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Introduction to Special Issue of *Community College Review* : Skills and Trajectories of Developmental Education Learners

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Introduction to Special Issue of *Community College Review*: Skills and Trajectories of Developmental Education Learners

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Abstract

The four articles in this special issue focus on developmental education students and the research needed for an enhanced understanding of the instructional and institutional approaches that promote their success. This introduction summarizes the purpose and key findings of each article, noting implications for future research and practice.

Keywords

developmental education, student outcomes, instructional practices, research methods

The population of students attending community colleges is becoming increasingly diverse with respect to socioeconomic background, English language proficiency, race and ethnicity, and academic history. This shift creates a need for the colleges to consider new approaches to teaching and supporting students to ensure that their academic and career goals are met. This special issue of the *Community College Review* is devoted to the topic of skills and trajectories of academically underprepared students in developmental (also called remedial) education programs, offering four articles that

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examine teaching and learning challenges, structural innovations, and research methods that indicate new directions for community college practice and policy.

Because of their open-access policies, community colleges are more likely than other higher education institutions to serve academically underprepared students. Of the approximately 6.5 million students attending the 1,100 community colleges in the United States (Phillippe & Sullivan, 2005), about 45% take at least one developmental course in reading, writing, or mathematics (Staklis, 2010); however, this percentage may be an underestimation of the number of learners who are in need of developmental coursework given that it represents enrollment rather than skill level (Perin, 2006).

For students in need of additional remediation, the requirement for basic skills improvement may conflict with personal demands for time, money, and motivation that continuing education places on the learner. These costs of remediation—in time, dollars, and loss of momentum—present a challenge to the country's college-completion agenda. Students and faculty alike are highly aware that developmental education credits do not accumulate toward graduation requirements. However, the number of developmental credits taken annually is extremely large, and estimates of the monetary cost may be as high as US\$3 billion per year (Scott-Clayton & Rodriguez, 2012). Given the cost and the loss of momentum toward a degree associated with developmental education (Bailey, Jeong, & Cho, 2010), college administrators, researchers, and policy makers are considering institutional and instructional reforms that could facilitate increased completion rates.

Community colleges offer access to affordable postsecondary education and training, a crucial step toward future self-sufficiency and family-supporting earnings. However, persistence and graduation rates are low, especially for those who enter with low skills (Bailey et al., 2010). The population of youths and adults in the United States with low skills is not only large but also represents an important segment of the current and future workforce. From the most recent report of 12-graders' math and reading skills assessed on the National Assessment of Educational Progress (NAEP; National Center for Education Statistics [NCES], 2010), there is a 17-year trend of more than 73% of students scoring below the proficient level in reading. In math, the trend line extends only 4 years (due to test changes) and shows more than 60% of 12th-graders scoring below the proficient level. In both subjects, an achievement gap of 20 or more points between the performance of White students and students of color remained persistent over the years in the reporting period. In 2011, a NAEP writing assessment was administered (NCES, 2012). On this measure, 73% of 12th-graders scored below the proficient level. This low level of basic skills attainment of the nation's 12-graders exerts pressures on open-access postsecondary institutions in an economic system like that of the United States, which increasingly sets college certificate and degree attainment as a prerequisite for meaningful labor force participation (Carnevale, Cheah, & Strohl, 2012; Holzer, 2010). Commensurate with the distressing academic outcomes of the nation's secondary school students are findings from the National Assessment of Adult Literacy that approximately 43% of individuals aged 16 and above have low literacy skills and 55% have low math skills (Kutner et al., 2007, Figure 2.2). Many of these adults attempt to improve their literacy and math skills in

adult literacy programs. As in college developmental programs, adult literacy students aim to improve their life trajectories through skills improvement.

Developmental and adult literacy learners are usually studied in separate venues, but a recent publication of the National Research Council (NRC; Lesgold & Welch-Ross, 2012) was innovative in focusing on both groups in the same initiative. The NRC publication, in noting that the body of empirical research on the literacy skills of college developmental students was small, motivated the editors to highlight recent work on the skills and characteristics of this population. In fact, the scope has been extended beyond literacy to include mathematics, an area that is particularly difficult for this student population.

The contributing authors of the four studies in this special issue tackle the challenges that confront underprepared learners, each investigating aspects related to literacy or math skill attainment in a developmental education context. The editors selected these articles to enhance current knowledge on developmental education by focusing on quantitative data and on student learning and instruction.

Perin (2013) delves into skill development by examining closely the relationships of learner and learning contexts. Through a careful literature review organized into two groups of studies, one describing the characteristics of the reading and writing of underprepared students, and the other focusing on instructional approaches, Perin underscores the diversity of learners' skill profiles in developmental education classes. Importantly, she identifies a key gap in students' struggles with reading comprehension and the impact this has on their writing performance. Low pass and completion rates for developmental education suggest the need for improved instruction, but the research base on the effectiveness of instructional methods for developmental education is currently slim, creating a need to turn to K-12 research in a search for effective techniques. The lack of research-based interventions, and of the associated classroom materials and activities for this population of learners, is a point made repeatedly in the NRC's work (Lesgold & Welch-Ross, 2012). The significant life differences between adolescents in K-12 settings and many developmental education students make a careful adaptation of interventions and materials essential. For example, in any developmental classroom it is likely that some students will be single, working mothers, individuals holding several jobs while attending school, or nonnative speakers of English, and the vast majority of students will have had a history of low academic achievement. This diversity is challenging for the teacher, who must select pedagogical approaches that are both validated and motivating.

