Table of Contents

Peer Study Groups as Catalyst for Vocational Exploration
By David R. Arendale and Amanda R. Hane 2

Acceleration and Compression in Developmental Mathematics: Faculty Viewpoints
By Brian Cafarella 12

Learning Support Centers and International Tutor Training Program Certification: An Interview with Rick A. Sheets
By Luann Walker 20

NADE News: The McCabe Developmental Education Conference Partnership
By Gwenn Eldridge, NADE President  28

For Your Information 29

Connecting Practice to Research: Making Informed Pedagogical Decisions
By Judi Salsburg Taylor, Renee K. Dimino, Jodi P. Lampi, and David C. Caverly 30

NADE Members Respond: Best Practices and Challenges in Integrated Reading and Writing, Part 1
By D. Patrick Saxon, Nara M. Martirosyan, and Nicholas T. Vick 32

Developments 35

Advertisers Index 36

Article Abstracts:

Peer Study Groups as Catalyst for Vocational Exploration
By David R. Arendale and Amanda R. Hane

ABSTRACT: Postsecondary peer assisted learning programs often cite improving academic achievement for students. This qualitative study investigated the potential effect of serving as student facilitators of a peer study group on their future vocation. This was a replication of previous studies of personal and professional outcomes for study group facilitators. Findings of this study suggest the facilitator experience strongly influenced facilitators’ interest in careers, especially related to the teaching profession. This study explores why these programs generate these outcomes through linking leading theories to the research outcomes. Peer study group programs present a cocurricular experience that could be more powerful if it was intentional for professional development outcomes of the student facilitators and participants. With the highly competitive job market for today’s college graduates, institutions must use every opportunity to increase job readiness skills of its graduates.

Acceleration and Compression in Developmental Mathematics: Faculty Viewpoints
By Brian Cafarella

ABSTRACT: Community colleges are facing increased pressure to accelerate students through their developmental mathematics sequence. However, many individuals feel that some state legislatures and college leaders are frequently bypassing developmental math faculty expertise when implementing acceleration and compression initiatives. This qualitative study focuses on faculty viewpoints with regard to acceleration and compression in developmental math. Guiding this study was the research question: Based on faculty experience, what is the best fit for the practices of acceleration and compression in developmental mathematics? Data has been gathered using a structured interview format for six developmental math instructors, two at each of three community colleges. Findings from this study suggested that the practices of acceleration and compression are a proper fit for students who are comfortable with computer software. Incoming skill level and individual student learning style are also imperative when considering acceleration and compression for developmental math students. Individual instructor comfort level is another significant detail for consideration with regard to the aforementioned practices.

Volume 39, Issue 1, Fall 2015
Table of Contents
Accelerated Developmental Arithmetic Using Problem Solving
By G. Michael Guy, Jonathan Cornick, Robert J. Holt, and Andrew S. H. Russell 2

Theory to Practice: Cultivating Academic Language Proficiency in Developmental Reading Classrooms
By Heather N. Neal 12

The Developing Role of Student Advising: An Interview with Charlie Nutt
By Arlene Harborth 18

Summer Bridge's Effects on College Student Success
By Beth Bir and Mondrail Myrick 22

NADE News: Join NADE! Your Voice Is Needed!
By Gwenn Eldridge, NADE President 29

Connecting Practice & Research: A Shared Growth Professional Development Model
By Jodi P. Lampi, Renee K. Dimino, and Judi Salsburg Taylor 32

For Your Information 35

Developments and Advertisers Index 36

Article Abstracts:

Accelerated Developmental Arithmetic Using Problem Solving
By G. Michael Guy, Jonathan Cornick, Robert J. Holt, and Andrew S. H. Russell

ABSTRACT: After many years of extremely low success rates, a radical new design of the first semester arithmetic remedial course was implemented and studied. Students at a large urban community college could take a traditional semester-long traditional lecture-based remedial arithmetic course or a new accelerated 4-week 20-hour problem-solving based alternative remedial arithmetic course. Students taking the accelerated course passed a common exit exam at a statistically significant increased rate. However, those students did not pass the subsequent remedial algebra class at a statistically significant different rate, suggesting that, although the shorter problem-solving based class format improved student achievement in an individual class, more is required to sustain a lasting impact. The pedagogical and structural changes involved in this redesign are also discussed.

Theory to Practice: Cultivating Academic Language Proficiency in Developmental Reading Classrooms
By Heather N. Neal

ABSTRACT: Academic language plays a key role in reading comprehension, disciplinary thinking, and overall academic success. However, many approaches to teaching academic language, such as a focus on academic vocabulary, overlook other language features that can pose challenges for students. Systemic Functional Linguistics (SFL), arguably one of the three bodies of knowledge that have most substantially contributed to disciplinary literacy theory, sheds light on the nature and functional purpose of academic language. This article explores academic language through the lens of SFL and identifies viable strategies for academic language instruction within the developmental reading classroom.

Summer Bridge's Effects on College Student Success
By Beth Bir and Mondrail Myrick

ABSTRACT: This study considered whether participation in a rigorous, intense summer bridge program had a significant effect on the academic success of African-American male and female students in developmental education, compared to nonparticipants, at a four-year Historically Black University in terms of retention, progression, and graduation from 2008-2012. Participants in the summer bridge program entered with significantly lower test scores and high school grades than nonparticipants, yet for all cohorts combined the summer bridge participants achieved significantly higher college GPAs and were retained to the second and third year at significantly higher rates. Female participants showed the greatest gains in all categories, with significantly higher GPAs and retention, for all cohorts. Male participants’ GPAs and retention, were, overall, not significantly higher. Graduation rates for females were also encouragingly higher, though they did not reach a level of significance.

Volume 38, Issue 3, Spring 2015
Table of Contents

Impact of Learning Assistance Center Utilization on Success
By Keith A. Wurtz 2

Factors Influencing College Persistence for First-Time Students
By Sheilynda Stewart, Doo Hun Lim, and JoHyun Kim 12

NADE News: Comment on the Higher Education Act Reauthorization
By Gwenn Eldridge, NADE President 20
Article Abstracts:

Impact of Learning Assistance Center Utilization on Success
By Keith A. Wurtz

ABSTRACT: A large number of community college students are developmental students. One of the most important challenges for community colleges today is to create programs that effectively educate community college developmental students. This study examines the effect of learning assistance centers on the success and persistence of students at a Southern California community college that utilized learning assistance centers to improve student success. Sequential logistic regression was used to predict the effects of learning assistance center utilization on success and persistence while controlling for self-selection and prior skill level. The results indicate that learning assistance center utilization increased the probability of success and persistence more than prior skill level and self-selection. Students who utilized a learning assistance center were three times as likely to be successful in their course and almost twice as likely to persist to the subsequent term. Implications for future practice include the recommendation for requiring students to utilize learning assistance centers.

Factors Influencing College Persistence for First-Time Students
By Sheilynda Stewart, Doo Hun Lim, and JoHyun Kim

ABSTRACT: Using Tinto’s (1993) longitudinal model of institutional departure, this study examined demographic variables, family characteristics, precollege and college academic performance factors, and extent to which mandatory placement in remedial courses predict persistence at a public research institution. This study also examined the relationship between ACT composite scores, high school GPA, first-semester college grade point averages, and persistence. Longitudinal data with 3,213 students were analyzed using factorial analysis of variance (ANOVA), Pearson’s product-moment correlations, and multiple regression analysis. Results showed significant mean differences for ethnicity, financial aid, and remedial status on persistence. High school GPA and first-semester college GPA were found to be significant predictors of persistence. Findings indicated that traditional college students who were academically prepared to take college-level coursework were more likely to persist than students placed in mandatory remedial coursework. Implications from this study suggest that support services such as tutoring, mentoring, counseling services, early intervention systems, and financial aid assistance will improve study participants’ academic deficiencies and increase persistence beyond the first year.

Students’ Reflections on Mathematics Homework Feedback
By Mara Landers and Daniel Reinholz

ABSTRACT: Homework is considered an important aspect of learning mathematics, but little research has considered how students utilize feedback as part of the homework process. This mixed methods, quasi-experimental study examines how community college students in a developmental intermediate algebra course participated in a feedback reflection activity throughout a semester and compares their outcomes with a class that did not engage in this activity. Although developmental math students are often positioned as deficient in skills and motivation, most students took this activity as an opportunity for self-assessment, documenting resources for success and critiquing their work for improvement. These students did not outperform peers on summative course assessments; however, there were differences in their growth as effective learners.

Volume 38, Issue 2, Winter 2015
Table of Contents

Investigating Academic Literacy Expectations: A Curriculum Audit Model
By Sonya L. Armstrong, Norman A. Stahl, and M. Joanne Kantner

Developmental Mathematics Success: Impact of Students’ Knowledge and Attitudes
By Babette M. Benken, Jorge Ramirez, Xuhui Li, and Scott Wetendorf

Ideas in Practice: Professional Development to Promote Universal Design for Instruction
By Carrie A. Rodesiler and Joan M. McGuire

For Your Information

NADE Members Respond—Developmental Education Research Agenda: Survey of Field Professionals, Part I
Investigating Academic Literacy Expectations: A Curriculum Audit Model
By Sonya L. Armstrong, Norman A. Stahl, and M. Joanne Kantner

ABSTRACT: Although much research has examined students’ readiness levels as they prepare to transition from high school to college, little published research exists on the specific literacy expectations students will face in their early college experiences. This article provides an overview of a model for determining the reading demands and expectations in such early-college courses. The evaluative model allows faculty teams to examine the academic literacy expectations for introductory-level general education and career technical courses and simultaneously explore the curricula in developmental reading courses. Using the model, evaluators can determine the degree of alignment of text difficulty levels, expectations for student literacy competencies, and standard literacy practices within and across courses.

Developmental Mathematics Success: Impact of Students’ Knowledge and Attitudes
By Babette M. Benken, Jorge Ramirez, Xuhui Li, and Scott Wetendorf

ABSTRACT: In order to improve student success within developmental programs, we conducted a study of 1st year students taking required, developmental mathematics courses at a large, urban public university. Findings suggest that merely the number of years of mathematics that students take in high school is not a precise indicator of student readiness and that passing courses in high school does not necessarily imply that students are prepared for the level of rigor expected in postsecondary institutions. Furthermore, results advocate for the re-evaluation of developmental mathematics courses to include student outcomes that focus on attitudes about mathematics in addition to content and skills.

Ideas in Practice: Professional Development to Promote Universal Design for Instruction
By Carrie A. Rodesiler and Joan M. McGuire

ABSTRACT: Given changing enrollment patterns in higher education that include more diverse learners, efforts to design instruction to be more inclusive are well documented. Developmental education programs comprise a dynamic environment for applying inclusive teaching strategies that promote learning. A grant-funded initiative for professional development that used the framework of Universal Design for Instruction (UDI) included activities in developmental reading, writing, and math courses. Participants, most of whom were part-time instructors, engaged in an intensive administrator-led, 2-day workshop followed by participant-led activities that extended over multiple semesters. Elements of the training are described; examples of strategies used by these instructors based on UDI principles are included; and insights into the value of designing teaching to incorporate UDI principles are shared. Participant feedback affirmed the benefits of professional development time with colleagues to share teaching ideas and to reflect on elements in the instructional cycle that lend themselves to deliberate planning. Recommendations for future initiatives to foster inclusive teaching practices are offered.
Innovative Developmental Education Programs: A Texas Model
By Eric A. Booth, Mary Margaret Capraro, Robert M. Capraro, Nandita Chaudhuri, James Dyer, and Miner P. Marchbanks III

ABSTRACT: This article provides insights from a 2-year, cross-site evaluation of state funded developmental education sites and serves as a focus article for response by those sites. Receiving grants from the Texas Higher Education Coordinating Board (THECB), nine sites (5 community colleges and 4 universities) implemented innovative developmental education programs in Texas. The Public Policy Research Institute at Texas A&M University was charged with evaluating the nine sites. A cross-site program evaluation collected quantitative data from the sites to determine success rates for students enrolled in their programs. Qualitative methods were used primarily to interpret the quality indicators present across sites. Data in the form of interviews, focus groups, and self-reports were applied. The successes and challenges were organized into four thematic categories: Curriculum Design and Instructional Strategies, Faculty and Staff Supports, Structures Supporting Learning, and Policy Issues. Findings show that accelerated approaches via redesigned curriculum for shortened, completely or partially self-paced, corequisite, and blended courses helped accelerate student completion or transition to credit bearing courses for the motivated students. Alternative instructional strategies provided a high level of interaction between students and instructors and on-line, on-demand tutoring at the sites. Focused professional development for the DE instructors and administrators was found to be useful in learning to deal with specific student problems.

