach for students with learning disabilities: “Reading workshop is one course that actually levels the playing field and allows the instructor to bring the students forward on an individual basis.”
Literary letters were a cause for many questions and concerns during the first year that they piloted reading workshop at NCC. One of the main issues surrounding literary letters was the quality of student writing. Atwell (1987) described the response journals she and her students wrote as "first draft writing, unpolished and unrevised." She stated that one of the main purposes of keeping the response journals was for "creating and maintaining a literary relationship with each student" (p. 166). The instructors at NCC had certain expectations of what a literary letter should be and were sometimes disappointed in what the students produced. Although we all agreed that the main purpose of literary letters should be a conversation about books and reading, some instructors tended to emphasize writing conventions such as organization, spelling, and sentence structure more than others did.

Assessment of literary letters was also a topic of discussion at many of the monthly meetings, where instructors reviewed the purpose of literary letters as per Atwell (1987) and Henry (1995), and discussed what their expectations of their students should be. They developed a grading scale for literary letters, discussed these criteria through various mini-lessons, and provided many models for their students. Their use of such explicit grading criteria is very different from both Atwell’s and Henry’s assessments of their students’ literary letters. Atwell discussed how she looked “for frequency and depth of response” (p. 195) in her students’ literary journals. She expected them to go beyond plot, and she did evaluate their growth in writing their literary responses. But she also emphasized that she responded to them “without coming across like a teacher’s guide or a test” (p. 170). Although Henry did not grade her students’ literary letters, she was aware of the potential to be evaluative in her responses to them. Literary letters between students and teachers should be interactive and collaborative, despite the “unequal authority and expertise of the correspondents” (Henry, p. 76). One of her goals for literary letters is to help students sustain, maintain, and extend their reading.

One of the reasons the instructors at NCC devised a grading scale for literary letters was because they had to assign the students a numerical grade at the end of the semester, even though it was a noncredit course. In order to pass the course, students had to receive a minimum grade of 70. They also had a chance of skipping the next course if they earned a grade of at least 85 and received a certain score on the post-test Degrees of Reading Power (Touchstone Applied Science Associates, 1995) standardized test. Furthermore, in considering the possibility that they would eventually go department-wide with reading workshop, they felt that they would need some kind of consistency in their evaluation and a rubric might help them attain that consistency across all sections of the course.

After the end of the first year student outcomes at NCC were positive, both in qualitative and quantitative terms. The instructors believed that reading workshop contributed to higher student motivation and improvement in their confidence and self-esteem. They were also pleased with their students’ newfound enthusiasm for reading. In an effort to ensure that students are placed in appropriate courses, the department administers the Degrees of Reading Power (DRP) both at the beginning and end of the semester. At the end of the first academic year of piloting reading workshop, data indicated that the students did as well, if not better on the DRP than they did with the traditional 090 course. Henry (1995) found similar results with her
students’ scores on a standardized reading test, but questions the validity of these types of tests. “Maybe the course improved students’ ability, but you cannot ‘prove’ it by me or by my data—it was not that kind of study and not that kind of course. Second, I am convinced that the [name of test], if it measures anything useful at all, measures a type of reading different from the one I taught” (pp. 44-45). I tend to agree with Henry about the validity of standardized reading tests and question the time devoted to them that I feel could be better used for teaching and learning. But I also wonder if perhaps our students had higher scores on the DRP at the end of the semester because they spent the entire semester engaged in meaningful literacy experiences. Because of their positive experiences, the group began to discuss the possibility of continuing and expanding their pilot for the following academic year.

When the instructors at NCC began to discuss the possibility of expanding reading workshop and going department-wide, assessment became a major topic of the monthly meetings. A key reason for their concern with assessment was the issue of accountability. They were members of a department within a community college, which is part of a state system of colleges and universities. When I questioned the BEP coordinator about this issue, she explained her point of view about accountability: “We’re mostly accountable to the stakeholders such as the administration, which has put a lot of money into the project, the Board of Trustees, and the whole feeling about remediation that is not as positive throughout the county and the state, as a matter of fact.”

These concerns are echoed throughout the field of developmental college reading. Although many postsecondary institutions offer developmental or remedial programs to help prepare students for college level work, these programs are under attack throughout the nation. Both the general public and legislators often argue that skills should have been learned in high school and that remedial programs are inappropriate at the college level (Institute for Higher Education Policy, 1998). Institutions fear a threat to their reputations of excellence if they admit underprepared college students. Attempts have been made to reduce or eliminate the number of remedial courses offered in postsecondary institutions; some states have moved all remediation to the community college level or to private institutions. With such a dark cloud hanging over developmental programs nationwide, the instructors at NCC were concerned. Their role was to “get students ready for the next level,” and they had to have assessments in place that would demonstrate their students’ accomplishments and measure their growth.

Another factor they would have to think about was how to convince the other faculty members, both full-time and part-time, that reading workshop was the way to go with this course. Not only would they have to convince them, but also they would have to insure that they received sufficient training and professional development opportunities for the implementation to be successful. In order to prepare instructors for the possibility of future department-wide implementation, they decided that they would introduce a component of reading workshop into every section of the traditional reading course in the fall 1998 semester.
Transitions

According to Beth, the department introduced a reading workshop component into the rest of the BEP 090 reading sections “as a way of transitioning the faculty, full and part-time, to this new course. We were afraid of compelling faculty to do something completely new all at once.” When considering the parameters for the reading workshop component, which the part-time instructors would incorporate into their classes, the department established that instructors would teach it once per week for nine weeks, replacing the novel study aspect of the course. The other class sessions would be devoted to the traditional skills curriculum. Students were expected to read two books and write five literary letters during those nine weeks. Reading workshop counted toward 20% of the final course grade.

The full-time faculty members continued to meet on a regular basis in order to exchange ideas and share concerns. The issue that inspired ongoing discussion and debate continued to be the quality and assessment of students’ literary letters. Some instructors were concerned that students were receiving a great deal of assistance from tutors on their literary letters. One instructor suggested that we create some kind of midterm assessment that would help us determine what students could do on their own, without any kind of assistance. We agreed to try a midterm literary letter in the following spring semester that students would complete in class. I had misgivings about the idea of a midterm literary letter because I believed that it was antithetical to the concept of reading workshop. When Henry (1995) discussed the theories underlying reading workshop, she wrote about authentic reading and writing, where students read and write for their own intents and purposes. By administering a midterm literary letter, the reading and writing activities are in danger of becoming inauthentic. These activities become what Edelsky (1996) refers to as “exercises,” which have instruction or evaluation as their main purpose, and students are not given many opportunities to engage in literate activities for their own purposes. Despite my misgivings, I went along with the midterm literary letter assignment.

