High School Teachers' Perceptions of Developmental Education

By Mitchell R. Williams, Patrick Tompkins, and Betty Rogers

ABSTRACT: ***Developmental education has been examined from the perspective of students, college instructors, administrators, and policy-makers. However, the perspectives of one important stakeholder group—high school teachers—has not been included in the research literature on this topic. The purpose of this study was to allow teachers to be heard on the factors affecting the placement of recent high school graduates in developmental courses and how to reduce the number of such placements in the future. Teachers were eager to be heard on this topic, and the paper calls for greater communication and collaboration between high school teachers and college instructors and administrators, particularly on curricular issues.***

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Developmental education in the United States today presents a number of dilemmas for educational leaders. According to the National Center for Education Statistics (as cited in Schak, Metzger, Bass, McCann, & English, 2017), over two-thirds of students who entered college in 2003-04 had taken a developmental course in English or math by the 2008-09 academic year during their college careers at a cost to students and families of $1.3 billion a year. Students pass state tests that indicate competence to graduate from high school, but a few months later, a college will tell the same students they are underprepared to enroll in college-level courses (Roksa, et al., 2009; Virginia Department of Education, 2017a).

> Federal data indicate that 68 percent of community college students…take at least one remedial course. Research suggests that many more students are referred to developmental courses but never enroll in them. (Jaggars & Stacey, 2014, p. 1)

A second dilemma stems from the "blame game" that sometimes results in tensions between higher education leaders who attempt to "remediate" underprepared students and secondary leaders who feel colleges and universities do not communicate their expectations (Elgin Community College, 2017). At times, those who seek answers to the challenges of developmental education tend to blame high school teachers for the problem. One prominent recent example is from Peter Cunningham, Executive Director of Education Post, who was quoted as saying, "High schools are not rigorous enough. Higher standards have raised the bar but we need to hold schools accountable for meeting those standards" (Education Reform Now, 2016, para. 4).

High schools, and teachers in particular, seem to be blamed for many of the problems related to developmental education. Although many states, colleges, high schools, and their faculty have discussed developmental education, the perspectives of high school teachers have been underrepresented in the research literature (Elgin Community College, 2017; Gaudiani & Burnett, 1986; Schak et al., 2017). The purpose of this study is to give high school teachers a voice in the research on developmental education. Additionally, a goal of the study is to document in the research literature high school teachers' proposed solutions to the challenges related to recent high school graduates requiring developmental courses upon arrival at college.

For over two decades, developmental education has been continuously debated and explored by community college leaders and those who study higher education in the United States (Weissman, 1995). State governments, private think tanks, foundations, and university research teams have all been studying and "solving" the problems of developmental education, with, at best, mixed results. Historically, it has been difficult for public education and higher education to align the work completed in high school and the skill sets needed on college placement examinations (Henry & Stahl, 2017). This difficulty to align has naturally led to a large percentage of students who graduate from high school but are, at the same time, unprepared to do college-level work (Schak et al., 2017).

This problem is certainly not a new phenomenon; it is almost a tradition (Arendale, 2011; Brubacher & Rudy, 1968; Wyatt, 1992). Institutions of higher education have complained about the preparation of in-coming students for far longer than there have been college football teams. Further, it is not a community college problem; the need for remedial education was demonstrated at the nation's most selective colleges over 140 years ago. Harvard established the first American college freshman remedial English course in 1874 at a time when faculty members at several selective institutions

were disappointed in the academic preparation of students from affluent backgrounds, particularly in formal academic writing (Brubacher & Rudy, 1968). At the present time, nonetheless, the nation is trying to increase the number of college graduates to ensure a competitive position in the global economy, and, as one recent national report indicated, "college readiness is key to improving college completion" (CCCSE, 2016, p. 2).

Background of the Study

In recent years, dozens of studies and dissertations have been written on developmental education and the various efforts to expand, revise, reform, or terminate it (Achieving the Dream, 2017; Bailey, 2009; Brothen & Wambach, 2012; Griffith, 2016). These studies have examined developmental education from myriad viewpoints. They include the perspectives of the students who require developmental courses (including special populations of students such as English Language Learners or first-generation college attendees), the instructors who teach developmental courses, the faculty members who teach former developmental students in credit-earning courses, the community college leaders, and the decision-makers who set policy on developmental education.

Institutional Perspectives

College graduation rates and initiatives to increase the number of college graduates are common topics for elected officials and leaders of institutions of higher education. Since a high percentage of seniors graduate from high school with low reading and math skills, it is possible that difficulties with basic literacy and math impede achievement in college. This challenge is particularly common among students who have earned some college credits but have not completed either an Associates or Bachelor degree (Grigg, Donahue, & Dion, 2007). Since community colleges enroll almost half of all undergraduates, discussions about the need for developmental programming often focus on the two-year institution. Community colleges are the primary destination for students who aspire to college credentials but who find themselves underprepared for college-level coursework. Additionally, it is no coincidence the community college serves students from groups that have been historically underserved by higher education: low-income students, students from minority population groups, and students who are the first generation within their families to attend college.