Faculty Advising to Support Student Learning
By Laurel V. Williamson, Rebecca A. Goosen, and George F. Gonzalez, Jr.

ABSTRACT: This article describes the implementation of a program undergirded by the theme of faculty and staff supports that physically brings advising to the point of instruction. Research shows that establishing a strong institutional connection with students improves retention, persistence, and success. What better way to do this than take advising into the classroom and create a strong partnership between faculty and student services to provide support, information, and career direction? Sustained through an ongoing dialogue between instruction and student development professionals, classroom activities and wrap-around support services can be uniquely focused on the individual student. The college found that advising becomes a tool delivered by a faculty-student services team that holds students accountable while providing needed assistance along the student’s educational pathway.

FOCUS: Sustainable Mathematics Successes
By Selina V. Mireles, Taylor W. Acee, and Lindsey N. Gerber

ABSTRACT: The FOCUS (Fundamentals of Conceptual Understanding and Success) Co-Requisite Model Intervention (FOCUS Intervention) for College Algebra was developed as part of the Developmental Education Demonstration Projects (DEDP) in Texas. The program was designed to use multiple services, courses, and best practices to support student completion of a credit-bearing mathematics course. The curriculum design and instructional strategies of the College Algebra FOCUS band are described and examples are included to expand on the richness of the model. Using repeated measures of students’ mathematics proficiency and baseline comparison group data of students’ course grades, we present evidence linking the FOCUS Intervention with increased mathematics proficiency, fewer course withdrawals, and improved course grades.

Transforming Developmental Education in Texas
By the Texas Higher Education Coordinating Board

ABSTRACT: In recent years, with support from the Texas Legislature, the Texas Higher Education Coordinating Board has funded various developmental education initiatives, including research and evaluation efforts, to help Texas public institutions of higher education provide more effective programs and services to underprepared students. Based on evaluation results from the various initiatives, especially the Developmental Education Demonstration Projects, a number of identified promising practices continue to be scaled and further evaluated in developmental education projects funded through August 2015. This report provides an update on the progress of developmental education initiatives and recommendations for future efforts to effectively and efficiently improve the persistence and success of underprepared students as they strive to reach their academic and career goals.

Volume 37, Issue 3, Spring 2014
Table of Contents

Analogical Processes and College Developmental Reading  
By Eric J. Paulson 2

Study Skills Course Impact on Academic Self-Efficacy  
By Brenna M. Wernersbach, Susan L. Crowley, Scott C. Bates, and Carol Rosenthal 14

Annual Index 23

Effective Student Assessment and Placement: Challenges and Recommendations  
By D. Patrick Saxon and Edward A. Morante 24

NADE News: Initiatives Focus on Enhancing Service to Members  
By Taunya Paul, NADE President 29

For Your Information 31

Techtalk: Mobile Apps for Disciplinary Literacy in Science  
By Jodi Patrick Holschuh, Erin Scanlon, Tamara Harper Shetron, and David C. Caverly 32

Critical Thinking: Intellectual Standards Essential to Reasoning Well Within Every Domain of Human Thought, Part 4  
By Richard Paul and Linda Elder 34

Developments and Advertisers Index 36

Article Abstracts:

Analogical Processes and College Developmental Reading  
By Eric J. Paulson 2

ABSTRACT: Although a solid body of research concerning the role of analogies in reading processes has emerged at a variety of age groups and reading proficiencies, few of those studies have focused on analogy use by readers enrolled in college developmental reading courses. The current study explores whether 232 students enrolled in mandatory (by placement test) developmental reading courses in a postsecondary educational context utilize analogical processes while engaged in specific reading activities. This is explored through two separate investigations that focus on two different ends of the reading spectrum: the word-decoding level and the overall text-comprehension level. The two investigations reported here build on comparable studies of analogy use with proficient readers. Results indicate clear use of analogy at the decoding level of reading with trends toward some types of analogy use facilitating comprehension at whole-text levels of reading.

Study Skills Course Impact on Academic Self-Efficacy  
By Brenna M. Wernersbach, Susan L. Crowley, Scott C. Bates, and Carol Rosenthal 14

ABSTRACT: Although study skills courses improve student retention, the impact of study skills courses on students’ academic self-efficacy has not been investigated. The present study examined pre- and posttest levels of academic self-efficacy in college students enrolled in a study skills course (n = 126) compared to students enrolled in a general education course (n = 111). Students enrolled in study skills courses had lower initial levels of academic self-efficacy and demonstrated greater increases than comparison students, reaching equivalent levels or surpassing the comparison students at posttest. Results are considered in light of the broader issue of student retention and in the context of current practice.

Effective Student Assessment and Placement: Challenges and Recommendations  
By D. Patrick Saxon and Edward A. Morante 24

ABSTRACT: Recent research on entering college student assessment instruments and placement practices has been critical. Critics suggest that commonly used assessment instruments are inaccurate, misused, and lack predictive validity. This article describes valid criticisms and appropriate uses of assessment instruments. It also lists challenges and provides recommendations to improve several common inadequacies in college assessment and placement processes. Finally, we discuss the role of assessment and placement as it is impacted by efforts to eliminate or redesign developmental education.
**Article Abstracts:**

**Flawed Mathematical Conceptualizations: Marlon’s Dilemma**
By Lauretta Garrett

ABSTRACT: Adult developmental mathematics students often work under great pressure to complete the mathematics sequences designed to help them achieve success (Bryk & Treisman, 2010). Results of a teaching experiment demonstrate how the ability to reason can be impeded by flaws in students’ mental representations of mathematics. The earnestness of the subject’s efforts and the frequent detours his learning took create a vivid portrait of what happens in the lives of students for whom “the dream stops” at developmental mathematics (Bryk & Treisman, 2010, p. 19). Results provide teachers with a clearer picture of what is needed to help their students build mathematical understanding.

**Academic Engagement: Hispanic Developmental and Nondevelopmental Education Students**
By Stephanie J. Brickman, Edna C. Alfaro, Amy A. Weimer and Karen M. Watt

ABSTRACT: The purpose of this research is to identify any differences in the academic engagement of Hispanic students enrolled in a developmental course compared to those enrolled in a retention initiative course. Researchers proposed that personal interests and perceptions of instrumentality to future goals would help develop, guide, and direct successful academic engagement. The participants (N = 407) were Hispanic college freshmen. MANCOVA and SEM were employed to examine whether group differences emerged. Analyses revealed perceptions of instrumentality were a stronger predictor of selfregulation for nondevelopmental course students than for developmental education students.

**Volume 37, Issue 1, Fall 2013**

**Table of Contents**

Using Formative Assessment and Metacognition to Improve Student Achievement
By John Hudesman, Sara Crosby, Bert Flugman, Sharlene Issac, Howard Everson, and Dorie B. Clay 2

Readiness, Behavior, and Foundational Mathematics Course Success
By Kevin Li, Richard Zelenka, Larry Buonaguidi, Robert Beckman, Alex Casillas, Jill Crouse, Jeff Allen, Mary Ann Hanson, Tara Acton, and Steve Robbins 14

NADE News: Developmental Education is Not Going Away
By Patti Levine-Brown, NADE President 23

Doctoral Programs in Developmental Education: Interview with Three Leaders
By Marla Kincaid 24

Techtalk: Mobile Learning and Literacy Development
By David C. Caverly 30

Critical Thinking: Intellectual Standards Essential to Reasoning Well Within Every Domain of Human Thought, Part Two
By Richard Paul and Linda Elder 32

For Your Information 34

Developments 35

Advertisers Index 36

**Article Abstracts:**
Using Formative Assessment and Metacognition to Improve Student Achievement
By John Hudesman, Sara Crosby, Bert Flugman, Sharlene Issac, Howard Everson, and Dorie B. Clay

ABSTRACT: This paper describes a multistep Enhanced Formative Assessment Program (EFAP) that features a Self-Regulated Learning (SRL) component. The program, which teaches students to become more effective learners, has been applied in a wide range of academic disciplines. In this paper we report on how the EFAP-SRL model can be applied to the area of developmental mathematics. In a 3-year series of studies, EFAP-SRL students enrolled in associate degree developmental mathematics courses consistently earned higher pass rates in the course as well as higher pass rates on the mathematics portion of the ACT. In addition, there is some evidence that program students transferred this learning into subsequent college-level mathematics courses.

Readiness, Behavior, and Foundational Mathematics Course Success
By Kevin Li, Richard Zelenka, Larry Buonaguidi, Robert Beckman, Alex Casillas, Jill Crouse, Jeff Allen, Mary Ann Hanson, Tara Acton, and Steve Robbins

ABSTRACT: This study examines the effects of math readiness and student course behavior (e.g., attendance, participation, homework completion) on knowledge gain and course success using two samples of students enrolled in foundational skills (noncredit-bearing) mathematics courses. As hypothesized, entering student mathematics readiness and course behavior predicted posttest mathematics knowledge. Posttest knowledge and course behavior predicted course success (i.e., passing the course). Results highlight the importance of mathematics readiness and student behavior for understanding mathematics knowledge gains and course success. Implications for institutional policy and practice using effective diagnostic testing and behavioral monitoring are discussed.

Volume 36, Issue 3, Spring 2013
Table of Contents

Causal Attributions and Student Success in Developmental Mathematics
By Jacob Arthur Dasinger

Student Responsibility and Self-Directed Learning: An Interview with Christine McPhail
By D. Patrick Saxon

Commentary: Characterizing the Effectiveness of Developmental Education: A Response to Recent Criticism
By Thomas Bailey, Shanna Smith Jaggars, and Judith Scott-Clayton

NADE News: Opening Channels of Communication
By Patti Levine-Brown, NADE President

A Brief Response to Bailey, Jaggars, and Scott-Clayton
By Alexandros M. Goudas and Hunter R. Boylan

Annual Index

Critical Thinking: Intellectual Standards Essential to Reasoning Well Within Every Domain of Thought
By Linda Elder and Richard Paul

On the Developmental Education Radar Screen – 2013
By Eric J. Paulson

Developments

For Your Information

Article Abstracts:

Causal Attributions and Student Success in Developmental Mathematics
By Jacob Arthur Dasinger

ABSTRACT: This research examined differences in causal attributions and an exam score in a developmental mathematics course based on student classification: traditional, minimally nontraditional, moderately nontraditional, and highly nontraditional as well as grade and gender among nontraditional students. Statistical analysis revealed significant differences on the Revised Causal Attribution Scale (CARSII) in the Personal Controllability dimension for low-graded students, and in both the Personal and External Controllability dimensions for high-graded students. Based on gender, low-graded, nontraditional students showed a significant difference in the Locus of Causality dimension whereas no significant differences appeared among high-graded, nontraditional students.

Commentary: Characterizing the Effectiveness of Developmental Education: A Response to Recent Criticism
By Thomas Bailey, Shanna Smith Jaggars, and Judith Scott-Clayton
ABSTRACT: Research conducted by the Community College Research Center (CCRC) and others was criticized in an article by Alexandros M. Goudas and Hunter R. Boylan (2012) published in the Journal of Developmental Education, Volume 36, Issue 1. They raise specific contentions related to the methodology applied in the CCRC studies, the review of related literature, and stated findings. Their article claims that we and others have overgeneralized, misinterpreted, and misapplied the data and research to advance a reform agenda that involves replacing prerequisite with corequisite developmental education. In this commentary we show that their key claims do not stand up to scrutiny. Moreover, we point out that, although we think research so far suggests that corequisite models have potential as part of a comprehensive reform of developmental education, we have never called for the elimination of prerequisite remediation. We conclude with some general suggestions—based on our research findings—for strengthening the services that community colleges provide to students with weak academic skills.

A Brief Response to Bailey, Jaggars, and Scott-Clayton
By Alexandros M. Goudas and Hunter R. Boylan

ABSTRACT: Shortly after we published “Addressing Flawed Research in Developmental Education” (2012) in the Journal of Developmental Education, Thomas Bailey, Shanna Smith Jaggars, and Judith Scott-Clayton from the Community College Research Center (CCRC) wrote a response rebutting several of our claims. Though their response corrects some confusion and clarifies a few of their positions on the debate, Bailey et al. appear to persist in a lack of understanding of the content and function of developmental education courses. Compounding the problem is that they solely rely on a relatively new and imperfect method for analysis, the quasi-experimental regression discontinuity design study. Based on these studies, Bailey et al. have consistently argued that developmental education as a whole is ineffective. In this brief response to Bailey et al.’s counterarguments, we elaborate on one of our original paper’s main points and discuss what we consider to be a fundamental flaw in their interpretation of data. The flaw apparently stems from a misunderstanding of what actually happens in remedial courses. As a result, they assume these courses should make remedial students perform better than statistically equivalent nonremedial students. We moreover point out other possible errors in the regression discontinuity approach and its application in developmental education.