During the fall semester, Beth received four credits of release time in order to coordinate the transition into reading workshop. She and a colleague sent memos and handouts to all instructors explaining the course parameters, the procedures for reading workshop, suggestions for getting started, and some ideas for mini-lessons. Beth held a meeting mid-semester in order to talk about how the component of the course was going and address any concerns instructors were having. When she held this meeting, many of the adjuncts reported that they would not be interested in teaching full reading workshop, and they preferred that reading workshop remain simply a component of the traditional 090 course. One instructor stated, “our students are too needy to put them in a course like that without teaching them skills.” At our full-time faculty meeting, Beth expressed her ongoing concerns about part-time faculty and the reading workshop component. Despite her efforts, some of the instructors remained resistant to this new pedagogy. Roxanne suggested that the adjuncts were not sure about reading workshop, and that with some mentoring and more experience their attitudes toward reading workshop might change. Most of them taught evening classes, when full-time faculty members were not available for discussion, resources, or ideas. Griffith and Connor (1994) discuss the problems of having a large number of
part-time instructors teaching classes at community colleges. These faculty members are often not invited to or compensated for professional development sessions. They also have few opportunities to get to know their full-time colleagues. These problems can clearly create obstacles to instructional change. If we were going to go department-wide with reading workshop, we recognized that we would have to offer more opportunities for faculty development. We agreed to address this issue further in the upcoming spring semester.

Spring 1999 was a pivotal semester in our implementation of reading workshop. As a group, we had made a decision to go department-wide with reading workshop in fall 1999. We had to address our ongoing concerns, plan for the summer inservice, and begin the procedures to make this the official BEP 090 reading course.

We held our literary letter holistic grading session in March, when we passed letters around and each of us gave them grades and then compared our grades. We found that we disagreed quite strongly about some of the students' letters and that we each interpreted the criteria quite differently. When Henry (1995) analyzed her students' literary letters, she found that they were interactive and that her students were very aware of their audience when writing. When the instructors at NCC decided to exchange literary letters with each other for the purpose of a midterm assessment, the notion of interaction and awareness of audience was diminished. Students were writing for the instructor instead of to the instructor. But the discussion was valuable in that it gave us an opportunity to struggle with the meaning of our grading criteria and come to some agreement with what our expectations of the students were.

At our final reading workshop meeting for the semester, we began to plan the faculty development workshops that would be offered in the summer. We agreed that the summer workshops should contain a balance of theory, discussion, and hands-on experience. Beth had applied for and was granted an additional four hours of reassigned time for summer-fall 1999. She would be responsible for planning and facilitating the workshops, but invited those of us who were available and interested to attend and share our experiences.

Summer 1999

During summer 1999, the department offered a series of workshops about reading workshop. Anyone who wanted to teach reading workshop or wanted to learn more about it was invited to attend. As a result, the majority of the participants were adjunct instructors who wanted to teach the course, but several of the full-time faculty members also attended. In an interview with Beth she reflected on the participants and the various reasons they had for attending the sessions: “I think some people came to the workshops with an open mind, some people came with a very predisposed way of thinking, whether they were for or against the implementation of reading workshop, and some people had no intention of teaching the course, but were curious about adapting it to other courses in the college and came for that reason.”

When I interviewed Beth about how she had planned the workshops and developed the agenda, she explained that from her experiences with the reading workshop component she
found that instructors wanted a “how-to” course. Although she recognized that the theoretical background was very important, she believed that it was just as important to experience it hands-on. The experiences would provide instructors with the opportunity to then reflect and think about the philosophy and theoretical bases of reading workshop. “We spent approximately half of the time discussing the course, its theoretical underpinnings, its practices and the other half of the time engaged in a reading workshop-like class.”

When I interviewed two adjunct instructors about their perspectives on these faculty development workshops, I received very different feedback from each of them. Meg, who had not been familiar with reading workshop, was a bit overwhelmed, but enjoyed the sessions. “I jumped right into reading workshop after taking your course during the summer which I thought was excellent. But I thought it was a little overwhelming, not having a first-hand experience in teaching it.” Anastasia, who was familiar with reading workshop, felt that the inservice session was not necessary for her. “Honestly, it’s hard for me to sit through a workshop for something that I know. People who already know reading workshop should be exempt from those.” Although Anastasia was very comfortable with reading workshop, many of the other participants did not share her confidence. Fall 1999 would be the first semester of department-wide implementation of reading workshop, and in order to address instructors’ needs, Beth planned to continue offering support and inservice through a weekly newsletter, meetings, and some individual mentoring.

**Fall 1999: Full Implementation**

During the fall semester, Beth was responsible for providing instructors, both full-time and part-time, with opportunities for faculty development and mentoring. She created a weekly memo that she distributed to department administrators and all faculty members who were teaching reading workshop that semester. In my analysis, the 13 memos that Beth distributed throughout the semester served four general purposes: procedures and administration, forum for sharing, outreach, and recognition. The major body of most of the weekly memos was a forum for sharing. They included ideas for mini-lessons, discussion of available resources, models and examples, reports of conversations and small group meetings, and sharing of questions or concerns.

Of 13 memos, 10 addressed the topic of literary letters. They included ideas for mini-lessons about literary letters, samples of student letters, samples of instructor responses, assessment of literary letters, and discussion of instructor concerns about the quality of student writing. The memos also contained mini-lessons on genre, characterization, goals, prior knowledge, context, point of view, vocabulary, and censorship. Many of the instructors shared their own ideas for mini-lessons with Beth, and she included them in the weekly memos. She told me that she also made a point to recognize people’s contributions in the newsletters because there was often very little contact between the part-time faculty and full-time faculty members as a group.

The memos also served the important role of outreach. Beth regularly invited instructors to share their concerns, questions, and ideas with her. She also offered to hold small group and
individual meetings with anyone who was interested. Beth reported that she did meet with several faculty members, particularly the evening instructors, in order to have conversations about the various aspects of reading workshop that they were enjoying or that troubled them. She also often had late-night phone calls with them. Besides the scheduled meetings she held with some instructors, she found that many people approached her in the hallways to have informal discussions. Some of the part-time instructors connected with other full-time instructors in order to ask questions, exchange ideas, and address their concerns.

Beth sent an end-of-the-semester course evaluation to all instructors in order to solicit their feedback about reading workshop. Their observations, questions, issues, and concerns were very similar to the experiences of the faculty members who piloted workshop during the first year. Instructors were pleased that their students were engaged with text. They also enjoyed the social aspect of reading workshop and the rich discussions that the students generated in class. Many instructors underlined the importance of giving students the opportunity to select their own books and to read for their own purposes. Some also reported that reading workshop increased student motivation, confidence, and self-esteem. The quality and assessment of literary letters continued to be an issue, so we talked about having another holistic grading session in order to achieve more standardization in our evaluation.

