

NADE Members Respond

Developmental Education Research Agenda: Survey of Field Professionals, Part I

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The field of developmental education has undergone substantial change in recent years. Philanthropic organizations have funded initiatives in well-meaning efforts to investigate developmental education practice and to promote innovation and improvement (Alstadt, 2012; Clancy & Collins, 2013; Silva & White, 2013). Along the way, however, critics have declared that developmental education is ineffective and needs to be eliminated or reformed (Complete College America, 2012). As a result, a range of fixes are being promoted and applied. Some such developmental education reform measures include accelerating and shortening courses (Complete College America, 2012), softening student placement policies (NC Community Colleges, 2012), or making developmental education altogether optional (Fain, 2013).

It seems there are two primary forces driving reform in developmental education at this time. The first is policy makers who believe reform is necessary in order for developmental education to perform more effectively. The second are opportunists and for-profit companies using social, economic, and political influence to promote reform through innovations, commercialized instructional models, and/or technology-based products. Some methods, models, and products being promoted as solutions are questionable in their suitability for standardization across institutions and programs. They also have yet to be proven on a large scale as effective. Nonetheless as these changes are implemented, developmental education professionals will be challenged to rethink and reformulate their practice. Administrators and practitioners must work to intricately define models and methods of instruction; they will likely need to redefine the roles of teachers and other personnel in redesigned program and classroom structures. Ultimately, they will be accountable for implementing the solutions that are being promoted and evaluating the results of reform.

It is appropriate at this time to listen to developmental education professionals regarding critical components of practice: What research is needed to inform meaningful practice in developmental education? This study has been undertaken to poll the members of The National Association for Developmental Education (NADE), as the largest professional association in the field, to determine their ideas and beliefs about the research agenda on which the field of developmental education should focus in the coming years. This column is the first of two that will describe and present the findings of the study.

Method

Via an online survey tool, an open-ended questionnaire was used to elicit topics of interest concerning the setting of a research agenda for developmental education. Due to its accessibility, an email invitation to participate in the

study by responding to the questionnaire was sent to the population (rather than a sample) of the National Association of Developmental Education (NADE). At the time of the invitation, the membership in NADE was 2977 (C. O'Shea, personal communication, February 17, 2014).

Data Collection

At the closing of the data collection window, 141 members had completed the questionnaire representing about 5% of the population. Because respondents were given the opportunity to supply up to five distinct topics for consideration, a total of 354 data points were collected. In addition to research topics, respondents were invited to propose research questions and explain the importance of proposed topics.

Data Analysis

Two of the researchers acted as data coders. To establish inter-rater reliability, each coder was asked to individually code the same 40 data points. After initial coding, the researchers

standardized coding vocabulary (i.e., "teaching methods" translated to "best practice") and calibrated coding on the data points. Coders then individually coded an additional 253 data points given 13 coding themes. Proposed research questions and respondents' explanation of the importance of the proposed topic were used to clarify research topics whenever the intent of the topic was unclear. Data not fitting any of the 13 themes were coded "other" with a descriptive subtheme (outliers). Additional themes were created whenever multiple subthemes were identified. After a total of 293 data points were analyzed, code saturation was established. Themes were then sorted by frequency. Outliers were reanalyzed to ascertain fit within other themes. Given the sorted data, the ten most frequently occurring themes were analyzed for distinction.

Results

Best Practices in Instruction

First and foremost, survey participants were interested in learning about best practices for improving teaching and student success. To narrow this broad topic, participants suggested that strategies and methods of instruction that worked best in particular situations and/or with particular groups of students were of primary concern. Their questions offered some detail about specific areas in which they were interested:

- What are instructional strategies that promote student engagement?
- What are instructional strategies that motivate students?
- What teaching methods can be effectively applied to replace the traditional lecture?

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- What are effective strategies and methods for improving reading instruction and student reading comprehension?
- What strategies and models are appropriate for integrating reading and writing courses?
- Which methods are more effective for teaching and learning mathematics?

As a foundational review for these areas of research, practitioners and scholars could look to the literature on teaching, learning, and andragogy for guidance and development. In developmental education however, as participants noted, there is much work to be done. A particular landmark writing in this area is work by Kulik and Kulik (1991) which predates the modern redesign era by nearly two decades. They offered a meta-analysis of the literature at the time that, given some of the suggested course design reforms being proposed, seems as relevant today as ever. It appears that many of these models being promoted are based on the principles of Bloom's Mastery for Learning, Keller's Personalized Systems of Instruction, and technology-based instruction, which were described by Kulik and Kulik (1991). A few examples include the Emporium Model (National Center for Academic Transformation, 2005) and modularized course content (Vandal, 2011).