Volume 36, Issue 2 Winter 2012
Table of Contents

From The Editor
By Barbara J. Calderwood 3

Cost of Developmental Education: An Update of Breneman and Haarlow
By Joshua Pretlow III and Heather D. Wathington 4

Developmental Mathematics: Challenges, Promising Practices, and Recent Initiatives
By Barbara S. Bonham and Hunter R. Boylan 14

Ideas for Practice: A Collaborative Look to the Classroom
By Dorothy A. Osterholt and Katherine Barratt 22

Improving Supervision of Part-Time Instructors
By Patricia R. Eney and Evelyn Davidson 28

Refocusing Developmental Education
By Thomas Brothen and Cathrine A. Wambach 34

NADE News: Policy Preparation Should Be By Professionals, Not Politicians
By Patti Levine-Brown, NADE President 37

For Your Information 40

Article Abstracts:

Cost of Developmental Education: An Update of Breneman and Haarlow
By Joshua Pretlow III and Heather D. Wathington

ABSTRACT: Since Breneman and Haarlow (1998) first estimated the national cost of developmental education to be approximately $1 billion dollars, the developmental education landscape has shifted in numerous ways. This paper provides an update to their estimate in light of both these changes and improved data that disaggregates the cost to community colleges and four-year public institutions. An updated national cost estimate of developmental education to public institutions in the academic year 2004-2005 is estimated to be $1.13 billion, a 13% increase over the estimate of Breneman and Haarlow. This paper calls for states to make data on developmental education both transparent and publicly available in order to accurately derive a precise cost of developmental education both at the local and national levels.

Developmental Mathematics: Challenges, Promising Practices, and Recent Initiatives
By Barbara S. Bonham and Hunter R. Boylan
ABSTRACT: Developmental education has increasingly become part of the national debate in higher education. This is particularly true for developmental mathematics courses which, in general, have the highest rates of failure and noncompletion of any developmental subject area. This manuscript describes the current state of the art in developmental mathematics, discusses major initiatives designed to reform and improve success rates, and identifies research-based teaching practices associated with improved student performance in developmental mathematics courses.

Ideas for Practice: A Collaborative Look to the Classroom
By Dorothy A. Osterholt and Katherine Barratt

ABSTRACT: Many developmental students begin college ill-equipped in the social and emotional competencies to be successful. Thus, it is essential that institutions of higher education address the broader needs of these students. The purpose of this article is to present collaborative learning as a tool for addressing the social and emotional inhibitors that may prevent success during this time of transition. We address potential concerns for making this pedagogical shift and present reasons for considering this approach. We also provide specific classroom applications of this process that increase the chance that all students acquire the full spectrum of skills crucial for academic success through cooperatively-shared experiences.

Improving Supervision of Part-Time Instructors
By Patricia R. Eney and Evelyn Davidson

ABSTRACT: With an increasing number of colleges and universities turning to part-time instructors to teach courses at their institutions, developmental education professionals are faced with the task of finding appropriate ways to train, serve, and evaluate these instructors. Unfortunately, there is little published information on how to accomplish these tasks. Therefore, the authors have drawn on best practices and research in the field to develop recommendations for supervising part-time instructors.

Refocusing Developmental Education
By Thomas Brothen and Cathrine A. Wambach

ABSTRACT: Dissatisfaction with student success has caused a crisis in developmental education. Critics from both inside and outside the field question whether remedial courses really prepare students for future college work or even if they are properly part of the college mission. In this article, we review research and present information that suggests developmental educators should redefine core principles and key concepts to reinvigorate theory and practice in the field.

Volume 36, Issue 1 Fall 2012
Table of Contents
Addressing Flawed Research in Developmental Education
By Alexandros M. Goudas and Hunter R. Boylan 2

For Your Information
13

NADE News: Conference Draws Near
By Rebecca Goosen, NADE President 14

Feedback on Developmental Writing Students’ First Drafts
By Beth Gulley 16

Strategies to Increase Enrollment, Retention, and Graduation Rates
By Patricia Y. Talbert 22

Critical Thinking: Competency Standards Essential to the Cultivation of Intellectual Skills, Part 5
By Richard Paul and Linda Elder 30

Techtalk: 13a-Mobile Learning and the Knowledge Age
By David C. Caverly 32

Developments
34

Advertisers Index
36

Article Abstracts:
Addressing Flawed Research in Developmental Education
By Alexandros M. Goudas and Hunter R. Boylan

ABSTRACT: Much of recent research in postsecondary developmental education leaves the distinct impression that most remedial courses in community colleges are unsuccessful in helping students and that they should be entirely overhauled. Legislators and administrators are now taking these recommendations very seriously and are ready to cut programs that are ineffective out of their budgets. However, if this research is read in depth, it is clear the data do not completely support
such claims of inefficacy. In fact, if one were to use solely the data from these studies, one could conclude that indeed community colleges are at least somewhat successful with their current developmental programs. The interpretation depends on how developmental education is defined, how success is defined, and how data is interpreted within a larger context. This paper explores the recent research’s primary claims regarding the effectiveness of developmental education, the data supporting those claims, their conclusions, and some potentially harmful results. We include different interpretations of that same data along with other infrequently cited studies to help shed light on what the current state of developmental education is with our nation’s nearly 1,200 community colleges.

Feedback on Developmental Writing Students’ First Drafts
By Beth Gulley

ABSTRACT: Many writing teachers provide feedback to their students through writing conferences; however, the existing literature indicates teachers may unintentionally harm their weaker students by using this strategy. To better understand the effect of the writing conference on developmental writing students, the researcher created a mixed design ANCOVA to answer the research question: What is the effect of oral feedback delivered via student teacher conferences on significant revisions to content, structure, grammar, and style for developmental writing students? The study found no statistically significant difference among treatment groups. Therefore, the researcher concluded that students improved their drafts regardless of the feedback method.

Strategies to Increase Enrollment, Retention, and Graduation Rates
By Patricia Y. Talbert

ABSTRACT: Student retention in postsecondary institutions continues to be a vexing problem, as graduation rates have continued to decline over the last decade. To be a competitive force in the global economy, it is crucial to keep students in school. This research uses a conceptual data model to introduce academic leaders’ (N = 104) perspectives to increase enrollment, retention, and graduation rates in higher education. The study is composed of two different facets. First, a review was conducted on a subsegment of the Minnesota Measures data regarding student enrollment and performance in two- and four- year degree programs in higher education in the state of Minnesota. Second, strategic methods are introduced from academic leaders involved in planning and developing programs to increase enrollment, retention, and graduation rates; findings provide special attention to reaching out to the minority population, first-generation students, and new attendees.

Volume 35, Issue 3 Spring 2012
Table of Contents

The Consequences of Delayed Enrollment in Developmental Mathematics
By David S. Fike and Renea Fike 2

NADE News: Challenge to Take Ownership
By Rebecca Goosen, NADE President 10

Ideas in Practice: Toward a Participatory Approach to Program Assessment
By Patrick L. Bruch and Thomas Reynolds 12

The Impact of History on the Future of College Reading: An Interview with Norman A. Stahl
By Sonya L. Armstrong 24

Editorial: What Do Placement Tests Measure?
By Edward A. Morante 28

For Your Information 29

Critical Thinking: Competency Standards Essential to the Cultivation of Intellectual Skills, Part 4
By Linda Elder and Richard Paul 30

Developments 32

Advertisers Index 33

Annual Index • Volume 35, 2011-2012 34

Article Abstracts:

The Consequences of Delayed Enrollment in Developmental Mathematics
By David S. Fike and Renea Fike

ABSTRACT: Though a large percentage of U.S. students enter higher education with mathematics deficiencies, many institutions allow these students to decide the timing of their enrollment in developmental mathematics courses. This study
of 3476 first-time-in-college students entailed the review of student outcomes (Fall GPA, Fall-to-Spring retention, Fall-to-Fall retention) for those who enrolled in developmental math during their first semester compared to those who delayed enrollment. The findings suggest that policy requiring mandatory enrollment during the first semester for developmental math students may be in the best interest of students and their institutions.

Ideas in Practice: Toward a Participatory Approach to Program Assessment
By Patrick L. Bruch and Thomas Reynolds

ABSTRACT: Drawing on critical multicultural education scholarship, this article discusses an alternative assessment of academic support programs. It highlights the importance and value of supplementing traditional assessments with direct student participation. Through a discussion of data from a summer bridge program at a large research university, the article examines how a participatory approach can illuminate strengths in a program as well as enduring challenges that might block student success.

Volume 35, Issue 2 Winter 2011
Table of Contents

Unsuccessful and Successful Mathematics Learning: Developmental Students Perceptions
By Laurel Howard and Martha Whitaker 2

NADE News: Join the Conversation
By Rebecca Goosen, NADE President 16

Academic Coaching to Promote Student Success: An Interview with Carol Carter
By Amy L. Webberman 18

Ideas in Practice: Professional Development to Manage Atypical Learner Behaviors
By Anthony G. Colarossi, Rachelle Maltzman, Hope Parisi, Christine M. Rudisel, and Tara Weiss 22

Editorial: Educational Emergency Room Reform
By the Executive Board, National Association for Developmental Education (NADE) 32

Critical Thinking: Competency Standards Essential for the Cultivation of Intellectual Skills, Part 3
By Richard Paul and Linda Elder 34

On the Developmental Education Radar Screen
By Eric J. Paulson 36

For Your Information 39

Developments and Advertisers Index 40

Article Abstracts:

Unsuccessful and Successful Mathematics Learning: Developmental Students Perceptions
By Laurel Howard and Martha Whitaker

ABSTRACT: Limited research has been published that examines newly successful mathematics students’ perceptions of what hindered their acquisition of basic math skills in the past and their beliefs about what enables them to be successful now and in the future. This article describes a qualitative study that examines the perspectives and experiences of newly successful developmental mathematics students. Each student could identify a negative turning point in their past that led to unsuccessful mathematics experiences and the mathematics concept associated with it. They each also reflected on the change in their mindset, a positive turning point, that fueled a shift in their strategies and resulted in successful mathematics experiences. Understanding students’ perceptions about their shift from unsuccessful to successful mathematics students can inform practice and fuel additional research.

Ideas in Practice: Professional Development to Manage Atypical Learner Behaviors
By Anthony G. Colarossi, Rachelle Maltzman, Hope Parisi, Christine M. Rudisel, and Tara Weiss

ABSTRACT: Issues of atypical learners in the developmental English classroom of an urban community college prompted a faculty collaborative “Group” response. Instructors and tutors were unable to help these students progress in their learning and the classroom atmosphere was impacted. The Group reached out to frustrated instructors and planned strategies for improving academic outcomes, offered collegial support, and provided professional development to tutors and instructors. Applying current action research-based models and focusing on a case-study format, the Group’s structure evolved to support more effective integration of atypical learners in the classroom.

Volume 35, Issue 1 Fall 2011
Table of Contents

Cost of Developmental Education: An Update of Breneman and Haarlow
Spelling Facilitates Good ESL Reading Comprehension
By Gail August

ABSTRACT: Adult ESL students were given reading comprehension and vocabulary tests, followed by spelling tests based on words in these assessments. The results showed that spelling knowledge of specific words in a reading selection affected reading comprehension of that text. However, the spelling of vocabulary words did not affect performance on a vocabulary test. The effect of spelling on reading comprehension may be related to information contained in English orthography and the role of spelling in the efficient storage and retrieval of words. The results suggest that integration of spelling instruction with vocabulary acquisition can facilitate college reading comprehension.

Ideas in Practice: Collaborative Problem-Based Learning in Intermediate Algebra
By Leslie B. Goldstein, Brian L. Burke, Amy Getz, and Paul A. Kennedy

ABSTRACT: A key goal in developmental education has been optimizing student success in future college-level classes. This study compared three sections of a problem-based collaborative learning pilot course of Intermediate Algebra to the original course section at a four-year public liberal arts college. The pilot course differed from the original course in three main areas: structure, content, and assessments. Results showed that student performance and satisfaction with the pilot course did not differ significantly from the usual course but that success in College Algebra the following semester was significantly higher among students from the pilot course sections, especially for Native Americans.
Developmental Mathematics: Challenges, Promising Practices, and Recent Initiatives
By Barbara Bonham and Hunter R. Boylan

ABSTRACT: Developmental education has increasingly become part of the national debate in higher education. This is particularly true for developmental mathematics courses which, in general, have the highest rates of failure and noncompletion of any developmental subject area. This manuscript describes the current state of the art in developmental mathematics, discusses major initiatives designed to reform and improve success rates, and identifies research-based teaching practices associated with improved student performance in developmental mathematics courses.