**Spring 2000**

Spring 2000 was the second semester of full reading workshop implementation. We held our literary letter holistic grading session at the end of March. I recall feeling upset about the grade most people assigned to one of my student’s literary letters. Although I considered it a satisfactory letter, almost everyone else concurred that it was a failing letter. The reasons they gave for failing this letter were that the particular student did not include any plot summary or support the views she expressed about her book with examples or explanations from the text and that there were major problems with her writing. I argued that the student had written the letter specifically to me, and she knew I had also read her book; therefore it was not necessary to include any summary. We had recently discussed it during status of the class, and she had supported her views by giving examples from the text during our conversation in class. From a grammatical point of view, there were some problems with her writing, but I reminded everyone that these letters are not polished, revised, or edited essays. Rather, they are a conversation between two people about books and reading. After much discussion, most of the instructors agreed to change their grade. I believe that this example underscores the problem in having a midterm literary letter that is graded holistically by someone other than the intended audience. Literary letters are not objective essays. They are supposed to be a personal transaction with text and a conversation between two people. If it is department policy to have a grading scale for the literary letters, it is up to individual instructors to use and interpret that grading scale while assessing their own students’ letters.
At the beginning of the semester the department submitted an application for a change in a course or curriculum to the college-wide Curriculum Committee. Following is an excerpt of the course description included in the application:

Reading Workshop provides students with the opportunity to construct meaning from text and respond to it through written and oral activities. This will prepare them, not only for the extensive reading/writing tasks of credit-bearing course content, but also for the world beyond college. The Reading Workshop curriculum facilitates development in behaviors, skills, strategies, habits, and affective stances evident among engaged, facile, productive readers of academic and non-academic text. . . . Reading becomes relevant to these students, which encourages them to commit further to the reading act. Through this, students develop the intellectual and affective behaviors necessary to enfranchise themselves to the rigors of college reading and writing.

When I read this course description, I pause to reflect on my role as a college reading instructor. Although I understand that I have been given the responsibility to help my students become better readers of college texts, I cannot disregard the “world beyond college” and my belief that it is also my responsibility to enfranchise my students to other literacies.

After six semesters of piloting reading workshop, the Reading and Basic Education department would be implementing it as the official BEP 090 course in fall 2000. Our pilot project and department-wide implementation of reading workshop would not have been possible without administrative support, both at the department and college levels. In an interview with Leslie, our department chair, she discussed why she had endorsed reading workshop: “It was really the enthusiastic support of those original people in the pilot group and Beth’s leadership that made the decision [to go department-wide]. I supported it because it was more than the enthusiasm. I supported it based on my own reading, and the quality of the discussions that took place when we had the regular meetings. And the serious assessment of the people who did the pilot and the indication that students were more involved.”

Reading workshop at NCC was different from both Atwell’s (1987) and Henry’s (1995) reading workshop with its emphasis on the evaluation of literary letters and quality of student writing, but the instructors shaped the course to meet their needs. In my opinion, one of the most positive outcomes of implementing reading workshop in the Reading and Basic Education department is that the faculty members introduced an innovative, more student-centered pedagogy into their program.

References


Instructors’ Perspectives of Instruction in Computer-Mediated and Lecture Developmental Mathematics Classes

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Abstract

Through surveys and interviews, this study examined instructors’ perspectives of instruction in computer-mediated and lecture-style developmental mathematics classes. All of the instructors had experience in teaching both computer-mediated and lecture classes. Instructors rated the effectiveness of computer-mediated instruction as compared to lecture instruction through a survey with items related to (a) learner-centered construction of knowledge, and (b) computer-directed transmission of knowledge. Overall, instructors viewed computer-mediated instruction as being slightly more effective than lecture. The interviews revealed perceived advantages and disadvantages of computer-mediated instruction, which should be further investigated.

This article explores (a) instructors’ views of how mathematics is taught in their computer-mediated and lecture-style developmental mathematics classes, and (b) instructors’ perceptions of the effectiveness of computer-mediated instruction as compared to lecture instruction. These are important topics because they may influence instructors’ decisions about whether or not to offer computer-mediated instruction, how instructors structure computer-mediated classes, and instructors’ views of the effectiveness of computer-mediated instruction in meeting students’ needs.

Gifford (1996) defines computer-mediated learning as a learner-centered model of technology-mediated instruction. In computer-mediated classes, the software: (a) presents and
explains the concepts and skills, (b) embeds items that require student responses within the instruction, (c) provides immediate and detailed feedback, and (d) tracks students’ progress. The software allows students to navigate along a path and at a pace that fits their individual preference. In this study, with the exception of one class, students were expected to attend regularly scheduled classes, complete assignments on schedule, and take exams using paper and pencil.

The computer-mediated classes incorporated interactive multimedia software from either Academic Systems (AcademicOnline 2000) or Prentice Hall (Interactive Math, 2000). Instructors in the computer-mediated classes that incorporated Academic Systems software did not lecture. Instead, the instructors worked with students individually or in small groups to: (a) clarify explanations provided by the software, (b) assist students in solving problems using paper and pencil, (c) provide feedback, and (d) promote the development of study skills. In the classes that used the Prentice Hall software, instructors often reviewed homework and presented mini-lectures during the first part of the class, then had students use the software or work on other activities during the remainder of the class period. The primary reason that instructors using Academic Systems did not present mini-lectures but Prentice Hall instructors did is that the Academic Systems software has a more complete presentation of the content using interactive multimedia than the Prentice Hall software. In lecture classes, instructors typically used direct instruction (Rosenshine & Meister, 1987) to present the concepts and skills, engage students in whole class discussions, provide opportunities for practice through individual or collaborative efforts, and provide feedback.

Mathematical Understanding

One of the primary goals of developmental mathematics instruction is to develop in students the requisite “mathematical understanding” of the course content. Mathematical understanding, however, does not necessarily mean the same thing to every instructor. This is not surprising, because instructors’ beliefs about teaching and learning mathematics are shaped by their experiences (Ball, 1988; Owens, 1987). For many instructors, these experiences have been dominated by learning procedures rather than concepts. Hiebert and Carpenter (1992) define mathematical understanding as follows:

A mathematical idea or procedure or fact is understood if it is part of an internal network. More specifically, the mathematics is understood if its mental representation is part of a network of representations. The degree of understanding is determined by the number and strength of the connections. (p. 67)

The constructs of conceptual knowledge and procedural knowledge are frequently used to describe two key parts of mathematical understanding. Hiebert and Carpenter (1992) describe conceptual knowledge as knowledge that is rich in relationships. Conceptual knowledge is not stored as isolated pieces of knowledge. To be conceptual knowledge, it must be part of a network. For example, a student who has a conceptual understanding of slope is able to connect the formula to calculate the slope of a line to the steepness of the graph of the line and to the notion “rate of change.”
Procedural knowledge, according to Hiebert and Carpenter (1992), is a sequence of actions. Procedural knowledge is exhibited, for example, when a student uses a sequence of actions, or steps, to find the slope of a line using the formula for slope and two ordered pairs. If a student is unable to connect the procedure for calculating the slope of a line to the steepness of the line, then these two pieces of knowledge are isolated. This student would be described as having procedural knowledge but not conceptual knowledge. The student who is able to make the connection between the value for the slope of the line and the steepness of the line is described as having conceptual knowledge. The student’s conceptual knowledge increases as the student is able to make more connections, such as recognizing that “m” in the slope-intercept form of the equation, \( y = mx + b \), represents the slope and that the slope represents the rate of change of two quantities.

