What Really Matters for Underprepared Students in Postsecondary Institutions

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Abstract

The transition that students must make from high school to college has proven to be a difficult task. With the changing face of K-12 education, career readiness is a primary focus. However, studies have shown that student readiness, particularly in reading, for college-level academics has steadily declined. The need to continue developing reading skills long after students are "able to read" is clear. This study examines students that were taught reading comprehension strategies versus students that were not.

The emotional, personal, social and academic transitions to college from high school can be very difficult for first year students (Hong-Nam & Leavell, 2011). These transitions may be further compounded as beginning college students realize the expectations of academic literacy practices in postsecondary contexts differ greatly from those they are familiar with from high school (Armstrong & Newman, 2011). The ability to engage in the strategic reading of postsecondary academic text that is both broad and variant is critical to the academic success of

college students. Students who demonstrate inadequate preparation for college-level work are often administered college placement exams. Scores from placement exams are used to assess whether or not students have the skills needed to enter into college-level courses. Students with scores that fall below an established cut score are typically required to enroll in developmental coursework prior to enrolling in courses for college credit.

The increasing number of underprepared students entering postsecondary institutions has gained national attention (Hong-Nam & Leavell, 2011). Despite criticisms and concerns about developmental coursework at the college level, current studies (Boatman & Long, 2010; Martorell & McFarlin, 2011) indicate a consistent academic need for many entering students. According to the most recent data from NCES (2010), the number of students who take developmental courses remains significantly high; about 36% of United States freshmen enroll in at least one developmental course upon entry to college. In the academic year 2009-2010, developmental instruction was provided by nearly all public two-year colleges, 75% of public four-year institutions, and 66% of private four-year institutions (NCES, 2010). Recent data from ACT (2012) indicated that a large number of secondary students are not equipped to meet the academic demands of postsecondary institutions and these numbers continue to increase.

Postsecondary institutions offer a myriad of developmental education programs designed to help students become self-regulated, strategic, and interactive readers (MacArthur & Philippakos, 2013). Courses within developmental programs are often referred to as "gatekeeper" courses because students are required to either retake and pass the placement test they failed; pass the developmental course in which they were placed based on their placement scores; or pass both to obtain unconditional admission to postsecondary institutions (Hong-Nam & Leavell, 2011).

Developmental Education

The goal of developmental education is to address skill deficits not mastered in high school (Kennel, 2012). The general purpose of developmental education courses is to provide academically underprepared students with the skills they need to earn a credential in their field of study and leave college qualified for a greater range of jobs and salaries. Although developmental education plays a critical role in the lives of students and the colleges and universities they attend, there are growing debates about how instruction should be delivered (Moss, Kelcey & Showers, 2013). Instructional support for academically underprepared students is critical and the need for effective literacy instruction for these students is even more critical, as is the need for instructional approaches that diminish the gap between academically underprepared students and those that are college ready.

Metacognitive Reading Strategies

Academically underprepared college students who experience difficulty when reading a large number of academic text also lack a repertoire of comprehension strategies needed to successfully comprehend college level text. This lack of available strategies is accompanied by an inability to extract what is important for the purpose of reading (MacArthur & Philippakos, 2013). These students may lack metacognitive reading strategies (MacArthur, 2011). The

acquisition of metacognitive awareness has received more emphasis with regard to reading comprehension research and reading strategy instruction (Gruenbaum, 2012; Maloney, 2003). With respect to reading, metacognition refers to the reading awareness of comprehension of a text while reading it and to the reader's regulation of the processes that leads to comprehension (Gruenbaum, 2012). Metacognitive readers have the ability to mentally step outside of themselves and view themselves as learners faced with particular learning tasks. In addition, these readers have metacognitive knowledge about themselves, the reading tasks they face, and the strategies they can employ in completing these tasks (Wade, 1990, Williams, 2007). The most effective readers are aware of their processes for making meaning from text and, more importantly, they know when their comprehension breaks down (Baker & Brown, 1984). In contrast, poor readers often lack these metacognitive skills that aid comprehension. Virtually all reading authorities agree that being metacognitive is extremely important to becoming a proficient reader (e.g., Allington, 2001; Baker & Brown, 1984; Pressley, 2002; Wade, 1990). Determining which strategies developmental students use and which they are lacking must occur to plan effective instruction for these students in order to meet the demands of college level text. However, the research on effective instruction for developmental education students is limited in its rigor and reliability.