Incorporating Study Strategies in Developmental Mathematics/College Algebra
By Selina Vasquez Mireles, Joey Offer, Debra D. Ward and Carol W. Dohen

ABSTRACT: The purpose of this paper is to discuss the effectiveness of incorporating study strategies in a developmental mathematics/college algebra program. Both quantitative and qualitative data were collected through a quasi-experimental methodology. Results show that students reported increases on the Learning and Study Strategies Inventory (LASSI) scales in study strategy usage, and this new strategy usage was supported by comments students made on open-ended surveys. A discussion of conclusions, limitations, recommendations, and suggestions is also included.

Volume 34, Issue 2, Winter 2010

Table of Contents

Increasing Student Success and Retention: A Multidimensional Approach
By Paul R. Fowler and Hunter R. Boylan

The Effectiveness of Computer-Assisted Instruction in Developmental Mathematics
By Kathy Spradlin and Beth Ackerman

Writing Center Work Bridging Boundaries: An Interview with Muriel Harris
By Elizabeth Threadgill

Ideas for Practice: A Collaborative Look to the Classroom
By Dorothy A. Osterholt and Katherine Barratt

Editorial: What Are We Going to Do About It?
By D. Patrick Saxon and Hunter R. Boylan

Critical Thinking: Competency Standards Essential for the Cultivation of Intellectual Skills, Part 1
By Linda Elder and Richard Paul

Techtalk: The Community of Inquiry Model for an Inverted Developmental Math Classroom
By Scott McDaniel and David C. Caverly

For Your Information

Developments

Advertisers’ Index
guidelines, (b) integrating first-year transition coursework, (c) intrusive academic advising to treat the nonacademic and personal factors, and (d) traditional developmental education coursework and tutoring to address the academic factors delivered via a Pathways to Success Program. The increase in the mean grade point average of program students as compared to nonprogram students, from 1.503 to 2.151, was statistically significant ($p = .000$). Increases in the number of students in good academic standing, increases in success in developmental education courses, and increases in the 1-year retention rate were also noted for participating students.

The Effectiveness of Computer-Assisted Instruction in Developmental Mathematics
By: Kathy Spradlin and Beth Ackerman

ABSTRACT: This quasi-experimental study compared academic performance of students enrolled in a developmental mathematics course using traditional instruction (i.e., lecture) and traditional instruction supplemented with computer-assisted instruction. In addition, gender differences in mathematical performance were also investigated. There was no statistically significant difference in the posttest scores of students receiving traditional instruction and traditional instruction supplemented with computer-assisted instruction. There was a significant difference in the posttest scores of females and males, with females outperforming males in both modes of instruction.

Ideas for Practice: A Collaborative Look to the Classroom
By Dorothy A. Osterholt and Katherine Barratt

ABSTRACT: Many developmental students begin college ill-equipped in the social and emotional competencies to be successful. Thus, it is essential that institutions of higher education address the broader needs of these students. The purpose of this article is to present collaborative learning as a tool for addressing the social and emotional inhibitors that may prevent success during this time of transition. We address potential concerns for making this pedagogical shift and present reasons for considering this approach. We also provide specific classroom applications of this process that increase the chance that all students acquire the full spectrum of skills crucial for academic success through cooperatively-shared experiences.
education program funded through a U.S. Federal Title III-A grant, achieving increases in course completion rates and student retention with an enhanced tutoring program. The authors present the cost/benefit of the tutoring intervention, demonstrating a surprisingly large return on the investment both to the college and society.

Questions for Practice: Reflecting on Developmental Mathematics Using 19th-Century Voices
By Marcus E. Jorgensen

ABSTRACT: In this article the author has used 19th-century arithmetic and algebra textbooks as a way to reflect on current practices in developmental mathematics education. Five areas of special interest were found: motivation, relevance, depth, pedagogy, and textbooks. Philosophic and practical statements from vintage textbook authors remind educators of a number of questions and issues within each of those areas of interest. In some respects, little has changed over the years and many issues remain unresolved or little progress has been made. One hundred years from now will things be the same, or is it time for a change, a rethinking?

Volume 33, Issue 3, Spring 2010
Table of Contents

Postsecondary Literacy: Coherence in Theory, Terminology, and Teacher Preparation
By Eric J. Paulson and Sonya L. Armstrong

Underprepared, Ethnically Diverse Community College Students: Factors Contributing to Persistence
By Peter Barbatis

Cultivating Critical Thinking: An Interview with Stephen Brookfield
By James Johnson

Annual Index, Volume 33

For Your Information

Critical Thinking: Ethical Reasoning as Essential to Fairminded Critical Thinking, Part III
By Richard Paul and Linda Elder

Techtalk: Cloud Computing and Developmental Education
By Douglas R. Holschuh and David C. Caverly

Developments and Advertisers’ Index

Article Abstracts:

Postsecondary Literacy: Coherence in Theory, Terminology, and Teacher Preparation
By Eric J. Paulson and Sonya L. Armstrong

ABSTRACT: Postsecondary literacy instruction -- the teaching of basic writing and transitional, or developmental, reading in community colleges and 4-year colleges – is an important and growing field, but also one still developing in key areas. In this article, we discuss three of these areas within which postsecondary literacy instruction can continue to develop. Specifically, we discuss current issues in theory, terminology, and teacher preparation within the field. We also explore specific suggestions for increasing coherence and consider focal points for further inquiry in each area.

Underprepared, Ethnically Diverse Community College Students: Factors Contributing to Persistence
By Peter Barbatis

ABSTRACT: The purpose of this study was to gain an understanding of the perceptions of underprepared college students who had participated in a first-year learning community at an urban, culturally diverse, commuter campus in the southeastern United States. Perceptions of graduates and those who earned at least 30 college-level credit hours were compared to their learning community peers who did not persist and had dropped out of college. A total of 22 students participated: 6 graduates, 12 persisters, and 4 dropouts. The factors included personal attributes, support systems, and other characteristics. Findings suggested the following ways to enhance the academic experience of underprepared college students: (a) include critical pedagogy, (b) integrate cocurricular activities with the academic disciplines, and (c) increase student-faculty interaction.

Volume 33, Issue 2, Winter 2009
Table of Contents

Is a Writing Sample Necessary for "Accurate Placement"?
By Patrick Sullivan and David Nielsen

American Indian/Alaska Native College Student Retention Strategies
By Raphael M. Guillory
Principal of Academic Success and Mentorship: An Interview with Saundra McGuire
By Kenyatta Y. Dawson 22

A Curriculum Focus Intervention’s Effects on Prealgebra Achievement
By David Yopp and Richard Rehberger 26

For Your Information 39

Critical Thinking: Ethical Reasoning and Fairminded Thinking, Part II
By Richard Paul and Linda Elder 40

Techtalk: Digital Storytelling and Developmental Education
By Kay Gregory, Joyce Steelman, and David C. Caverly 42

Developments and Advertisers’ Index 44

**Article Abstracts:**

Is a Writing Sample Necessary for “Accurate Placement”?
By Patrick Sullivan and David Nielsen

ABSTRACT: The scholarship about assessment for placement is extensive and notoriously ambiguous. Foremost among the questions that continue to be unresolved in this scholarship is this one: Is a writing sample necessary for “accurate placement”? Using a robust data sample of student assessment essays and ACCUPLACER test scores, we put this question to the test. For practical, theoretical, and conceptual reasons, our conclusion is that a writing sample is not necessary for “accurate placement.” Furthermore our work on this project has shown us that the concept of accurate placement itself is slippery and problematic.

American Indian/Alaska Native College Student Retention Strategies
By Raphael M. Guillory

ABSTRACT: This article presents findings from a qualitative study examining the similarities and differences between American Indian/Alaska Native student perceptions of state representatives, university presidents, and faculty about persistence factors and barriers to degree completion specific to American Indian/Alaska Native students at three land-grant universities across Washington, Idaho, and Montana. A comparative analysis of themes emerging from interview data reveals conflicting perceptions among participant cohorts. Retention-to-graduation strategies are offered for institutions of higher education desiring to better serve these students and their respective tribal communities. The strategies offered, including specialized forms of culturally-sensitive career and academic counseling, peer mentoring, and Supplemental Instruction, can also help professionals delivering developmental education programming better serve this student population.

A Curriculum Focus Intervention’s Effects on Prealgebra Achievement
By David Yopp and Richard Rehberger

ABSTRACT: This paper discusses a pilot study of the effects of a curriculum focus intervention on students’ Prealgebra achievement. Elements of the intervention include identification of high-priority learning objective; structured repeatable testing; and a coherent, rubric-based feedback component. This research differs from traditional mastery learning research in that it focuses on a subset of high-priority learning objectives, as opposed to the entire curriculum, and focuses on assessing students’ ability to structure, represent, and communicate their processes and thinking skills, as opposed to assessing only whether the solution and processes are correct. Students in the treatment and control groups were given general (not mathematics specific) academic efficacy measures, a course-specific measure, and a common course final exam. Only the differences in the means on course specific measures were statistically significant, with the treatment group outperforming the control group on both the course-specific efficacy measure and the final. A possible negative effect was that students in the treatment group dropped out at a higher rate than students in the control group.

Volume 33, Issue 1, Fall 2009

Table of Contents

Literary Letters: Developmental Readers’ Responses to Popular Fiction
By Marty Frailey, Greta Buck-Rodriquez, and Patricia L. Anders 2

The Paraprofessional-to-Teacher Pipeline: Barriers and Accomplishments
By Jorgelina Abbate-Vaughn and Patricia C. Paugh 14

Strategic Learning and College Readiness: An Interview with Claire Ellen Weinstein
By Taylor W. Acee 20

Position Paper: Creating a New Professional Association
By David Arendale, Hilda Barrow, Kathy Carpenter, Russ Hodges, Jane McGrath, Pat Newell, and Jan Norton 28
For Your Information 33
Critical Thinking: Ethical Reasoning and Fairminded Thinking, Part I
By Richard Paul and Linda Elder 36
Techtalk: Mobile Learning and Access
By David C. Caverly, Anne R. Ward, and Michael J. Caverly 38
Developments and Advertiser’s Index 40

Article Abstracts:

Literary Letters: Developmental Readers’ Responses to Popular Fiction
By Marty Frailey, Greta Buck-Rodriquez, and Patricia L. Anders

ABSTRACT: This article describes elaboration in “literary letters” (Atwell, 1984, 1987) written by developmental reading students. Nineteen community college students received instruction in “elaborative thought patterns,” or types of elaboration, to improve the quality of their responses to popular fiction. This instruction was part of a literature-based component intended to foster positive changes in comprehension and attitude toward reading. Data were derived from (a) letters analyzed according to a coding system, (b) questionnaires, (c) focus-group discussions, and (d) self-evaluations. Students demonstrated improvements in quality of elaboration; they also reported positive changes in comprehension, writing, literature discussions, self-efficacy, and attitude.

The Paraprofessional-to-Teacher Pipeline: Barriers and Accomplishments
By Jorgelina Abbate-Vaughn and Patricia C. Paugh

ABSTRACT: This study examined barriers experienced by veteran school paraprofessionals attempting to complete a 4-year degree leading to public school teaching credentials. The study followed culturally and linguistically diverse, nontraditional student participants through their 1st and 2nd years as sophomore/junior students in a large urban university. The population exhibited a variety of academic, organizational, financial, and counseling needs typical of developmental learners. With significant numbers of adult learners re-entering baccalaureate degree-granting institutions, the notion of developmental education might be applied to such students; they bring a mix of academic needs and success through resilience based in their cultural funds of knowledge.

Volume 32, Issue 3, Spring 2009
Table of Contents
Instructional Delivery in Developmental Mathematics: Impact on Retention
By Carol A. Zavarella and Jan M. Ignash 2
Targeted Intervention for Developmental Education Students (T.I.D.E.S.)
By Hunter R. Boylan 14
Learning Center Issues, Then and Now: An Interview with Frank Christ
By Barbara J. Calderwood 24
College Preparedness and Time of Learning Disability Identification
By Carla Abreu-Ellis, Jason Ellis, and Richard Hayes 28
For Your Information 38
Critical Thinking Strategies for Improving Student Learning, Part III
By Linda Elder and Richard Paul 40
Techtalk: Second Life and Developmental Education
By Melissa L. Burgess and David C. Caverly 42

ARTICLE ABSTRACTS:

Instructional Delivery in Developmental Mathematics: Impact on Retention
By Carol A. Zavarella and Jan M. Ignash

ABSTRACT: Studies of students enrolled in computer-based instruction have yielded mixed results, with some reporting a high dropout rate. This article describes a quantitative study examining the probability of students’ withdrawal from a computer- versus lecture-based developmental math course based on learning style, reasons for selecting the instructional format, and entry test scores. Students in the computer-based format were more likely to withdraw from the course compared to those in the lecture-based format, and personal reasons for choosing a specific format appeared to influence completion rates. Implications for practice include suggestions for providing appropriate information to students prior to their enrollment in online developmental education courses.