**Views of How Mathematics Should Be Taught**

When a developmental mathematics program incorporates interactive multimedia software into its program, instructors face questions about how they believe mathematics should be taught. Kuhns and Ball (1986) identified four distinct views of how mathematics should be taught:

1. Learner-focused: This view of instruction focuses on the learner’s personal construction of knowledge. It has underpinnings from the constructivist view (Cobb, Yackel, & Wood 1992; Wood & Cobb, 1991) of mathematics according to Kuhns and Ball (1986). In this student-centered approach, the instructor poses interesting questions and situations and facilitates students’ construction of personal knowledge. Students are expected to be actively engaged in exploring questions and formalizing conclusions as they construct their own personal understanding of the mathematics. Software that supports this view of instruction will “provide students with experiences that allow them to discover or re-invent concepts” (Niederhauser & Stoddart, 2001, p. 24).

2. Content-focused with an emphasis on conceptual understanding: Kuhns and Ball (1986) describe this view as one that focuses on the mathematical content and emphasizes students’ understanding of ideas and processes. They also note that in this view the content is organized according to the structure of mathematics and follows the instructor’s scope and sequence. Software that reflects this view should include a thorough presentation and explanation of the concepts, not just the steps to perform skills.

3. Content-focused with an emphasis on performance: This view of mathematics teaching emphasizes student performance and mastery of mathematical rules and procedures. The premises of this view include: (a) rules are the basic building blocks of all mathematical knowledge, (b) knowledge of mathematics is being able to get answers, (c) computational procedures should be automatized, and (d) in school, knowing mathematics means being able to demonstrate mastery of the skills described by instructional objectives (Kuhns & Ball, 1986). Software that reflects this view supports the drill and practice of skills; it may or may not present and explain concepts.
4. Classroom-focused: This view of mathematics teaching is based on knowledge about effective classrooms. Effective teachers present lessons that are clear and well-structured, assign tasks, monitor students’ progress, provide feedback, and manage the classroom environment so that no disruptions interfere with the planned instructional flow of activities. This view does not address content; it assumes that the content is addressed by the school curriculum (Kuhns & Ball, 1986).

The views of how mathematics should be taught focus on the mathematics itself, not on whether the instruction is delivered by computer-mediated instruction or lecture. Instructors who are considering offering computer-mediated instruction must determine how well each available software package supports their view of how mathematics should be taught and how to structure classes to support their view. Today’s generation of mathematics instructors did not learn mathematics through computer-mediated instruction, thus they have no experiential basis to make an informed decision about the effectiveness of computer-mediated instruction. This may explain in part why instructors often find it difficult to decide whether or not to offer computer-mediated instruction and, if they do, how to select software and structure classes.

Ernest (1988, as cited in Thompson, 1991) found that mathematics instructors use instructional approaches that depend upon: (a) their conceptions of the nature and meaning of mathematics, and (b) their mental models of teaching and learning mathematics. For many teachers, beliefs about mathematics teaching and learning are influenced by their own experiences as students of mathematics (Ball, 1988). Frequently, these experiences have been dominated by instruction that focuses on learning rules and procedures rather than developing conceptual understanding (Wood & Cobb, 1991).

Method

Participants

The 11 participants in this study all had experience in teaching both computer-mediated and lecture mathematics classes. Ten of the participants had taught computer-mediated elementary algebra, intermediate algebra, or both, while one had taught college algebra. Seven of the instructors used software from Academic Systems; four used Prentice Hall software. The experience of the participants ranged from graduate teaching assistants with fewer than two years of teaching experience to full time permanent faculty members with more than 10 years of experience.

Interviews

In the first part of the interview participants were asked to rank the views of instruction provided by Kuhns and Ball (1986) according to how well each view described: (a) instruction in their computer-mediated classes, and (b) instruction in their lecture classes. It is reasonable to ask instructors to rank the views of instruction for each category, rather than selecting only the view that most closely matches their choice for each category, because instructors typically draw upon each of the views when teaching.
Results

The results, shown in Figure 1, can be examined in several ways:

1. Computer-mediated versus lecture rankings: The results show that each instructor provided different rankings for his or her computer-mediated and lecture classes. Even if only the first choice of each instructor is considered, only three instructors (i.e., AS-4, AS-5, AS-6) marked the same view of instruction first for both their computer-mediated and lecture classes. This indicates that individual instructors tend to believe that the instructional approaches in their computer-mediated and lecture classes are different. For example, the third Academic Systems instructor (AS-3) ranked “mathematics teaching that focuses on the learner’s personal construction of mathematical knowledge” the highest when teaching a computer-mediated class. When teaching a lecture class, the same instructor ranked “mathematics teaching that emphasizes rules and procedures” the highest.

2. Rankings within the same type of category: For the computer-mediated classes, the 11 instructors ordered the four views of instruction in eight different ways; no order was selected by more than two instructors. The first response selected by instructors, and its frequency, was: (a) mathematics teaching that is driven by the content itself but emphasizes conceptual
understanding, 5; (b) mathematics teaching that focuses on the learner’s personal construction of
mathematical knowledge, 3; (c) mathematics teaching that emphasizes rules and procedures, 2;
and (d) mathematics teaching based on knowledge about effective classrooms, 1.

For the lecture classes, the instructors ordered the views in 10 different ways. The first
response selected by instructors, and its frequency, was: (a) mathematics teaching that is driven
by the content itself but emphasizes conceptual understanding, 3; (b) mathematics teaching that
focuses on the learner’s personal construction of mathematical knowledge, 3; (c) mathematics
teaching that emphasizes rules and procedures, 3; and (d) mathematics teaching based on
knowledge about effective classrooms, 2. The results show that within each type of instruction,
different instructors tend to have different views of instruction.

The rankings provided by instructors demonstrate that they tend to hold different views
about the instruction students receive in computer-mediated and lecture classes.

The difference in views may be due in part to differences in how instructors teach their
classes. However, it is worth noting that the first six Academic Systems instructors used the same
syllabus, assignments, schedules, exams, and classroom procedures in their computer-mediated
classes. Even in these computer-mediated classes, where the software is the primary vehicle for
delivering the instruction, and where student achievement was assessed by common measures,
instructors tended to hold very different views of how the mathematics was taught.

**Computer-Mediated Versus Lecture**

The second part of the interview consisted of asking instructors about the effectiveness of
computer-mediated instruction as compared to lecture instruction. The items were developed by
Niederhauser and Stoddart (2001) to assess teachers’ beliefs about the effectiveness of computers
as compared to more traditional forms of instruction for accomplishing a variety of instructional
goals. Their analysis of teachers’ perspectives about the instructional use of computers produced
two factors, which they labeled (a) learner-centered construction of knowledge, and (b)
computer-directed transmission of knowledge. Participants selected a response to each item in
Figure 2 and provided a rationale for their answer.

Overall, the mean rating of the Academic Systems instructors for the learner-centered
construction of knowledge (LC) items was 3.34 and for the computer-directed transmission of
knowledge (TK) items the mean was 3.80. The Prentice Hall instructors’ mean rating for LC was
2.65 and for TK was 3.90. Because three is the midpoint of the scale, a rating under three
indicates that instructors viewed the instruction as less effective than lecture and ratings above
three indicate that instructors viewed the instruction as more effective than lecture. The
responses for Academic Systems and Prentice Hall are given separately because there are
differences in how the software is designed.