The Study

Purpose

The purpose of this study was to compare the metacognitive strategy use of developmental reading students who were explicitly taught reading comprehension strategies instruction to those developmental reading students who did not receive reading comprehension strategies instruction. Therefore, the research hypothesis for this study was: There is no statistically significant difference in the metacognitive strategies use of developmental reading students who were explicitly taught reading comprehension strategies and those who were not as measured by the Metacognitive Awareness of Reading Inventory.

Instrument

The Metacognitive Awareness of Reading Strategies Inventory (MARSI) was administered to measure students' metacognitive awareness (Mokhtari, 2000). The instrument was designed for adolescents and adult readers (fifth grade through college); however, it has been adapted for students in third grade. The adapted version of the instrument was used in this study as the pretest, posttest, and delayed posttest because of the varied reading levels of the students. The instrument contained 30 statements; students responded to how often they used the strategy described in the statement using a 5-point Likert-type scale ranging from 1 (I never do this) to 5 (I always do this). The highest possible score on this instrument is 150 and found to be reliable at .89 using Cronbach's alpha. The administration time was approximately 15 minutes for each of the administration periods. The strategies on the instrument are divided into three strategy subscales: global (13 items), support strategies (9 items), and problem solving (8 items).

Participants

The participants for this study were 129 freshmen enrolled in a developmental reading course at a Historically Black College and University (HBCU) that serves over 5,600 students. The description of the participants is listed in Table 1.

Table 1

Description of Participants

Freshmen (first year college students)	ACT Score Less < 18	ACT COMPASS Reading Subtest < 78

Upon admission to college, students were required to take the COMPASS (ACT, 2003) Reading placement test if they received a score below 18 on the ACT. Based on the University's recommendation, students with a reading score less than 78 were enrolled in a developmental reading class. Two of the four developmental reading classes served as the experimental instruction condition (n= 64) using the reading strategy instruction and the remaining two classes served as the control condition (n= 65) using the traditional developmental reading instruction. The experimental group consisted of 65 students and the control group consisted of 64 students. The four groups were similar in abilities as measured by the results of the COMPASS (ACT, 2003) Reading test.

The instructors for the control group were two adjunct professors with doctoral degrees in Reading and Literacy. One of the adjunct instructors is a certified English teacher at a local high school. The other adjunct instructor is currently employed as a full-time faculty member at local community college. The two instructors in the experimental group were certified K-12 teachers with earned doctorate degrees and comprehensive training in reading instruction for young, adolescent, and adult readers. Further, these instructors earned at least 18 hours of graduate level course work hours in reading and language arts. Additionally, both experimental group instructors were full-time faculty members at the university in which the research was conducted.

The Intervention

Instruction in the experimental group included weekly comprehension strategies instruction using a direct instruction teaching style. Two principles in the design of this treatment were adapted: direct explanation (Roehler & Duffy, 1984) and explicit teaching (Pearson & Leys, 1984). Modeling paired with explanation, guided practice with feedback in whole and small groups, and independent practice were implemented weekly during the intervention. Comprehension strategies included but were not limited to the following: question-answer-relationships, brainstorming, previewing and predicting, making connections, visualizing, rereading, adjusting reading speed, and using context and word parts to teach vocabulary.

The control group, which included the traditional developmental reading instruction, focused on developing discreet reading skills (i.e. identifying main idea, making inferences, drawing conclusion) in isolation. The skill instruction was generated by the topic organization in the associated textbook. Additionally, myReadingLab, a technology-based Pearson Education

product was heavily used throughout the course. In contrast, instruction in the comprehension strategy instruction group (experimental group) was contextualized in the specific types of text that students will encounter in postsecondary content courses.