Targeted Intervention for Developmental Education Students (T.I.D.E.S.)
ABSTRACT: This manuscript proposes a theoretical model that provides an alternative for assessing, advising, and placing underprepared students in colleges and universities. It advocates combining cognitive and affective assessment data along with information about students’ personal circumstances to make more precise placement decisions via advising that targets both course and service recommendations. The article also includes a detailed description of the model and how it might be implemented. The assumption underlying this model is that although the traditional practice of placing students into remedial courses based on a single cut score on a cognitive assessment instrument is efficient, it is not necessarily effective. The use of the alternative model, referred to as "Targeted Interventions for Developmental Education Students," should enable institutions to place their underprepared students more accurately and serve them more effectively.

College Preparedness and Time of Learning Disability Identification
By Carla Abreu-Ellis, Jason Ellis, and Richard Hayes

ABSTRACT: This paper discusses the results of the Learning and Study Strategies Inventory (LASSI) administered to college students in order to identify similarities and differences between time of diagnosis of a learning disability and the development of learning strategies related to will, self-regulation, and skill components. Findings indicate that early identification (in K-12) and providing students with test-taking strategies may ameliorate academic success in higher education for students with learning disabilities. Recommendations for action will assist developmental educators to better serve college students with learning disabilities in higher education.
collaborate with developmental educators in designing library sessions and class assignments, interact with learning assistance and tutoring centers, and help reduce library anxiety and build student confidence.

**Volume 32, Issue 1, Fall 2008**

**Table of Contents**

- How Research contributes to Access and Opportunity Around the World
  By Hunter R. Boylan
  2

- First Generation College Students: A Study of Appalachian Student Success
  By Christie Hand and Emily Miller Payne
  4

- Words from Experience: An Interview with Gladys Shaw
  By Russ Hodges and Jason Sparks
  16

- Ideas in Practice: Instructional Design and Delivery for Adult Learners
  By Julia Simms and Dave S. Knowlton
  20

- Critical Thinking: Strategies for Improving Student Learning
  By Linda Elder and Richard Paul
  32

- Techtalk: Web 2.0, Blogs, and Developmental Education
  By David C. Caverly, Sheila A. Nicholson, Jennifer Battle, and Cori E. Atkins
  34

**ARTICLE ABSTRACTS:**

**First Generation College Students: A Study of Appalachian Student Success**
By Christie Hand and Emily Miller Payne

ABSTRACT: First-generation students represent a crucial population in institutions of higher education. Often considered "at-risk" in academic persistence and retention discussions, these students present both a challenge and opportunity to postsecondary education. This study focuses on a subgroup of first-generation students, those from Appalachia, and the factors contributing to their academic persistence.

The participants were students from the Student Support Services program at a major Appalachian university. The phenomenological method was employed, enabling the themes to flow from the data rather than being presupposed by the researcher. The themes (factors) emerging from the students’ experiences were the importance of home culture and family, financial concerns, significance of an internal locus of control, relationships and emotional support, and communication of information. Each of these has shown a definite impact on the students’ academic persistence.

**Ideas in Practice: Instructional Design and Delivery for Adult Learners**
By Julia Simms and Dave S. Knowlton

ABSTRACT: A pertinent question for developmental educators is not whether computers should be used in developmental education but how (Dotzler, 2003; Rapp & Gittinger, 1993). Instructional design models appropriate for courses delivered electronically should be applied because part of the how requires ensuring that adult students who are enrolled in developmental courses experience computer-based instruction that is well-designed in terms of both efficiency and relevance of delivery. This article begins by describing the needs of adult students who are enrolled in developmental courses. Then, it describes a project in which Morrison, Ross, and Kemp’s (2004) curvilinear instructional design model was used to create computer-based instruction about fractions. Both the design and developmental phases are described. The article concludes with implications for others who might apply the model to various areas within developmental education.
Impact of the Supplemental Instruction Experience on Science SI Leaders
By Nancy M. Lockie and Robert J. Van Lanen

ABSTRACT: This qualitative study describes the experiences of SI leaders in science courses. Analysis of data using Colaizzi’s phenomenological approach has indicated the following advantages of the SI experience for SI leaders: (a) greater appreciation of the diversity of student learning styles, (b) increased understanding of the subject matter, (c) greater self-confidence as a learner, (d) development of closer relationships with faculty, (e) application of the strategies and skills learned as an SI leader in other courses, and (f) realization of the importance and value of collaborative learning. The results of this study can be used by Learning Center professionals and faculty to successfully recruit new SI leaders and to customize the SI model to maximize the effectiveness.

Ideas in Practice: Graphing calculators in Beginning Algebra
By Aimee Martin

ABSTRACT: This paper reports on a project to improve Beginning Algebra students’ understanding of basic algebraic concepts through fully integrated use of the TI-83 graphing calculator. The methodology incorporated an intervention case study including approximately 700 Beginning Algebra students at an open-door community college of 8,500 students in the Southwest. Pass rates, empirically calculated at points before and after the implementation of the graphing calculator project, clearly showed an increase with the use of graphing calculators.

Retrospective Miscue Analysis for Struggling Postsecondary Readers
By Eric J. Paulson and Pamela Mason-Egan

ABSTRACT: Retrospective Miscue Analysis (RMA) is presented as an instructional strategy for postsecondary reading instruction. Oral reading miscues, which form the core of the RMA approach, are briefly described, and RMA is discussed as a one-on-one instructional approach utilizing the reader’s own miscues. The theoretical and underpinnings of RMA are discussed and detailed procedures for implementing RMA are provided. Examples from several RMA sessions that illustrate RMA procedures are presented.

Ideas in Practice: Strategic Note Taking in Developmental Mathematics
By Carol Eades and William M. Moore

ABSTRACT: This article conveys the importance of note taking in postsecondary developmental mathematics. It presents a strategic note-taking methodology that is designed to help students increase self-regulation and facilitate learning. Although
the note-taking system is applied to developmental mathematics, it can be used for any course. The article also describes what note-taking strategies can and cannot do for students and instructors. The authors conclude by inviting readers to analyze the success of this systematic process in their own classes.

Volume 31, Issue 1, Fall 2007

Table of Contents

Does Faculty Employment Status Impact Developmental Mathematics Outcomes?
By David S. Fike and Renea Fike 2

A Retention/Persistence Intervention Model: Improving Success Across Cultures
By Geneva Escobedo 12

Challenges and Potentials in Developmental Education: An Interview with Raymund A. Paredes
By Hansel Burley 18

Academic Motivation and Performance of Developmental Education Biology Students
By Randy Moore 24

For Your Information
34

Critical Thinking: The Art of Socratic Questioning
By Richard Paul and Linda Elder 36

Techtalk: Assistive Technology
By David C. Caverly and Debra Fitzgibbons 38

Developments and Advertisers’ Index 40

Article Abstracts

Does Faculty Employment Status Impact Developmental Mathematics Outcomes?
By David S. Fike and Renea Fike

ABSTRACT: This study assessed the impact of faculty employment status on student outcomes in developmental mathematics. The sample consisted of 1318 students enrolled in Intermediate Algebra classes at a community college. Multivariate analyses revealed that faculty employment status (full time or part time) was not associated with students’ final grades or completion rates. Faculty education level was correlated with course final grades, with faculty possessing graduate degrees having better student outcomes. Student gender, race, and age were associated with outcomes; semester hours attempted were not. These findings should help equip administrators to make informed decisions regarding faculty assignments that lead to improved student outcomes and help faculty to target interventions for “at-risk” students.

A Retention/Persistence Intervention Model: Improving Success Across Cultures
By Geneva Escobedo

ABSTRACT: This article describes a 3-year pilot study that addressed persistence and retention of developmental students at a multi-campus community college in the Southwest. The study was conducted as part of a U.S. Department of Education Hispanic Serving Institution grant program. Qualitative research and formative evaluation with outcomes on data for three fall cohorts were collected and analyzed. Analysis of the data revealed that there was a significant difference between the persistence rates of three fall cohorts compared to the general population. The intervention strategies applied to the fall cohorts resulted in increased persistence rates.

Academic Motivation and Performance of Developmental Education Biology Students
By Randy Moore

ABSTRACT: At the beginning of classes, 1st-year developmental education students in an introductory biology class are confident that they will earn high grades and do extra-credit work if given the opportunity to do so. However, in this study fewer than 25% of students submitted such work, despite the fact that the extra-credit was guaranteed. Students who did the extra-credit work (a) were more likely to come to class, lab, and optional help-sessions and (b) earned higher grades than students who did not do the extra-credit work, even when the points earned by the work were not considered in calculations. These results indicate that the most successful developmental education students have a variety of motivation-related behaviors that maximize success, and the least successful students are often unwilling to expend the effort necessary to succeed.
Online Mathematics Achievement: Effects of Learning Strategies and Self Efficacy
By Leigh M. Wadsworth, Jenefer Husman, Mary Anne Duggan, and M. Nan Pennington 6

Oral History of Postsecondary Access: Mike Rose, A Pioneer
By Laura Bauer and Martha E. Casazza 16

Ideas in Practice: Developmental Writers’ Attitudes toward Audio and Written Feedback
By Susan Sipple 22

For Your Information
33

Critical Thinking: The Nature of Critical and Creative Thought, Part II
By Linda Elder and Richard Paul 36

Developments 40

Article Abstracts

Online Mathematics Achievement: Effects of Learning Strategies and Self Efficacy
By Leigh M. Wadsworth, Jenefer Husman, Mary Anne Duggan, and M. Nan Pennington

ABSTRACT: A fluid and flexible learning strategies repertoire and self-efficacy have been documented as important factors for learning and achievement. However, there has been little research examining the effects of these same factors on achievement in an online learning environment. The current research investigates the strategies used by and self-efficacy demonstrated by successful college students in an online developmental mathematics course. This article provides evidence of the relationship between learning strategies, motivation, self-efficacy, and student achievement in this environment. Participants were 89 students enrolled in an online developmental mathematics course. Results indicate four types of learning strategies—motivation, concentration, information processing, and self-testing—along with self-efficacy predicting 42% (r=0.65) of the variance in grade achievement.

Ideas in Practice: Developmental Writers’ Attitudes toward Audio and Written Feedback
By Susan Sipple

ABSTRACT: Instructor commentary on student essays in developmental writing classes is typically delivered in handwritten margin and endnotes. Audio-recorded instructor commentary in these classes, delivered via cassette tape, CD-R, or email, may provide a more effective method for students who need individualized instruction. In this qualitative pilot study, designed to determine student attitudes toward audio and written commentary in developmental writing classes, results show a preference for audio commentary by the majority of study participants. Survey and interview responses reveal that audio commentary positively affected students’ perceptions of their motivation, self-confidence, revision practices, student-professor bond, and overall learning in ways written commentary did not.

Volume 30, Issue 2, Winter 2006

Table of Contents

ACCUPLACERTM OnLine: Accurate Placement Tool for Developmental Programs?
By Cindy L. James 2

L.D. Students’ Access to Higher Education: Self-Advocacy and Support
By Wanda M. Hadley 10

By Michael W. Galbraith and Melanie S. Jones 20

Ideas in Practice: Bringin’ Hip-Hop to the Basics
By K. Leigh Hamm Forrell 28

For Your Information
31

Critical Thinking: The Nature of Critical and Creative Thought
By Richard Paul and Linda Elder 34

Techtalk: Word Processing from Adoption to Innovation
By Lucy MacDonald and David C. Caverly 36

Developments 38

Article Abstracts

ACCUPLACERTM OnLine: Accurate Placement Tool for Developmental Programs?
By Cindy L. James
ABSTRACT: ACCUPLACER™OnLine appears to be a suitable placement tool for developmental programs, but little is known about its predictive validity. This study evaluates the correlation between ACCUPLACER™ OnLine test scores and student performance in various levels of English and mathematics developmental courses and the placement validity for these courses based upon preestablished cutscores. The results reveal strong predictive values for the ACCUPLACER™OnLine Arithmetic and Elementary Algebra tests and achievement in the mathematics developmental courses but weaker values between the ACCUPLACER™ OnLine Reading Comprehension and Sentence Skills test scores and performance in the English developmental courses. Implications of these results relative to entry placement procedures are discussed.