**Explanations Related to Learner-Centered Construction of Knowledge**

Instructors using Academic Systems believed the software was slightly more effective than
lecture \((M = 3.34)\) for enabling students to construct their own knowledge, while instructors
using Prentice Hall believed that it was slightly less effective than lecture ($M = 2.65$). A common thread through most of the responses was that in both computer-mediated and lecture classes, there is a greater emphasis placed on procedural knowledge than conceptual knowledge than instructors would like and that there are limited opportunities for students to meaningfully construct their own knowledge. Also, instructors noted that students who construct their knowledge must be active learners and show an interest and willingness to do more than memorize procedures, whether in computer-based or lecture classes.

The perceived advantages of using software to support learner-centered construction of knowledge include: (a) students are in control of the pace, which allows them to stop and think about the mathematics; (b) students can navigate along a path that best meets their learning needs; (c) students receive more instruction through animation, graphics, and multiple
representations than in most lecture classes; and (d) students are rarely passive. The perceived disadvantages of using software include: (a) lecture seems to lead to more frequent, deeper discussions about concepts, (b) software tends to show one way of looking at a concept whereas an instructor leading a discussion can help students make connections that lead to understanding concepts, and (c) it can be difficult for the instructor to know if students are thinking deeply about the mathematics or just considering surface features when using software.

**Explanations Related to Computer-Directed Transmission of Knowledge**

Academic Systems instructors averaged 3.80 and Prentice Hall instructors averaged 3.90 when selecting responses to the questions about the effectiveness of the software for the direct transmission of knowledge. In this study, the direct transmission of knowledge was interpreted as developing procedural knowledge. This interpretation was given to the participants prior to the interviews. The rationale for selecting answers was similar for instructors using both software packages.

The perceived advantages of the software include: (a) students receive immediate feedback informing them if their answer is correct, (b) students receive a detailed explanation of the solution, (c) students can work at their own pace, (d) students can select which problems they work on rather than having to work those provided by the instructor, and (e) students can generally work through more problems in class using the software than is possible in a lecture class. The disadvantages to using the software include: (a) when students do not understand an explanation provided by the software, they do not always ask the instructor to clarify the explanation; (b) even when students believe they understand explanations, they often do not, and thus fail to work a sufficient number of problems; and (c) because Academic Systems classes do not include any lecture, students who fail to ask questions are deprived of being able to overhear explanations in response to other students’ questions. The first two disadvantages of using software provided by instructors may be better described as “challenges” when using software rather than disadvantages because students in lecture classes may also fail to ask enough questions or work a sufficient number of problems.

**Discussion**

The interviews revealed that instructors hold different views of how mathematics should be taught and that overall they perceive that computer-mediated instruction may be slightly more effective than lecture. The instructors’ explanations to the survey items revealed that most instructors would prefer to have their students construct more of their knowledge, develop greater conceptual understanding, or both. In the computer-mediated classes, the instructors would like to see the software include more truly interactive features, such as being able to dynamically move a graph and watch the coefficients change, which would allow students to more meaningfully explore mathematics and investigate relationships. To a large extent, the material in the “Explore” section of each software package consists of problems that are more challenging than the “routine” procedural problems in each section, but are still solved using procedural knowledge. One approach to facilitate students in constructing more of their
knowledge is to simply turn off the computers at times and have the students work together, perhaps using cooperative learning techniques, on activities developed or selected by the instructor. But even when teaching lecture classes, the same instructors found it challenging to devote as much time as they would like for students to construct their own knowledge and to develop conceptual understanding. This suggests that there are deeper issues that need to be addressed.

Communication

Instructors discussed differences in the types of communication and questions that occur in computer-mediated and lecture classes. Instructors noted that when teaching lecture classes, there is the opportunity for whole class discussions and that these may lead to deeper discussions about concepts and their applications than those that occur in computer-mediated classes. Instructors also believed that students in lecture classes, especially those that do not ask questions, benefit from listening to the instructor answer other students’ questions. But there are drawbacks to communication in lecture classes, too. First, the instructor must devote part of the class period to presenting the material, which reduces the time available for the instructor to address student questions. The computer-mediated instructors using Academic Systems could address student questions throughout the entire class period because they did not lecture. Second, for every long and engaging discussion about the concepts, there are many brief question and answer exchanges that place most students “on hold.” Finally, there are the students who struggle with mathematics. Many of these students do not ask as many questions as they should in lecture classes, often because they feel embarrassed or they do not want to constantly hold up the class. In a computer-mediated class where the instructor does not lecture, these concerns are alleviated because the instructor works individually with students throughout the class period.

The explanations provided by the instructors to the survey items suggest that further research is needed to better understand factors that influence the views of instructors regarding computer-mediated and lecture instruction. These factors include: (a) the beliefs that instructors hold about their personal effectiveness in providing lecture instruction and how it compares to the instruction provided by the software; (b) an instructor’s willingness and comfort level with “letting go” of being the primary means of delivering the instruction when teaching a computer-mediated class; and (c) instructors’ beliefs about what constitutes mathematical understanding and the roles that the software and instructor play in supporting students’ development of mathematical understanding. These are important questions because they impact instructors’ decisions about whether or not to offer computer-mediated classes, selection of software, and how classes are structured.

Writing as One Way to Facilitate Students’ Construction of Knowledge

A recurring theme through the interviews was that instructors would like students to construct more of their own knowledge and to develop greater conceptual knowledge. One approach for addressing this concern is to incorporate writing assignments into each class. The
research of Patricia Ehrich (1994) shows that writing can help students deepen their mathematical understanding and go beyond simply finding the solution. Lesnack (1989) found that writing helps students overcome math blocks and helps alleviate math anxiety. In a case study on writing to learn mathematics, Powell and Lopez (1989) found that writing supports the development of critical reflection and the generation of knowledge. Writing can be incorporated into mathematics classes in a variety of ways, including through the use of checkpoint questions and learning logs.

Checkpoint questions can be used to ease students into writing. They are brief questions that may ask students to engage in explaining, reasoning, clarifying, or justifying a mathematical concept or task. Checkpoint questions have been a useful tool in the computer-mediated classes using Academic Systems in part because they provide an opportunity for instructors to check students’ understanding of the mathematics and to provide students with feedback. Given daily except on quiz and exam days, they also provide a mechanism that encourages attendance, mathematical communication between students, and daily communication between each student and the instructor. Not all students ask as many questions as they should in a computer-mediated class; therefore, daily checkpoint questions provide an overt mechanism to ensure daily student-instructor contact, which often results in discussions about other questions that students have.

A second method for incorporating writing into mathematics courses is the learning log. A learning log requires more in-depth writing than a checkpoint question. These may be assigned every few weeks, and students work on them primarily outside of class. The components of a learning log are (a) introduction—What problem or question am I working on for this learning log?, (b) mathematical process—In what ways did I investigate, represent, and solve this problem?, and (c) reflection—What did I learn from investigating the problem and what challenges and successes did I face? Students are encouraged to include their questions and mistakes as they work through the learning logs, which average two to three pages. Comments about learning logs from students such as, “The logs really make me sit and think through problems I may otherwise rush through” and “I enjoy the understanding you have of the math after trying to explain the problem,” provide evidence that writing can serve as an effective mechanism to promote students’ construction of mathematical knowledge and their development of deeper conceptual understanding.