Bahr's article (2013) proposes shortcomings in a common methodology used to understand underprepared students' pathways toward a degree. This article is a retrospective look at how his perspective has matured, reflecting his increasingly sophisticated understanding of the complex challenges of watching—much less predicting—student progress along a postsecondary pathway from a transcript study alone. The deconstructive approach he proposes, which presumes a mix of quantitative and qualitative methods, suggests a productive shift to student processes and decision making. In looking for students who are lost from the remedial sequence, Bahr segments his database into action-based steps such as passing a course, registering for the

next in the sequence, attempting the course, and so on. Doing so infuses into analyses of course-taking patterns the complexity of students' goals, motivation, and sense of purpose, and how they adjust their aspirations in light of a failing grade in a developmental course, in this case, in mathematics. This type of analysis could capture student agency in relationship to the wide array of options the community college experience represents but does not necessarily make clear to students. Understanding the student decision-making process at these choice points could inform the establishment of more successful interventions, advising, and counseling responses.

In the third article in the issue, Bremer et al. analyze and interpret a data set of 7,898 community college students to see inside the trends occurring across the country. This sample of students exhibited a pattern that matches the national averages of approximately 40% enrolling in one or more developmental education class and an overall average completion rate within 3 years of under 15%. But within this sample, we can see student agency at work and the trajectories toward goals: older students, women, those who selected an occupational program, those who received financial aid, and those who made use of tutoring persisted longer, gained a higher grade point average, and completed their program or graduated at a higher rate. Three of these activities—selecting an occupational program, receiving financial aid, and getting tutoring—involve services that must be sought and secured by the student, often without prompting by institutional representatives. That such purposeful, self- and goal-directed behaviors are associated with postsecondary success is not surprising, but that they are as useful a predictor of success as incoming academic abilities is worthy of further consideration.

In the fourth article, MacArthur and Phillipakos (2013) report on a design study of an instructional intervention. It is a self-regulated writing strategy with an embedded measure of motivation for writing practice. The research builds from the literature on self-regulated, strategy instruction, an intervention that has the potential to boost not only the target skill but also the skills of reflection, planning, goal setting, and so forth, such that there may be transfer benefits to the student's other endeavors. This article points to a positive model of research that can be used to adapt evidence-based interventions from adolescent settings to the postsecondary context. Both instructors and students are considered participant researchers, reflecting on the intervention and offering possible changes for improvement and implementation. The authors point to student gains in motivation to write as one of the most important outcomes of the intervention, and one that they will be investigating further in future research.

Informing Future Research and Practice

The papers comprising this special issue clearly establish the interconnectedness of academic skills with a host of psychological, instructional, and social factors. Students present diversity along several dimensions, including age, recency of high school or equivalency degree, motivation, self-regulation, social factors (income, parenting status, working status, first-in-family to attend postsecondary status), academic history and ability, and English language proficiency. How students with mixed profiles of

these factors respond to the variety of instructional approaches they encounter is unclear. Given this complexity, there should be no assumption of a simple explanation or single pathway to developing higher skills. The essays in this special issue contribute to a growing awareness of productive future research directions that may advance our understanding. Below, we categorize aspects of what a broader agenda might include for learners, institutions, and researchers.

At the level of the learner, the authors suggest that we need additional research studies that are sensitive to, and systematically capture and represent the heterogeneity inherent in the community college student population (Perin, 2013). Assessment and intervention research will need to take into account skill profiles; demographic indicators such as low socioeconomic status, parenting status, and being the first in one's family to attend college (Cohen & Brawer, 2008); psychosocial variables such as motivation and self-efficacy (Bruning, Dempsey, Kauffman, McKim, & Zumbrunn, 2012; MacArthur & Philippakos, 2013; MacArthur, Philippakos, & Graham, 2012); and sociological factors such as how learners understand their role as a college student (Karp & Bork, 2012) and what supports are available (Bremer et al., 2013).

At the institutional level, there is a need to understand more fully which supports are necessary, and for which students, to facilitate successful learning and transitions during and after completion of developmental education coursework (Bremer et al., 2013). A reasonable first step would be to examine how the commonly offered supports of tutoring, counseling, and advisement (Boylan, 2002) may interact with classroom instruction to affect not only learning outcomes but also persistence and completion.

At the researcher level, an enhanced focus on implementation and evaluation of instructional approaches is called for, and Perin (2013) articulates multiple research directions informed by the findings of her review. In particular, we need to know the extent to which developmental education could benefit from importing, with appropriate modifications, evidence-based instructional techniques and materials from secondary education (MacArthur & Philippakos, 2013). Additionally, new methods and models are needed that can capture the complexity of students' trajectories, as Bahr (2013) discusses. Models that do not capture a more nuanced view of developmental learners in postsecondary education will do little to advance our understanding of how literacy and mathematics practices grow or how to efficiently and effectively structure institutional and instructional interventions to support students' goals.

The articles in this issue offer new ideas, data, and critiques that contribute to a growing, more sophisticated understanding of how to support underprepared learners through to postsecondary and training completion.

Author's Note

The opinions and assertions presented in this article are those of the authors and do not purport to represent those of the Eunice Kennedy Shriver National Institute of Child Health and Human Development, the National Institutes of Health, the U.S. Department of Health and Human Services, or the U.S. Department of Education.

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