L.D. Students’ Access to Higher Education: Self-Advocacy and Support
By Wanda M. Hadley

ABSTRACT: Increasing numbers of students with learning disabilities are entering postsecondary education. While in high school, students with a learning disability are assured services under the Individuals with Disabilities Education Act (IDEA). This legislation, however, does not apply to colleges and universities. This qualitative study applied psychosocial theorist Arthur Chickering’s (1969) vectors of student development theory to examine how traditional-age, first-year college students with learning disabilities adjusted to academic expectations as they moved from a sheltered secondary environment to a less monitored collegiate environment. The importance of students with learning disabilities self-advocating with their professors, and the importance of their professors’ support of their academic needs, were major findings of this study.

By Michael W. Galbraith and Melanie S. Jones

ABSTRACT: This article suggests that a balance of the art and science of teaching is essential if the learning and teaching process is to be a meaningful and rewarding educational journey. This notion is explored through a dialogue, held over a 3-year period, with a developmental mathematics instructor at a community college who discovered that technique alone was not sufficient to becoming a good instructor. An unusual situation occurred as a result of the dialogue: Discussion of research-based literature on college teaching and personal experiential reflectivity merged and resulted in an organizing framework for understanding the artistic and mechanic elements of effective instruction.

Ideas in Practice: Bringin’ Hip-Hop to the Basics
By K. Leigh Hamm Forrell

ABSTRACT: While shifting definitions of literacy and changing demographics of students in higher education, a unique opportunity arises for instructors of basic reading and writing to reflect on their classroom practices and question whether discursive practices within the academy readily align with students' home and community values. This article describes how integrating hip-hop into the developmental/basic writing curriculum might bridge the gap between literacy practices within and outside of the classroom and why this is important in terms of student persistence and success. Specifically, this piece explores the research that has been done on the efficacy of an techniques for using hip-hop as a teaching tool in basic writing classrooms to connect with students and inform and enhance their composition projects. It also includes a discussion of specific practices—some outlined from related research and others that I developed based on research and piloted in my own classroom—for integrating hip-hop into the composition curriculum.

Volume 30, Issue 1, Fall 2006
Table of Contents

Improving Supervision of Part-Time Instructors
By Patricia R. Eney and Evelyn Davidson 2

Disability Services in Postsecondary Education: Impact of IDEA 2004
By Joseph W. Madaus and Stan F. Shaw 12

Developmental Mathematics in 4-Year Institutions: Denying Access
By Irene M. Duranczyk and Jeanne L. Higbee 22

Critical Thinking…and the Art of Substantive Writing, Part III
By Linda Elder and Richard Paul 32

Techtalk: Integrating Mapping Software
By Lucy MacDonald and David C. Caverly 34

Developments and Advertisers Index 36

Article Abstracts

Improving Supervision of Part-Time Instructors
By Patricia R. Eney and Evelyn Davidson
ABSTRACT: With an increasing number of colleges and universities turning to part-time instructors to teach courses at their institutions, developmental education professionals are faced with the task of finding appropriate ways to train, serve, and evaluate these instructors. Unfortunately, there is little published information on how to accomplish these tasks. Therefore, the authors have drawn on best practices and research in the field to develop recommendations for supervising part-time instructors.

Disability Services in Postsecondary Education: Impact of IDEA 2004
By Joseph W. Madaus and Stan F. Shaw

ABSTRACT: In November of 2004, Congress passed the reauthorized Individuals with Disabilities Education Act (IDEA). Although postsecondary institutions are not subject to the mandates of the IDEA, there will be a ripple effect of the law on postsecondary services for students with disabilities. The focus of this article is to provide information to postsecondary disability service providers related to four key areas of the new IDEA that will impact students accessing services in the coming years: (a) reevaluations of disabilities, (b) the summary of performance requirement, (c) transition planning, and (d) new criteria for the diagnosis of a learning disability. Changes in each area are highlighted, as well as possible implications for postsecondary disability programs.

Developmental Mathematics in 4-Year Institutions: Denying Access
By Irene M. Duranczyk and Jeanne L. Higbee

ABSTRACT: In this article we use two avenues to make a case for retaining developmental mathematics education at 4-year postsecondary educational institutions. First we review the literature surrounding inadequate preparation for college-level mathematics. Then we report results from a qualitative research study that examined students’ perspectives on policies related to relegating all developmental mathematics course offerings to a 2-year institutions. We conclude that both students and institutions benefit from making developmental mathematics available at a 4-year institutions.

Volume 29, Issue 3, Spring 2006
Table of Contents

Computer Homework Effectiveness in Developmental Mathematics
By Eric Jacobson 2

Ideas in Practice: Building Bridges in a Multicultural Learning Community
By Patricia A. James, Patrick L. Bruch, and Rashné R. Jehangir 10

Strategic Reading and Learning, Theory to Practice: An Interview with Michele Simpson and Sherrie Nist
By Norman A. Stahl 20

Annual Index, Volume 29 27

Ideas in Practice: Theoretical Bases for Using Movies in Developmental Coursework
By Linda Sweeney 28

Critical Thinking…and the Art of Substantive Writing, Part II
By Linda Elder and Richard Paul 38

For Your Information 39

Techtalk: Online Discussion Forums
By Cynthia L. Peterson and David C. Caverly 40

Developments and Advertisers’ Index 42

Article Abstracts

Computer Homework Effectiveness in Developmental Mathematics
By Eric Jacobson

ABSTRACT: Students in a college prealgebra course were required to do all homework on the computer practice/tutorial system which accompanied their textbook. Student evaluations of the computer experience were strongly positive. However, exam performance did not reflect these high opinions. Computer students did not do better on course exams than control students. Difficulties in learning to enter mathematical notation with keyboard and mouse may have distracted computer students from the mathematics they were to learn. A relatively large investment of time and resources could be required to make computer support software beneficial; institutions should not depend on student opinions to decide if the effort is worthwhile.

Ideas in Practice: Building Bridges in a Multicultural Learning Community
By Patricia A. James, Patrick L. Bruch, and Rashné R. Jehangir
ABSTRACT: This article describes conceptual foundations and practical student outcomes of a learning community designed to serve culturally diverse, first generation students in a developmental college at a research university. We focus on the social, cultural, and cognitive bridges that our themes enabled students to build between their nonacademic lives and higher education and share details of a student project that highlights the strengths of a multicultural learning community approach for 1st year students. We also discuss principles of learning communities that can be utilized in other settings.

Ideas in Practice: Theoretical Bases for Using Movies in Developmental Coursework
By Linda Sweeney

ABSTRACT: This article discusses the use of movies from a practitioner’s viewpoint, supporting the process of screening, discussing, and/or writing about movies as an enhancement of the literacy process. Substantiation from a variety of literature sources is explored, from classic language arts theory to second language journals and English journals. Implications and indications are made for watching or assigning movies for developmental reading and writing coursework.

Volume 29, Issue 2, Winter 2005
Table of Contents

Prefreshman Summer Programs’ Impact on Student Achievement and Retention
By Joseph Christopher Maggio, William G. White, Jr., Susan Molstad, and Neelam Kher

Performance Indicators for Postsecondary Disability Services
By Stan F. Shaw and Lyman, L. Dukes, III

Oral History of Postsecondary Access: K. Patricia Cross, a Pioneer
By Laura Bauer and Martha E. Casazza

Attendance: Are Penalties More Effective Than Rewards?
By Randy Moore

Research Tips: Classroom Observation Data Collection, Part II
By Dale T. Griffee

TechTalk: Building Academic Literacy through Online Discussion Forums
By Cynthia L. Peterson and David C. Caverly

Article Abstracts

Prefreshman Summer Programs’ Impact on Student Achievement and Retention
By Joseph Christopher Maggio, William G. White, Jr., Susan Molstad, and Neelam Kher

ABSTRACT: This study utilized 397 students who participated in Prefreshman summer programs in 1998 at six universities and who were tracked for 3 years. The purpose of this study was to identify which Prefreshman summer program characteristics and precollegiate student characteristics had an effect on college GPA and student retention. The findings revealed that high school GPA had a direct positive effect and program size and program length had direct negative effects on college GPA. Furthermore, age and voluntary peer/professional tutoring had direct negative effects on student retention. The findings and implications for practice are discussed.

Performance Indicators for Postsecondary Disability Services
By Stan F. Shaw and Lyman, L. Dukes, III

ABSTRACT: There is an increasing expectation of state-of-the-art services for college students with disabilities. Although access to postsecondary education has resulted in positive outcomes for students with disabilities, there has been little validation of services that should be available to students with disabilities. This study sought to identify and validate Performance Indicators that experts agree foster access to postsecondary education. The results identified 90 Performance Indicators that are essential “best practices” for disability services in higher education. The findings provide direction for institutions of higher education to implement and validate their services for students with disabilities.

Attendance: Are Penalties More Effective Than Rewards?
By Randy Moore

ABSTRACT: This study examined how developmental education students’ grades and attendance rates were affected by (a) penalties of excessive absenteeism, and (b) an emphasis on the academic benefits of class attendance in a large introductory biology course. On average, students in sections of the course in which the importance of attendance was stressed throughout the semester came to class more often and made higher grades than did students in sections in which the importance of attendance was not emphasized (despite the fact that students received no academic credit for coming to class.) Imposing a penalty for excessive absences did not affect attendance or grades. These results indicated that improved rates for class attendance were associated with improved academic performance and that an emphasis on the academic benefits of class attendance was more effective for boosting attendance and academic performance than penalties for excessive absenteeism.
Reconceptualizing Diversity in Higher Education: Borderlands Research Program  
By Ross B. MacDonald and Monica C. Bernardo  
ABSTRACT: In this article we intend to contribute to a deeper discussion of diversity in the context of developmental education theory and practice. The article is a position piece, proposing that diversity be defined as a continually expanding awareness of the dynamics of difference in regard to social power, personal perceptions, and judgments about others. It then discusses the theoretical and practical underpinnings of a research program identifying the competencies of multicultural students and their applications in educational settings. Although untested, the ideas are intended to challenge thinking, promote discussion, and set the stage for future articles reporting on outcomes of the research program.

Women with Attentional Issues: Success in College Learning  
By Jill Hinckley and Peg Alden  
ABSTRACT: This pilot study, funded from a 5-year grant from the U.S. Department of Education Title III Strengthening Institutions Program, explores the factors identified by women with AD/HD that are necessary to their achieving college success. The results of this study, based on 13 in-depth interviews with women who are both academically successful and have AD/HD, highlight the influence of motivation, attitude, support systems, self-reflection, and social-academic balance on academic success. The article concludes with implications that may help instructors and institutions better serve women with attentional issues in the college setting.

Increasing Attendance Using Email: Effect on Developmental Math Performance  
By Eric Jacobson  
ABSTRACT: From the assumption that class attendance is important for learning it follows that methods which increase attendance will increase learning. To increase attendance, students who missed developmental math classes were sent email reminders that they should attend. Students in sections which received the email reminders did attend at higher rates than students in matched sections. The higher attendance, however, did not result in greater learning as measured by standard course examinations. Attending class may be superficial behavior not necessarily related to the deeper study behaviors which determine learning outcomes.

Ideas in Practice: Science Courses in Developmental Education  
By Leonardo Hsu, Murray Jensen, Randy Moore, and Jay Hatch  
ABSTRACT: One of the goals of developmental education is to help students to be able to succeed in mainstream college courses. However, courses in developmental education traditionally have focused exclusively on reading, writing, and basic mathematics. In this article, we discuss the role that science courses can play in developmental education. Drawing upon examples from our own courses, we illustrate how science courses can be used both as vehicles for the application of best practices in teaching and as contexts within which to conduct research on how to help developmental students acquire the skills they need to succeed.
Theory, Practice, and the Future of Developmental Education
By Carl J. Chung 2

Reducing Attrition Rates for Maori Students
By D.F. McKenzie 12

Teaching in Postsecondary Institutions: An Interview with Dr. Wilbert McKeachie
By Russ Hodges and Christie L. Hand 20

Developmental Mathematics Self-Efficacy
By J. Michael Hall and Michael K. Ponton 26

For Your Information
33

Research Tips: Interview Data Collection
By Dale T. Griffee 36

Techtalk: Wireless Networking
By David C. Caverly and Lucy MacDonald 38

Developments
40

Advertisers' Index
41

Annual Index, Volume 28
42

Article Abstracts

Theory, Practice, and the Future of Developmental Education: Toward a Pedagogy of Caring
By Carl J. Chung

ABSTRACT: The guiding premise of this article is that developmental education and learning assistance programs will continue to be undervalued and vulnerable as long as there is no overarching, shared theoretical framework that practitioners can (and want to) call their own. The traditional approach to addressing this theory crisis has been to import theories from outside the field. This article presents an alternative approach. Advantages and benefits of a practice-oriented approach are identified and briefly discussed.