Comparison of Outcomes in Computer-Mediated and Lecture Classes

Finally, it is worth considering students’ performance in computer-mediated and lecture classes. At General College during Fall 2000, a common final exam was administered to students in the computer-mediated classes using Academic Systems software and in the lecture classes. No significant difference was found on the common final exams in Elementary Algebra classes taught through computer-mediated (M = 70.12, SD = 14.57) and lecture instruction (M = 70.82, SD = 16.61), t(233) = .30, p = .76. Also, there was no significant difference in the Intermediate Algebra computer-mediated (M = 67.19, SD = 12.26) and lecture classes (M = 68.47, SD = 11.61),
t(336) = 1.86, p = .31. The exams contained approximately equal numbers of conceptual and procedural items.

Even though there was no significant difference on the common final exams, there are benefits to offering computer-mediated instruction. Surveys and focus groups involving students in computer-mediated and lecture classes for the Academic Systems instructors showed that most students had a preference for either computer-mediated or lecture instruction and that it was important to students that they were able to select the learning environment that best matched their learning style. Instruction that allows students to learn using their preferred learning style can lead to improved student outcomes (Higbee, Ginter, & Taylor, 1991; Lemire, 1998). Discussions in focus groups revealed that students often enrolled in computer-mediated classes simply to avoid being in lecture classes and because they wanted more control over their learning. Students in both instructional formats indicated an increased confidence to succeed in mathematics and an improved attitude towards mathematics. The research conducted so far at the General College at the University of Minnesota suggests that students should be assisted in making informed decisions about the instruction offered in computer-mediated and lecture classes and allowed to enroll in the class that they believe will best meet their learning preferences.

**Summary**

This study examined instructors’ views of how mathematics should be taught and perspectives of instruction in computer-mediated and lecture-style developmental mathematics classes. The ratings and discussions provided by instructors demonstrate that there is little agreement among instructors on how mathematics should be taught, and that computer-mediated instruction may be a viable alternative to lecture for some students. The primary contribution of this research is in identifying and describing instructors’ perceptions about the effectiveness of computer-mediated instruction as compared to lecture instruction in developmental mathematics. This is useful because most instructors make decisions about computer-mediated instruction based on their perceptions, not on research, in part because very little research currently exists on computer-mediated instruction in developmental mathematics. Research is needed to investigate the perceived advantages and disadvantages of computer-mediated instruction so that instructors can make informed decisions about how to effectively structure computer-mediated classes.

**References**


The Effects of Attribute Retraining on Developmental Mathematics Student Performance and Attributions

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Abstract

The primary purpose of this study was to investigate if attribution retraining would improve developmental mathematics students’ academic performance. A secondary purpose was to examine if the students’ attributions changed after the treatment to the only controllable attribution—effort. The research consisted of one independent variable and two dependent variables. The independent variable was attribution retraining, and the dependent variables were achievement test scores and post attributions.

Developmental students have traditionally been described as individuals who fall below their capacity in school achievement. In other words, “developmental” may refer to those who, for whatever reasons, fail to develop their potentialities maximally. They may not be ready to do college level work because they lack some academic skills, such as reading, writing, mathematics, and study skills (Myers, 1983; Tomlinson, 1989).

Even though many developmental students do work hard in order to exit from mandatory developmental studies programs, a large number are not successful because their motivation and their self-confidence are low. Developmental students often come to college with the attitude and belief that they could not succeed in high school and, therefore, they avoid tasks that they perceive as too difficult (Lowery & Young, 1992; Smith & Price, 1996). Students who are at risk may not take any risks to learn because they have little hope for success (Curwin, 1994). According to the National Association for Developmental Education (NADE), one of the goals for a successful developmental education program is to ensure proper placement by assessing each learner’s level of preparedness for college course work.

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Purpose of the Study

The primary purpose of this study was to investigate if attribution retraining improved developmental mathematics students' academic performance. A secondary purpose was to examine if the students' attributions changed after the treatment to the only controllable attribution—effort.

Significance of the Study

Primarily, effort and ability are the perceived attributes of achievement-related outcomes, but task difficulty and luck are additional attributes included in explanation of success and failure. Failure attribution to lack of effort allows improvement because the learner has internal locus of control and has the capability to control subsequent tasks. Failure attribution to lack of ability, however, diminishes the diagnosis for future success because ability has stable, uncontrollable, and internal properties. In relation to developmental students who have the capacity to succeed, it is essential that lack of performance be attributed to lack of effort and not lack of ability. This transition may occur by applying attribution retraining, which enables them to change from believing they cannot succeed to believing that they can.

In this chapter, Attribution Theory and attribution retraining will be discussed followed by sections presenting the methodology, data analyses, results, conclusions, and recommendations.

Attribution Theory

Weiner (1979, 1985, 1989) indicated that students attribute successes and failures to ability, effort, luck, and task difficulty. He suggested that these factors exist on three dimensions: locus of control (i.e., internal or external), stability (stable or unstable), and controllability (controllable or uncontrollable). An examination of two of these three dimensions may provide some insight into how the attributions of developmental students may impact their chances of success (Smith & Price, 1996).

Controllability deals with whether the learner can control the cause of the outcome or not. Students who have control for their outcome will attribute their success or failure to effort, the only controllable factor. Students who do not have control for their outcome will attribute their success or failure to the uncontrollable factors (i.e., task difficulty, ability, luck). Of all the causal attributions, the only one completely under a student’s control is effort (Weiner, 1979, 1985, 1989). Underachievers tend strongly to attribute their failures and successes to the uncontrollable factors of ability, task difficulty, and luck. They seem to deny their own lack of effort as the reason for success or failure (McHolland, 1989).

Locus of causality is the source of the attribution, either within a learner (i.e., internal) or outside a learner (external). If locus of causality is internal, then success is attributed to either ability or effort. If the locus of causality is external, success and failure will be attributed to either
task difficulty or luck (Weiner, 1979, 1985, 1989). Underachievers are more likely to exhibit an external locus of causality (Findley & Cooper, 1983; Shell, Bruning, & Colvin, 1995).

**Attribution Retraining**

If students attribute success or failure to uncontrollable and external causes, then they will expect the same from the future as from the past. However, if failure or success is related to effort, which is a controllable factor, then expectations can change (Weiner, 1979, 1985). Therefore, attribution retraining is designed to enhance student achievement by changing how students think about their successes and failures (Perry, Hechter, Menec, & Weinberg, 1993).

Attributional intervention has been found to aid college freshmen who were concerned with their academic performance (Wilson & Linville, 1982). The students viewed videotaped interviews in which senior students described how their grade point averages improved substantially from their first to later academic years. The information was intended to change attributions for performance from stable to unstable causes and to show that although many students had problems initially, their performance improved dramatically in later years. Subjects who received the information as compared to subjects who did not were less apt to leave college by the end of the sophomore year, and had a significantly greater increase in grade point average one year after the study.