Methodology

The MARSI pre-test was administered to four intact classes of developmental reading students during week three of the semester. The posttest was administered during week fifteen of the same semester. An interim assessment director at a comparable university scored the pretests and posttests for each administration. There were no statistically significant difference in the MARSI pretest scores of the control (*M*=76.63, *SD*=14.87) and experimental groups (*M*=75.89, *SD*=15.75). Therefore, each of the groups was similar in abilities as measured by their COMPASS (ACT, 2003) Reading scores and their pretest scores on the MARSI.

Findings

A repeated measure analysis of variance (ANOVA) was used to determine if differences existed between the experimental and control groups' metacognitive scores on the MARSI pretest and posttest. In other words, did students' reported use of specific metacognitive strategies change depending on whether they were in the control or experimental group? To answer this question, time was used as a within-subjects factor (repeated measure) and group was used as a between-subjects factor.

The results of the ANOVA indicated a significant time effect, Wilks's $\wedge$ = .15, $F(1, 127)$ = 724.93, $p < .01$, multivariate η^2 = .85. The mean metacognitive strategy scores increased from pretest (*M*=75.89, *SD*=15.75) to posttest (*M*=95.31, *SD*=16.03) for the experimental group. Although metacognitive strategies scores increased from pretest (*M*=76.39, *SD*=14.87) to posttest (*M*=83.78, *SD*=16.40) for the control group, the increase was not statistically significant. Follow up comparison indicated that each pairwise difference was significant, $p < .01$. There was a significant increase in scores over time, suggesting that participation in the reading strategy instruction group (experimental group) increased participants' metacognitive reading strategy scores. Therefore, the null hypothesis was rejected. There was a statistically significant difference in the metacognitive strategies use of students who received comprehension strategies instruction compared to those who did not as measured by the MARSI.

Conclusion

Current studies demonstrate that when students experience explicit instruction of comprehension strategies, it improves their comprehension of new texts and topics (Gruenbaum, 2012; MacArthur, 2011). Perin, Bork, Peverly, and Mason (2013) posit that efficient strategic behavior requires more than the awareness of the appropriate strategies; it requires immersion. When students are immersed in explicit instruction of comprehension strategies, improved comprehension of novel texts and topics has been well-documented by a number of studies (e.g. Baker & Brown, 1984; Gruenbaum, 2012; Hiebert, Pearson, Taylor, Richardson, & Paris, 1998;

MacArthur, 2011; Pressley, 2002). When the reader fully understands a comprehension strategy, how the strategy works, as well as, when and where to apply it; comprehension is improved.

  The aforementioned assertions present and validate the case for explicit strategy instruction. As a result, the pedagogical understanding of the course instructors is critical to instructional delivery. The control group was instructed by a part-time faculty member and a full time faculty member. This instruction was driven by the layout of the textbook with a focus on skills and did not prove to elicit a statistical improvement in students' metacognitive strategy use. In contrast, the experimental group, which was instructed by two full-time faculty members, with a focus on the explicit instruction in comprehension strategies did see a statistical improvement in students' metacognitive strategy use.

  Instructional quality and instructional effectiveness are among the most essential factors influencing developmental-level students' academic achievement. Consequently, policymakers, researchers and educators, should develop more cohesive procedures to professional development that provide ongoing support to faculty, as they implement meaningful pedagogical practices. Stakeholders should make a concerted effort to align classroom pedagogy and practice with student outcomes.

  The 2011 report, *Unlocking the Gate: What we know about improving developmental education* (Rutschow & Schneider), posits that developmental education instructors typically have limited professional preparation for instructing basic skills students, yet the degree of effectiveness and level of quality of instruction are unquestionably among the most critical considerations influencing developmental-level students' academic achievement. To support successful preparation of these students, the National Study of Community College Remedial Education recommends sound "techniques, models and structures. Among these are staff training and professional development for those who work with underprepared students (Eney & Davidson, 2012). All faculty should be provided with the training and preparation they need to be effective teachers in developmental education with an emphasis on appropriate and explicit strategy instruction.

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