Reducing Attrition Rates for Maori Students
By D.F. McKenzie

ABSTRACT: Attrition statistics for first-year students in many tertiary environments suggest that students face a wide variety of obstacles. Students in Developmental Education programmes usually have one additional obstacle, viz. they have a history of failure in academic settings. Therefore there are emotional and psychological barriers in addition to academic ones. Those students who come from low socio-economic background, often linked to membership of a minority ethnic group, face further obstacles again. This paper follows the efforts made in one Developmental programme to reduce the dropout rate for such a group of students.

Developmental Mathematics Self-Efficacy
By J. Michael Hall and Michael K. Ponton

ABSTRACT: The purpose of this study is to determine differences in mathematics self-efficacy between students enrolled in a developmental mathematics course and those enrolled in a calculus course. Data from a sample of 185 freshmen students at a single 4-year institution using the Mathematics Self-Efficacy Scale are analyzed. Results indicate that calculus students possess not only better mathematical skills but also a more powerful sense of self-belief in their ability to succeed in a college mathematics course. The results of this study suggest that future teaching methodologies should be designed specifically for students enrolled in developmental courses that not only develop mathematics capability but also a self-awareness of increased capability. Efficacy-enhancing instructional strategies should be tested for effectiveness, thereby improving the teaching and learning process for all learners.

Volume 28, Issue 2, Winter 2004
Table of Contents

Reading and Learning Strategies: Recommendations for the 21st Century
By Michele L. Simpson, Norman A. Stahl, and Michelle Anderson Francis 2

Refocusing Developmental Education
By Thomas Brothen and Cathrine A. Wambach 16

Delaying Developmental Mathematics: The Characteristics and Costs
By Marianne Johnson and Eric Kuennen 24
In Memoriam, Arthur E. Whimbey 30

For Your Information 33

Critical Thinking and the Art of Close Reading, Part IV
By Linda Elder and Richard Paul 36

Techtalk: Keeping Up With Technology
By David C. Caverly and Lucy MacDonald 38

Developments and Advertisers' Index 40

Article Abstracts

Reading and Learning Strategies: Recommendations for the 21st Century
By Michele L. Simpson, Norman A. Stahl, and Michelle Anderson Francis

ABSTRACT: Finding practical ideas about college reading and learning strategy programs that have been drawn from theory and research is difficult for most veteran instructors, but is even more difficult for those instructors new to the field. Over a decade ago the authors reviewed the literature and generated a list of their own "best ideas" as a way of facilitating professional development. Given the promising research trends and best practices that have emerged since then, the authors deemed it important to update these ideas or recommendations. In addition, the authors have purposely cited many scholarly sources in order to provide an extensive bibliography for colleagues new to the field.

Refocusing Developmental Education
By Thomas Brothen and Cathrine Wambach

ABSTRACT: Dissatisfaction with student success has caused a crisis in developmental education. Critics from both inside and outside the field question whether remedial courses really prepare students for future college work or even if they are properly part of the college mission. In this article, we review research and present information that suggests developmental educators should redefine core principles and key concepts to reinvigorate theory and practice in the field.

Delaying Developmental Mathematics: The Characteristics and Costs
By Marianne Johnson and Eric Kuennen

ABSTRACT: This paper investigates which students delay taking a required developmental mathematics course and the delay's impact on student performance in introductory microeconomics. Analysis of a sample of 1462 students at a large Midwestern university revealed that, although developmental-level mathematics students did not reach the same level of performance as nondevelopmental microeconomics students, students who did take developmental mathematics performed better than students who had not yet done so. We recommend that students needing mathematics remediation take the course in their first semester and that the importance of developmental courses to other disciplines be stressed.

Volume 28, Issue 1, Fall 2004
Table of Contents

Basic Writing Placement with Holistically Scored Essays: Research Evidence
By Richard N. Matzen and Jeff E. Hoyt 2

Influences of Online Delivery on Developmental Writing Outcomes
By Trudy G. Carpenter, William L. Brown, and Randall C. Hickman 14

Oral History of Postsecondary Access: Martha Maxwell, a Pioneer
By Martha E. Casazza and Laura Bauer 20

Do Colleges Identify or Develop Intelligence?
By Randy Moore 28

For Your Information 34

Critical Thinking and the Art of Close Reading, Part III
By Richard Paul and Linda Elder 36

Research Tips: Validity and History
By Dale T. Griffee 38

Developments and Advertisers' Index 40

Article Abstracts
Basic Writing Placement with Holistically Scored Essays: Research Evidence
By Richard N. Matzen Jr. and Jeff E. Hoyt

ABSTRACT: Recently, the popularity of timed-essay exams has increased, becoming part of the Graduate Management Admissions Test (GMAT) in the late 1990s and now being incorporated into The College Board Scholastic Aptitude Test (SAT) in Spring of 2005 and ACT (American College Testing Program) test in Fall of 2004. This research evaluates the A value added of an essay component, contrasting placement using ACT’s multiple choice COMPASS (Computerized Placement Assessment Support System) writing test versus essays holistically scored by English faculty. Evidence suggests that (a) combining the timed-essay exam score with another score may improve accurate placement; (b) that the timed-essay exams, not multiple-choice tests, may be fairer for minority students; (c) and that a questionnaire creates an invaluable context when relating scores on placement tests to final grades in courses.

Influences of Online Delivery on Developmental Writing Outcomes
By Trudy G. Carpenter, William L. Brown, and Randall C. Hickman

ABSTRACT: Four years of data on the academic performance of 256 students who self-selected online developmental writing rather than a face-to-face section (about 10% of the 2,275 students enrolled in the course overall) are examined in this empirical study. The research controls for self-selection effects related to demographic variables, student status, and academic preparedness. Resulting analysis of the data suggests that instructional delivery method-asynchronous or face-to-face-has a significant impact on student outcomes. The researchers summarize findings related to the influences of various factors on the retention and success of students in the online course. Based on these findings, the researchers offer suggestions for improving or creating a new online developmental course and discuss implications for future research.

Do Colleges Identify or Develop Intelligence?
By Randy Moore

ABSTRACT: Most colleges and universities emphasize identifying smartness much more than developing smartness. This value is made explicit in the many influential rankings of colleges and universities, in which elitist schools who recruit students with high SAT scores, grade point averages, and class rankings are declared “better” than other schools. The pursuit of high academic rankings (a) often is accompanied by a disdain for underprepared students who lower a school’s ranking and (b) often contradicts the alleged desire to promote educational opportunities for groups of students who are placed at a strong disadvantage by factors such as SAT scores.

Volume 27, Issue 3, Spring, 2004
Table of Contents

Students’ Resistance to Change in Learning Strategies Courses
By Myron H. Dembo and Helena Praks Seli 2

Enabling Access: Toward Multicultural Developmental Curricula
By Patrick L. Bruch, Rashné R. Jehangir, Walter R. Jacobs, and David L. Ghere 12

50 Years after Brown v. the Board of Education: An Interview with Cheryl Brown Henderson
By Nancy E. Carriuolo 20

Research in Practice: Understanding Significance Testing in Program Evaluation
By Dale T. Griffee 28

Critical Thinking…and the Art of Close Reading (Part II)
By Linda Elder and Richard Paul 36

TechTalk: Developing Tech-Knowledge
By David C. Caverly and Lucy MacDonald 38

Developments
40

For Your Information
41

Annual Index, Volume 27
41

Readers Service Card and Advertisers’ Index
42

Article Abstracts

Students’ Resistance to Change in Learning Strategies Courses
By Myron H. Dembo and Helena Praks Seli

ABSTRACT: Research findings indicate that many students fail to benefit from academic support services and courses. The paper discusses reasons why some students resist changing their academic behaviors and links the reasons to learning and motivation variables. The explanations for failure to change include: (a) students believe they can’t change, (b) they don’t
want to change, (c) they don’t know what to change, or (d) they don’t know how to change. The authors describe an assignment in which students identify their own academic problems and conduct individual case studies based on a four-stage process for behavioral change: self-observation and evaluation, goal setting and strategic planning, strategy-implementation and monitoring, and strategic-outcome monitoring.

Enabling Access: Toward Multicultural Developmental Curricula
By Patrick L. Bruch, Rashné R. Jehangir, Walter R. Jacobs, and David L. Ghere

ABSTRACT: This article seeks to initiate discussion of the contours of a multicultural developmental curricula. It first discusses the need for multiculturalism in developmental education and offers an understanding of access to higher education that integrates key strengths of several, currently popular, conceptions of multiculturalism. Then, it presents a model curriculum and discusses specific classroom practices to implement a multicultural developmental approach.

Significance Testing Program Evaluation
By Dale T. Griffée

ABSTRACT: Despite its widespread use in evaluation data analysis, statistical testing has come under persistent criticism resulting in calls for its rethinking, and even possible elimination (Carver, 1978, 1993). Saxon and Boylan issue a call "to strengthen developmental education research and to make it more accessible" (2003, p. 2). Among the types of research they consider appropriate is control group methodology which often makes use of statistical tests. This paper responds to that suggestion, and seeks to explain statistical testing, to state what it can and cannot tell us, and to make practical recommendations for its use.

Table of Contents

Self-Regulation Support Offered by Developmental Educators
By Dawn B. Young and Kathryn Ley 2

ESL Student Transition to College: The 30-Hour Program
By Myra M. Goldschmidt, Norma Notzold, and Christine Ziemba Miller 12

Recruiting and Retaining Women and Minority Faculty: An Interview with JoAnn Moody
By Nancy Carriuolo 18

Ideas in Practice: A Novel, "Cool" Assignment to Engage Science Students
By Murray Jensen, Randy Moore, Jay Hatch, and Leon Hsu 28

For Your Information 33

Critical Thinking and the Art of Close Reading
By Richard Paul and Linda Elder 36

Techtalk: Implications of Changing Storage Needs in Developmental Education
By Lucy MacDonald and David C. Caverly 38

Developments and Advertisers' Index 40

Article Abstracts

Self-Regulation Support Offered by Developmental Educators
By Dawn B. Young and Kathryn Ley

ABSTRACT: Poor self-regulation may partially explain developmental student academic achievement because self-regulated learning has been consistently related to achievement in learners across age and educational groups (Lan, 1998; Ley & Young, 1998; Zimmerman & Martinez-Pons, 1990). Underprepared college students, those who enrolled in college developmental courses, may require more external support from the learning environment. By observing two master developmental educators in the classroom for an entire semester we have sought to answer the question, "what is the experienced developmental educator doing to foster self-regulation in the poorly self-regulated student?" Results demonstrate that the developmental education classroom, although rich with instructional interactions, has provided self-regulation support only on a selective basis. Explanations regarding the lack of prevalent self-regulation support and recommendations as to how it may be provided are included.

ESL Student Transition to College: The 30-Hour Program
By Myra M. Goldschmidt, Norma Notzold, and Christine Ziemba Miller

ABSTRACT: This paper describes a student-designed and student-conducted program initiated to provide incoming college students, including a unique group of English-as-a-second-language (ESL) students, with those skills necessary for success in their freshman classes. This individualized 30-hour, precollege program, offered during the summer prior to freshman
year, is designed to ready underprepared students for their math and English classes and to introduce them to learning strategies that can be used in all of their college courses.

Ideas in Practice: A Novel, "Cool" Assignment to Engage Science Students
By Murray Jensen, Randy Moore, Jay Hatch, and Leon Hsu

ABSTRACT: We've developed a unique assignment that rewards students' creativity. Students are told to "do something cool" that is related to human anatomy and physiology. This article documents the history of the assignment, provides examples of both good and bad projects, and reports students' reactions to the assignment. Evaluating the projects is the most difficult part of the assignment for instructors, but the overall benefits of the project outweigh this detriment.

Volume 27, Issue 1, Fall, 2003
Table of Contents

Program Evaluation for Postsecondary Disability Services
By David R. Parker

Diversity as a Resource in Developmental Education: Research and Policies
By Hunter R. Boylan, E. Michael Sutton, and James A. Anderson

Connections: An Integrated Community of Learners
By Rebecca Brittenham, Richard Cook, Janet B. Hall, Phyllis Moore-Whitesell, Connie Ruhl-Smith, Morteza Shafii-Mousavi, Jay Showalter, Kenneth Smith, and Karen White

Ideas in Practice: Letters of Advice From At-Risk Students To Freshmen
By Nanette Evans Commander and Maria Valeri-Gold

For Your Information

Critical Thinking: Teaching Students How to Study and Learn (Part IV)
By Linda Elder and Richard Paul

Techtalk: How Technology has Changed Developmental Education
By David C. Caverly and Lucy MacDonald

Developments and Advertisers' Index

Article Abstracts

Program Evaluation for Postsecondary Disability Services
By David R. Parker

ABSTRACT: In an era of decreased funding and rising expectations for demonstrable outcomes, postsecondary professionals face a growing need to evaluate the effectiveness of their program's mission and activities using data-driven procedures. Numerous studies have documented disappointing educational and occupational outcomes for young adults with disabilities. These findings have driven reform efforts designed to make special education services more accountable. This article draws upon recommendations in the literature and examples from five campuses to describe a decision-making process that can be used to organize an evaluation action plan. Although examples are specific to disability services, the rationale, framework, and activities described in this article can be applied to any program in higher education. Recommendations for making program evaluations a routine component of professional practice are presented.