Wilson and Linville (1985) undertook two additional studies similar to the one conducted in 1982. The results from these two studies demonstrated an increase in performance on all types of Graduate Record Examination (GRE) questions and an increase in grades in the following semester. The results of these studies led Wilson and Linville to conclude that a simple one time retraining intervention can have short-term and long-term benefits. However, an attempted replication providing similar attribution retraining using print case histories, as well as videotaped information, failed to find any benefit for retraining (Jesse & Gregory, 1986-1987).

In another study, students who obtained very low grades on the first two examinations in a college course were exposed to information that suggested examination performance was primarily caused by internal, controllable factors such as effort, motivation, and self-control (Noel, Forsyth, & Kelley, 1987). This information was conveyed to participants through videotaped interviews with seniors who explained that they had overcome their initial failures when they realized that examination performance could be controlled through personal effort. In addition, participants received written information that summarized these claims. On subsequent tests and on the final examination, experimental students earned higher grades than control students who received no attributional information.

In a related research study, freshman students who had failed a midterm economics exam also watched a videotape of upperclassmen discussing their causes of academic success and failure in their first year. The students also viewed a videotape of a psychology professor discussing benefits of a strategy program that emphasized effort attribution for success (Van Overwalle, Segebarth, & Goldchtein, 1989). The freshmen attained higher scores on their next
examination. In a similar study, after attribution retraining, student performance on a final examination improved over previous exams (Van Overwalle & De Metsenaere, 1990).

Method

This research is similar to previous research on attribution retraining that examined the enhancement of academic performance on psychology and economics students with attribution retraining by videotape (Noel et al., 1987; Van Overwalle et al., 1989; Wilson & Linville, 1982, 1985). This research investigates the effect of attribution retraining on academic performance of developmental mathematics students and determines if their performance attributions for success and failure change after training.

Participants

Four classes in one community college of second semester developmental mathematics were used for the study. The treatment and control group consisted of two classes each. The treatment group originally consisted of 39 students, but three students resigned from the course. The control group consisted of 29 students; however, four students dropped the course.

The control and treatment classes were similar in achievement test scores, age, ACT scores, and gender. The means for achievement test one and two for the control and treatment students were 83.32 and 80.47 respectively. The average ages for the control students were 29.52 and 25.05 for the treatment students. The control students’ ACT mean score was 17.90, and the treatment students’ ACT mean score was 18.16. The control students consisted of 40% males (10) and 60% females (15) in relation to 33.3% males (12) and 66.7% females (24) for the treatment students.

Procedures

The procedures included two sessions for both the control and treatment classes. The two sessions took place during the regular class times.

During Session 1, Packet 1 was completed by all four classes prior to the third course examination in developmental mathematics. Packet 1 for both the treatment and control classes consisted of the consent form and the Mathematics Attribution scales (Fennema, Wolleat, & Pedro, 1979).

In Session 2, Packet 2 was completed by all four classes prior to the fifth course examination in developmental mathematics. Packet 2 for both the treatment and control classes consisted of the Mathematics Attribution scales (Fennema et al.). The length of time that elapsed between Session 1 and Session 2 was four weeks.

After Session 1, subjects’ high school grade point averages, ACT composite scores, and course grades in developmental mathematics were obtained. Immediately following Section 2, subjects’ course grades since Session 1 in developmental mathematics were retrieved.
Videotape

Following the administration of the consent form, the treatment of the videotape on attribution retraining was given to the two treatment classes. The tape consisted of actual interviews with five upper class students who were successful in their developmental courses. The tape lasted 15 minutes. The format of the interviews was identical: (a) the students revealed the reasons for their early failures, (b) they reported on their efforts that improved their scores on following examinations, and (c) they gave suggestions to students on how to be successful in their developmental mathematics courses. The causes of failure reported by the interviewees were edited for responses that emphasized lack of effort. The reasons for success reported by the interviewees were edited for answers that emphasized effort.

Instruments

Mathematics Attribution Scales. The scales are designed to measure students’ perception of the causes of their successes and failures in mathematics, and was adapted from Fennema, Wolleat, and Pedro (1979, as cited in Elliott, 1990).

The Mathematics Attribution scales is comprised of 36 items that make up eight subscales that measure attribution of success due to ability, failure due to lack of ability, success due to effort, failure due to lack of effort, success due to task ease, failure due to task difficulty, success due to luck factors, and failure due to luck factors (Elliott, 1990).

Achievement Measures. Four achievement measures were administered to the four classes in this study. The achievement measures consisted of four developmental mathematics examinations provided by the instructors. The four classes received the same examinations.

Hypotheses

In the three areas of proposed investigation, there are three hypotheses.

Hypothesis 1

Subjects who receive attribution retraining will have higher scores on the measure of effort attribution than subjects who receive no attribution retraining controlling for prior attributions.

Hypothesis 2

Subjects’ scores on the measures for attribution for ability, luck, and task will be greater prior to attribution retraining than after attribution retraining.

Hypothesis 3

Subjects who receive attribution retraining will have higher achievement test scores than subjects who do not receive attribution retraining controlling for prior achievement.
Data Analysis And Results

The statistical procedure to test hypotheses 1 and 3 was Analysis of Covariance (ANCOVA), because intact classes were used. ANCOVA was used to statistically control the effect of an independent variable that is related to the dependent variable (McMillan & Schumacher, 1984). The statistical procedure to test hypothesis 2 was a t-test. The research consisted of one independent variable and two dependent variables. The independent variable was attribution retraining, and the dependent variables were achievement test scores and post attributions.

Results

Hypothesis 1

An ANCOVA tested for a significant difference between the four item success-effort attributions post means while controlling for student’s entry-level success and effort attributions. The independent variable was the attribution retraining videotape and the dependent variable was the Success-Effort sub-scale score from the Mathematics Attribution scales.

It was hypothesized that developmental mathematics students who completed the Mathematics Attribution scales after watching videotape on attribution retraining would attribute their success in mathematics to effort. Conversely, the developmental mathematics students who completed the Mathematics Attribution scales and did not view the videotape on attribution retraining would not attribute their success in mathematics to effort. With an alpha level of .05, the effect of attribution retraining was not statistically significant, $F(1, 53) = 3.05, p = .08$.

Hypothesis 2

A paired t-test was used to determine if there was a significant difference in the means for the luck, task, and ability sub-scales. The attribution retraining videotape was the independent variable, and three subscale scores from the Mathematics Attribution scales were the dependent variables.

It was hypothesized that developmental mathematics students who completed the Mathematical Attribution scales after viewing an attribution retraining videotape would report weaker attributions to ability, luck, and task difficulty. None of the paired pre and post means for the three attribution sub-scales (i.e., ability, luck, task) differ significantly for the attribution retraining group.

The pre and post means for the success-ability attribution subscale were 12.11 and 11.96 (SDs = 4.15 and 4.12 respectively). The difference between these two means were not statistically significant ($t = .12, df = 26, p = .45$).
The pre and posttest means for the success-luck attribution subscale were 15.48 and 14.74 (SDs = 3.34 and 3.11 respectively). The difference between these two means were not statistically significant (t = 1.15, df = 26, p = .13).

The pre and posttest means for the success-task attribution subscale were 11.55 and 11.81 (SDs = 3.08 and 3.85 respectively). The difference between these two means were not statistically significant (t = .26, df = 26, p = .40).