Work by Zientek, Ozel, Fong, and Griffin (2013) identifies standard attendance policies, required academic support, and administration of testing on a regular basis as instructional strategies contributing to the success of developmental mathematics students. The integration of support services as an effective instructional strategy has been affirmed by Boylan and Saxon (2006) and Jenkins (2006). Boylan (2002) also applies deductive reasoning to advocate for several instructional practices that may contribute to student success. Explaining that traditional lecture-based methods of instruction have previously failed to effectively serve developmental students, he suggests a broad range of teaching and learning strategies to apply in the classroom. Among them are active learning methods, self-paced and individualized instruction, collaborative learning and peer review, and mastery learning. However, these sources provide theoretical and/or anecdotal reporting on developmental education instruction. Therefore, the field could benefit from an investigation of the efficacy of various teaching techniques.

Persistence and Retention

Naturally, in a field charged with the mission of preparing students for advancement to college-level academic success, professionals would be concerned with the success of students throughout this progression. Study participants expressed strong interest in knowing about and understanding what keeps students in school and on a path to college success. Specific questions of interest were:

- What is the effect of student success courses?
- How do the persistence and retention rates differ for particular student groups?
- What are the common reasons that students do not complete their college goals?
- How can teachers promote and instill student commitment to completing developmental courses?
- What are the most successful academic and support service interventions?

Classic work by Tinto (1987) posited the complex social, institutional, and leadership issues that may impact student decisions to leave college. The release of a report by Bailey, Jeong, and Cho (2009) has drawn great attention to

attrition rates along the path through a developmental course sequence. Wide dissemination of this report has encouraged a deeper discourse about the reasons students leave higher education never having completed their developmental education requirements. Zeidenberg, Jenkins, and Calcagno (2007) found that student success courses are typically structured to include orientation, study skills, and freshman year experience content. They identified a positive correlation between these types of courses and student success outcomes.

Efficacy of New Instructional Models

Given some recent mandates for reform and redesign (Fain, 2013; NC Community Colleges, 2012; Texas Higher Education Coordinating Board, 2014) practitioners want to know more about the models and applications that they are being asked to implement. Scholars and practitioners in the field want to know that what they are being asked to do is soundly designed and evidence based. Among their top responses were:

- For which students is Integrated Reading and Writing most effective?
- How can reading and writing be most effectively integrated?
- Are technology-based models of instruction effective?
- What are the long term outcomes for students completing accelerated learning programs?
- Which models work most effectively for reading, writing, and math?

The integration of developmental reading and writing instruction is currently a popular method being applied in many programs in an attempt to accelerate students more quickly through developmental education.

One such model is the Accelerated Learning Program pioneered at the Community College of Baltimore County (2014). There is limited evidence that this model is effective when applied with small class sizes. For developmental mathematics, current popular approaches include

modularizing content tailored to individually diagnosed student needs and/or applying technology-based instruction in accordance with the principles of mastery learning (NC Community Colleges, 2012). Astute practitioners are rightly skeptical about the full-scale implementation of instructional models without sound evidence of their success. A prudent approach would be a pilot program approach with objective and comparative assessment measures in place.

Assessment Testing and Student Placement

The front end of any quality developmental program must include attention and care to place students in the most appropriate courses and support services. An effective assessment and placement system however, can be quite complex. It must assist students in understanding assessment exams and placement options. It should take into account cognitive and affective characteristics of the student (Saxon & Morante, 2014). Advising professionals must understand course and support service options and the limitations of these systems and processes. Getting students started in the correct courses with the best support service options is crucial. Survey participants understand this and are interested in the following:

- How can we better prepare students for placement testing?
- Which placement criteria are most effective in properly placing students?
- What are the appropriate procedures to apply in placing students?
- Does the use of multiple assessment measures (academic and noncognitive) impact student success?

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- Are students who enroll in developmental courses more successful than students who are assessed as needing developmental courses but do not take them?

Interestingly, three such research agenda studies have been conducted in the past (Boylan, Saxon, Bonham, & Parks, 1993; Haithcock, Weinstein, Boylan, & Saxon, 2010; Saxon & Boylan, 2003), and assessment and placement has turned up each of them. Though classic work by Morante (1989) states the components and principles of sound assessment and placement practice, it remains a challenge for institutions. Saxon and Morante (2014) have affirmed and updated recommendations for quality assessment and placement practice. Safran and Visher (2010) have warned of common problems associated with poorly constructed assessment and placement programs. Though the aforementioned authors have offered advice to remedy some of the common shortcomings of assessment and placement, no research has been identified that investigates whether these remedies are being applied and, if so, their effectiveness. As institutions are compelled to embrace comprehensive, well-designed assessment and placement systems, scholarly assessments of these systems will contribute to their impact and effectiveness.

Conclusion (Part I)

This concludes part one of the developmental education research agenda study. Part two of the study will appear in the next issue of the *Journal of Developmental Education* and will offer the remaining research topics and questions. The findings from this study are intended to be helpful in guiding research and practice in appropriate directions that are of interest to scholars and practitioners in the field of developmental education.