Diversity as a Resource in Developmental Education: Research and Policies
By Hunter R. Boylan, E. Michael Sutton, and James A. Anderson

ABSTRACT: Recent research indicates that interacting and taking classes with students of a different ethnic background contributes to students' intellectual development. Because a large number of minority students pass through developmental courses on their way to the credit-bearing curriculum, these courses may serve as either a barrier or a facilitator for minority retention. This manuscript proposes methods of increasing retention of minority students--thereby enhancing intellectual development--through developmental education. It also offers a challenge to development al educators to view the diversity of their classes as a benefit to learning rather than as a detriment to teaching.

Connections: An Integrated Community of Learners
By Rebecca Brittenham, Richard Cook, Janet B. Hall, Phyllis Moore-Whitesell, Connie Ruhl-Smith, Morteza Shafii-Mousavi, Jay Showalter, Kenneth Smith, and Karen White

ABSTRACT: This study compares the outcomes of connected developmental mathematics and developmental writing sections to those of nonconnected sections at a regional commuter campus of a Midwestern public university system. The Connections Program directs all of the university support systems toward students enrolled simultaneously in developmental mathematics and developmental writing courses. The program proposes to underprepared students that they are entitled to learn the habits of mind, to practice the social and academic skills, and to build the personal and professional connections
that lead to academic success. The Connections Program courses have significantly higher pass rates in math (85% pilot vs. 69% all developmental sections) and in writing (85% vs. 53%). Students enrolled in the two connected developmental courses returned to the university the following fall at a 13.9% higher rate than all other students in this cohort of first-year students, including students requiring only one or no developmental courses. The results suggest that a public university with a large commuter population of developmental students can teach basic skills and encourage psychological and social adjustment to university life through appropriately designed academic programs.

Ideas in Practice: Letters of Advice From At-Risk Students To Freshmen
By Nannette Evans Commander and Maria Valeri-Gold

ABSTRACT: This article describes an assignment that required at-risk students to give advice for success in college to freshmen through letter writing. Analysis of the letters revealed ten specific themes that mirrored what instructors of orientation classes often communicate to beginning students. Research documents that letter writing is a valuable tool for learning about writing skills. In addition to being an effective writing exercise, at-risk students shared their valuable experiences as they connected with freshmen who learned essential elements for success.

Volume 26, Issue 3, Spring, 2003
Table of Contents

Supplemental Instruction: Short- and Long-Term Impact
By Peggy Ogden, Dennis Thompson, Art Russell, and Carol Simons 2

Principles for Effective Teaching in Developmental Education
By Patricia Smittle 10

Annual Index, Volume 26
16

Perceived Inhibitors to Mathematics Success
By Ethel Wheland, Rose Marie Konet, and Kevin Butler 18

Social and Emotional Intelligence: Applications for Developmental Education
By Suzanne B. Liff 28

Critical Thinking: Teaching Students How to Study and Learn (Part III)
By Richard Paul and Linda Elder 36

Techtalk: Developing Academic Literacy through WebQuests
By Cynthia Peterson, David C. Caverly, and Lucy MacDonald 38

Developments
40

For Your Information
41

Readers’ Service Card and Advertisers’ Index
43

Article Abstracts

Supplemental Instruction: Short/Long-Term Impact on Academic Performance
By Peggy Ogden, Dennis Thompson, Art Russell, and Carol Simons

ABSTRACT: The purpose of this study was to assess Supplemental Instruction (SI), an academic assistance program, for short- and long-term impact on college academic performance and retention. Data were compiled for students registered in a political science course supported by SI. Four groups were identified according to their university entry status and SI participation: traditional (regularly admitted) SI participants, conditional (Learning Support Programs and/or English as a Second Language entry status) SI participants, traditional non-SI participants, and conditional non-SI participants. All SI participants volunteered for the program. Conditional students participating in SI had significantly higher short- and long-term outcomes compared to conditional non-SI participants. Conditional SI participants reenrolled at a higher rate than did the other three student groups included in this study.

Principles for Effective Teaching
By Patricia Smittle

ABSTRACT: Effective teaching in developmental education is one of the most challenging jobs in the college teaching profession. The search for teaching excellence in this field extends beyond basic cognitive issues to address noncognitive needs of underprepared students also. The six principles for effective developmental education teaching reviewed in the article are the product of integrating research findings from successful developmental education programs and general principles for effective teaching in undergraduate education. The principles focus on key elements that teachers may use to support effective teaching.

Perceived Inhibitors to Mathematics Success
By Ethel Wheland, Rose Marie Konet, and Kevin Butler

ABSTRACT: This study examines five perceived inhibitors to successful performance in an intermediate algebra course: perceived inhibitors examined are (a) non-native English speaking status of the instructor, (b) instruction provided by teaching assistants versus adjunct faculty, (c) student performance in mathematics compared to other courses, (d) relationship of performance in an intermediate algebra course to success in subsequent mathematics courses and (e) student attendance. Student performance data, collected using uniform, nongrader-biased computer-based assessment techniques, are presented and then analyzed. Discussion of the results, their implications and potential strategies to more actively influence students’ beliefs about mathematics are included.

Social and Emotional Intelligence: Applications for Developmental Education
By Suzanne B. Liff

ABSTRACT: By addressing social and emotional learning within their classrooms, postsecondary educators, in both traditional and developmental classrooms, will foster the scholarly, as well as interpersonal, growth of students. This article explores the very real, if not causal, relationship between social and emotional intelligence and success in college. Student needs and faculty capacities to address those needs are the focus. Six components of the social and emotional intellectual paradigm, gleaned from the literature and merged with the voices of college educators, are reviewed and pragmatically applied to campus life and learning. Traditionally not a pedagogic focus of higher education beyond a variety of developmental enhancements, it will be shown how sensitivities and learning within the affective domain are strongly linked to the efficacy of a successful collegiate experience for all students.

Volume 26, Issue 2, Winter 2002
Table of Contents

Program Evaluation Studies: Strategic Learning Delivery Model Suggestions
By Michele L. Simpson 2

Curriculum and Affect: A Participatory Developmental Writing Approach
By Thomas J. Reynolds and Patrick L. Bruch 12

Comprehension Monitoring: An Aid to Mathematical Problem Solving
By William A. Schurter 22

For Your Information 33

Critical Thinking: Teaching Students How to Study and Learn (Part Two)
By Linda Elder and Richard Paul 36

Techtalk: Effective Technology Use in Developmental Mathematics Classroom
By Lucy MacDonald, Selina Vasquez, and David C. Caverly 38

Developments 38

Advertisers’ Index 40

Article Abstracts

Program Evaluation Studies: Suggested Strategic Learning Delivery Models
By Michele L. Simpson

ABSTRACT: Although strategic learning delivery models such as study strategy courses or paired courses are essential in assisting college freshmen with their challenging academic tasks, very few program evaluation studies have been conducted on their efficacy. In order to encourage academic assistance professionals to evaluate their strategic models, the author shares seven suggestions that have been drawn from personal experiences and actual research studies. These suggestions focus on important questions that should be asked, instruments that might be used, possible data analyses methods, and tips for collecting data and writing reports.

Curriculum and Affect: A Participatory Developmental Writing Approach
By Thomas J. Reynolds and Patrick L. Bruch

ABSTRACT: Developmental writers have traditionally been taught according to a method that favors mastery of smaller discrete skills before moving on to sophisticated writing tasks. This article first describes an alternative approach to a 1st-year developmental writing curriculum. We explain our approach in terms of its theoretical foundations and practical activities. We then discuss student perceptions of our "literacy work" curriculum gathered through a survey of students upon completion of a 2-semester developmental writing sequence. The article concludes by highlighting the promise of a participatory approach to developmental writing instruction.

Comprehension Monitoring: An Aid to Mathematical Problem Solving
By William A. Schurter
ABSTRACT: Teaching problem solving continues to be a challenging and often frustrating task for mathematics teachers. Students do not understand how to use all of the information available to them, and perhaps more importantly, they do not know what it is that they do not understand. This study investigates using comprehension monitoring as a technique for problem solving by students in three different sections of developmental algebra. It concludes that although there is no apparent difference in the conscious use of these techniques, the students who receive increased emphasis in the use of comprehension monitoring strategies perform better in mathematical problem solving than students who do not receive this type of instruction.

Volume 26, Issue 1, Fall, 2002
Table of Contents

Repetition and the Informational Writing of Developmental Students
By Dolores Perin 2

Comparison of Beginning Algebra Taught Onsite Versus Online
By Gail H. Weems 10

Ideas in Practice: When Older Readers and Younger Readers Meet
By Jennifer M. Good and Terry C. Ley 20

Developmental Mathematics Education and Supplemental Instruction: Pondering the Potential
By Gary L. Wright, Robin Redmon Wright, and Charles E. Lamb 30

For Your Information 33

Critical Thinking: Teaching Students How to Study and Learn (Part I)
By Richard Paul and Linda Elder 36

Techtalk: Access to Distance Education
By David C. Caverly and Lucy MacDonald 38

Developments 40

Article Abstracts

Repetition and the Informational Writing of Developmental Students
By Dolores Perin

ABSTRACT: This study investigated the effects of task repetition on the writing skills of upper-level developmental reading students. On two occasions spaced 1 week apart, the students were presented with college-level allied health and business text and asked to write an informational report. Although no writing instruction was provided in the interval, performance changed significantly on four of five indicators of writing skill. Productivity, use of source text, and representation of key ideas improved, which suggests that the simple repetition of meaningful literacy tasks has potential to facilitate learning in developmental education classrooms. However, there was also an increase in copying from the sources, possibly the result of students’ growing recognition of task difficulty.

Comparison of Beginning Algebra Taught Onsite Versus Online
By Gail H. Weems

ABSTRACT: This study compared two sections of beginning algebra: one taught online and the other onsite. The dependent variable of primary interest was mathematical achievement; however, other variables included student attitude toward mathematics, their reasons for selecting an online section, and their critiques of the online format. Although there was not a significant difference between exam averages for the two formats, there was a significant decrease in performance by the online students across the exams, whereas performance by the onsite students remained relatively stable. Significant differences were not found regarding student attitudes toward mathematics. Students indicated an overall satisfaction with taking the course online and many plan to enroll in online courses in the future.

Ideas in Practice: When Older Readers and Younger Readers Meet
By Jennifer M. Good and Terry C. Ley

ABSTRACT: To encourage older students (high-needs, college-level students involved in developmental education) to develop their own literacy skills while also providing an opportunity for them to interact with youth from the surrounding community, a program model entitled “Community Days” was designed for university freshmen enrolled in a developmental studies course. The program model includes the following components: (a) the older students are taught a variety of prereading, during reading, and postreading strategies which they apply to their own reading processes in order to help them construct meaning; (b) the older students spend an introductory session at the library learning various search methods; (c) the older students search for a selection of children’s literature that would be appropriate for a specified age group; (d) the older students plan and explain the use of specific prereading, during reading, and postreading activities in order to engage an audience in their chosen text; (e) the older students visit a local public school where they read the
books to kindergarten and elementary school-aged children, engaging the students in the predetermined reading activities; (f) the older students reflect in writing on their own reading process and the reading processes of others. The theoretical underpinnings of this model are discussed, and responses from the older students illustrate their perceptions of the experience.

Developmental Mathematics Education and Supplemental Instruction: Pondering the Potential
By Gary L. Wright, Robin Redmon Wright, and Charles E. Lamb

ABSTRACT: During the Spring, Summer, and Fall 2000 semesters, data were gathered and analyzed concerning the effective use of Supplemental Instruction (SI) in 90 developmental mathematics courses. The study monitored student outcomes in a small pilot program conducted at a southern state university with about 11,000 students. The student outcomes suggested that Supplemental Instruction may have made a positive difference in the performance and retention rates of developmental mathematics students when the instructor was actively involved in promoting the SI group and certain modifications were made to the traditional role of the SI leader in the classroom.