**Hypothesis 3**

An ANCOVA tested for a significant difference between the academic achievement posttest means while controlling for the entry-level academic achievement. The independent variable was the attribution retraining videotape, and the dependent variable was the achievement test scores.

It was hypothesized that the treatment students would have higher achievement test scores in mathematics after the attribution retraining videotape. With an alpha level of .05, the effect of attribution retraining was not statistically significant, $F(1, 53) = .292, p = .59$.

**Conclusions and Recommendations**

**Hypothesis 1**

The results of the study indicated that after the treatment, a greater number of the developmental mathematics students receiving the attribution retraining treatment agreed that success in mathematics was due to effort than before the treatment. Following the treatment, scores on the subscale that measure success in mathematics due to effort were significantly higher (77.7%) than prior to the treatment (51.8%).

For the control group, the results were just the opposite. Their pre attributions that success in mathematics is due to effort are greater in number than their post attributions. On the pre success-effort attribution sub-scale, 63.6% of them agree that success in mathematics is due to effort in relation to 54.6% on the post success-effort attribution sub-scale.

**Hypothesis 2**

In addition, the results of the research did not statistically support the hypothesis that developmental mathematics students’ attributions for ability, luck, and task would be greater prior to attribution retraining than after attribution retraining (44%-40%; 73%-72%; 40%-38% respectively). However, the attribution retraining students did agree in a greater number of responses that success in mathematics is due to ability, luck, and task prior to the attribution retraining than after attribution retraining by videotape.

The agree responses for the success-ability, success-luck, and success-task subscales are the only responses that directionally remained consistent; the number of responses decreases in each sub-scale after the attribution retraining videotape. Once again, attribution retraining by
videotape may have provoked the developmental mathematics students to take responsibility for their individual learning by not attributing outcomes to ability, luck, and task.

The failure of attribution retraining by videotape to improve developmental mathematics student’s academic performance did not support Weiner’s attribution theory. However, the findings lend support that attribution retraining by videotape shifted the attribution retraining students’ attributions away from uncontrollable (i.e., ability, task, luck) causes to the only controllable cause, effort. Therefore, attribution retraining can be an essential tool for educators to either encourage or alter the way students think about their success.

**Hypothesis 3**

The pretest achievement grades may have been the greatest factor for differences in results for academic achievement. Only 8.3% of the developmental mathematics students receiving the attribution retraining treatment were failing developmental mathematics prior to the treatment. Most of the students were achieving success prior to the treatment, therefore it is likely that they did not experience much difficulty with the course.

Developmental education has a viable role in educating students. Many institutions have developed programs for their developmental students in reading, English, and mathematics. Developmental education allows students to have well-trained instructors and learning facilities to enhance their academic performance. This factor alone may be a good reason why many of the students in this research were successful with developmental mathematics.

The research finding from this study to improve developmental students’ academic achievement yields a recommendation for future attribution retraining by videotape. Attribution retraining by videotape has been proven successful when used with academically weak students (Noel et al., 1987; Van Overwalle et al., 1989; Van Overwalle & De Metsenaere, 1990; Wilson & Linville, 1982, 1985). Future studies with developmental students could randomly assign low academic students to treatment. Although the current research was conducted with developmental mathematics students, they may not have been suffering from learning difficulties or even concerned about their academic performance. Future studies could also include more than one institution. Involving several institutions would allow researchers to better generalize results across institutions and test for program differences.

Educators should also encourage students to consider the causes of their success and failure in relation to their achievement. For instance, educators may consider explicitly reinforcing students’ effort attributions and never encouraging attributions to luck or ability. “If students who do poorly in class conclude there is nothing they personally can do to change their outcomes, then their failure could undermine their motivation and satisfaction with self and with school work” (Noel et al., 1987, pp.160–161). However, if the teacher encourages students to associate failure with the only controllable factor, effort, then the debilitating consequences of failure may be avoided.
References


Walter Pauk’s *How to Study in College* is one of the best textbooks available for helping students make the transition from high school learning strategies to college learning strategies. This book is based on widely tested educational and learning theory, much of which is cited in the text. However, the theory presented is appropriately tied to specific applications that are easy for the student to understand. The book does not stress mere memorization, but stresses learning techniques that result in real learning for the student. Students learn that they are in control of the learning process and are taught to become their own instructor, who is capable of using techniques and strategies that will assist them in becoming independent learners. The readability level appears to range from 8th grade to 11th grade level according to the Flesh Kincaid Readability Formula on Microsoft Word.

The instructor who is teaching a college study skills course easily can apply the study strategies presented to study skills classes because the text itself is a good example of a college-level text. The text is reader friendly and contains charts, figures, headings, subheadings, tests, summaries, and answers. Students can apply the “Cornell Note Taking System” when taking lecture notes and can implement the “Questions in the Margin System” to textbook notes. Even outlines can be modified into learning systems by applying the Cornell Note Taking System’s “Que Column” and the Questions in the Margin System to the outlined notes. Using the 3 x 5 card system could be used for vocabulary learning and other content learning as well. Students may be asked to create objective and essay questions over chapters accompanied with answers because they are taught the specifics about how the questions are constructed.

Topics covered in the text include Goals, Time Management, Stress, Vocabulary Learning, Reading Comprehension, Concentrating and Focusing, and Test Taking Strategies. In the text, Pauk deftly compares the “Survey, Question, Read, Recite, Review” (SQ3R) system to the Questions in the Margin System, showing the advantages and disadvantages between the two systems. Extra chapters, provided in the *Instructor’s Manual*, are concerned with how to write a
research paper, how to study science, how to study foreign languages, and how to study literature. Also included are 10 additional multiple choice questions with answers and further study and discussion questions for each chapter in the text. In addition, video tapes to accompany several chapters can be purchased. The videos portray a diverse group of students learning to cope with the new demands of college life. These tapes are called “Roundtable Discussion Video Tapes.” The tapes teach students to help each other learn to take practical actions to deal with learning, personal, and professional life problems to assure success in college. Discussion questions and assignments for the tapes are also included in the Instructor’s Manual.

This new edition of Pauk’s book emphasizes the importance of lifelong vocabulary development. After trying a multitude of different vocabulary exercises, Pauk believes that the most important motivational force to make vocabulary learning lasting and meaningful is interest. Interest in words may be developed two ways: by reading books about stories of words with pictures in a book such as *Picturesque Word Origins*, which is currently out of print, or having students read biographies of some famous women or men who acquired a solid vocabulary, overcame illiteracy, and achieved both academic and worldly success, somewhat similar to Malcolm X’s experiences in *The Autobiography of Malcolm X*. Other systems of learning vocabulary that are suggested in the text are “The Word History System” and the “Frontier Vocabulary System.” The Word History System is based on the theory that if you learn the story of a word by tracing its development and viewing its picture, you will remember it better. Students are introduced to Johnson O’Connor’s “Frontier Vocabulary System” and the 3 x 5 card system to master already familiar words.

If this book has weak points, the only areas would be not including learning inventories, not having randomized computerized test banks, and not providing enough information on how to write the term paper. This is a small disadvantage for such a complete book.
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