No research has been identified that investigates whether these [assessment and placement] remedies are being applied.

References

Alstadt, D. (2012). *Ahead of the curve: State success in the developmental education initiative*. Retrieved from http://www.jff.org/sites/default/files/AheadOfTheCurve_120312.pdf

Bailey, T., Jeong, D., & Cho, S.-W. (2009, November). *Referral, enrollment, and completion in developmental education sequences in community colleges* (CCRC Working Paper # 15). New York, NY: Community College Research Center, Teachers College, Columbia University.

Boylan, H. R. (2002). *What works: Research-based best practices in developmental education*. Boone, NC: National Center for Developmental Education/Continuous Quality Improvement Network.

Boylan, H. R., & Saxon, D. P. (2006). *Affirmation and discovery: Learning from successful community college developmental programs in Texas*. Retrieved from <http://www.ncde.appstate.edu/resources/reports/documents/TACC%20Final%20Report.pdf>

Boylan, H. R., Saxon, D. P., Bonham, B. S., & Parks, H. E. (1993). A research agenda for developmental education: 50 ideas for future research. *Research in Developmental Education, 10*(3).

Clancy, M. C., & Collins, M. L. (2013). *From innovation to transformation: Texas moves to reform developmental education*. Retrieved from http://www.jff.org/sites/default/files/publications/materials/FromInnovationToTransformation_040113.pdf

Community College of Baltimore County. (2014). *What is ALP?* Retrieved from <http://alp-deved.org/what-is-alp-exactly/>

Complete College America. (2012). *Remediation: Higher education's bridge to nowhere*. Retrieved from <http://www.completecollege.org/docs/CCA-Remediation-final.pdf>

Fain, P. (2013, June 5). *Remediation if you want it*. Retrieved from <https://www.insidehighered.com/news/2013/06/05/florida-law-gives-students-and-colleges-flexibility-remediation>

Haithcock, H., Weinstein, C. E., Boylan, H., & Saxon, P. (2010). The future is now: A research agenda for developmental education in the 21st century. *Research in Developmental Education, 23*(4).

Jenkins, D. (2006). *What community college management practices are effective in promoting student success? A study of high- and low-impact institutions*. New York, NY: Teachers College, Columbia University, Community College Research Center.

Kulik, J. A., & Kulik, C. L. (1991). *Developmental instruction: An analysis of the research* (Research Report Number 1). Boone, NC: Appalachian State University, National Center for Developmental Education.

Morante, E. (1989). Selecting tests and placing students. *Journal of Developmental Education, 13*(2), 2-4, 6.

National Center for Academic Transformation. (2005). *Program in course redesign: Project descriptions sorted by model*. Retrieved from http://www.thencat.org/PCR/Proj_Model.htm

NC Community Colleges. (2012). *Success NC: Developmental education initiative*. Retrieved from <http://www.successnc.org/initiatives/developmental-education-initiative>

Safran, S., & Visher, M. G. (2010). *Case studies of three community colleges: The policy and practice of assessing and placing students in developmental education courses* (Working Paper). New York, NY: National Center for Postsecondary Research and MDRC.

Saxon, D. P., & Boylan, H. R. (2003). Where do we go from here? An agenda for developmental education research, part I. *Research in Developmental Education, 17*(4).

Saxon, D. P., & Morante, E. A. (2014). Effective entering college student assessment and placement: Challenges and recommendations. *Journal of Developmental Education, 37*(3), 24-31.

Silva, E., & White, T. (2013). *Pathways to improvement using psychological strategies to help college students master developmental math*. Retrieved from http://www.achievethegoal.org/sites/default/files/resources/PathwaysToImprovement_0.pdf

Texas Higher Education Coordinating Board. (2014). *Developmental education/Texas Success Initiative*. Retrieved from <http://www.theccb.state.tx.us/index.cfm?objectid=233A17D9-F3D3-BFAD-D5A76CDD8AADD1E3>

Tinto, V. (1993). *Leaving college: Rethinking the causes and cures for student attrition* (2nd ed.). Chicago, IL: University of Chicago Press.

Vandal, B. (2011). *Getting past go. Modular/emporium model*. Retrieved from <http://gettingpastgo.org/blog/2011/03/22/modularemporium-model/>

Zeidenberg, M., Jenkins, D., & Calcagno, J. (2007, June). *Do student success courses actually help community colleges succeed?* (CCRC Brief No. 36). New York, NY: Community College Research Center, Teachers College, Columbia University. (ED499357)

Zientek, L. R., Ozel, Z. E. Y., Fong, C. J., & Griffin, M. (2013). Student success in developmental mathematics courses. *Community College Journal of Research and Practice, 37*, 990-1010.

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