Most community colleges assess entering students in order to determine whether they are ready to take college-level courses or whether they need to be placed in developmental courses. No nationally accepted measure of college readiness exists; placement examinations and methods vary from state to state and institution to institution (Perin, 2006). Community college leaders have long assumed that completing developmental courses, which rarely count for credit toward degrees, will help students to acquire the academic skills they will need to succeed in college-level courses, particularly English and math. As indicated in the literature, however, fewer than half of the students who begin a developmental education track successfully complete that program, and even fewer move on to earn a degree (Bailey, 2009; Perin, 2006).

In fact, even though the overwhelming majority of students feel they are well prepared for college (CCCSE, 2016), 68% of community college students take at least one developmental class (Jaggars & Stacey, 2014). Further evidence is provided by Chen (2016) who found that among 2003-2004 beginning students at two-year institutions, 69% of students 18 years of age or younger took at least one developmental course, as did 70.7% of 19-year-old students; these students took an average of three developmental courses. The percentage of students who are not ready to take college-level courses is probably higher.

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Research has indicated that community college instructors often practice "hidden remediation" in for credit courses (Grubb et al., 1999, p. 104). Despite the large percentage of community college students who require developmental coursework, many consider developmental education to have a "second-class status" within the community college's comprehensive curriculum (Brothen & Wambach, 2012).

According to Bailey, Jaggars, and Jenkins (2015) community colleges will continue to have large numbers of entering students who are not prepared for college-level work, "unless efforts are made to improve the preparation of incoming students" (p. 120). These efforts have often been focused on institutional change. For the past decade or longer, community college leaders, and those who study community colleges, have completed studies and initiated efforts to reform developmental education programs (Bailey et al., 2015). In Virginia, for example, the Virginia Community College System redesigned its developmental math and English programs. The primary reasons the redesign was initiated was that too many incoming students required developmental courses, too many of these students were unable to exit developmental education courses, too few entered and completed college-level English and math courses, and too few earned a college credential (Asera, 2011). The redesigned math program was implemented in 2013 and included a series of nine, one-credit modules (Kalamkarian, Raufman, & Edgecombe, 2015). The modularized approach reduced the time students spend in developmental math by allowing them to "test out" of some modules, and it moved students into "for-credit" courses more quickly than previously possible. In English, the curriculum was redesigned to integrate reading and writing (Developmental English Curriculum Team, 2011). Based on the results of a placement test, students are placed into one of three 1-semester courses with varying credit hour requirements. Students who need the most intensive instruction enroll in an 8-credit-hour course. Students with moderate needs are placed into a 4-credit-hour course. Students who need the least support are placed into a 2-credit hour course that is a corequisite with college composition. All of these developmental courses are designed to allow students to move directly into college-level English as quickly as possible.

Student Perspectives

When students' perspectives on developmental education have been the focus, recent studies have investigated high school students. Mathai (2014), for example, interviewed students who graduated from high school without adequate proficiency in mathematics. Themes were developed which related to family background, personal factors, teacher effectiveness, the absence of support systems and intensive interventions. Additionally, Griffith (2016) completed a qualitative study to understand first-year college students' perceptions of their high school preparation for college success. Themes emerged in areas such as the need for supportive connections, an enhanced role for school counselors, and changes in student work habits.

Students, parents, teachers, administrators, employers, and legislators share the goal of wanting students to be successful, not simply in terms of a grade earned but in terms of developing the reading, writing, and math skills that will provide the foundation for learning in school and at work; however, their perspectives and motivations may differ. For students, progression, graduation, and employment are paramount. Along with parents, they may focus on course, high school, and college completion. Parents may also focus on the quality of the underlying skills that make completion possible. One should perhaps assume that both high school and college faculty are committed to their disciplines of study and committed to student learning (ACT, 2016). But high school teachers may be especially focused on high stakes testing, such as the Standards of Learning tests in Virginia by which students, teachers, and schools are judged (Virginia

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Department of Education, 2017b). The perspective of the college faculty may be more focused on entrance skills, that is, the ability of high school graduates to engage in college-level work (ACT, 2013). Administrators hold individuals and schools accountable and are in turn held accountable, such as through performance based funding (Dougherty et al., 2016). Employers have an interest in a recruitment pool of potential employees who have completed developmental education and gained a solid foundation in basic skills and the ability to upskill (ACT, 2016; Carroll, Kersh, Sullivan, & Fincher, 2012). Legislators are often parents themselves and are members of the community; as such they share many of the same goals. Additionally they have a concern that taxpayer funds are efficiently and effectively used and high schools and that colleges are graduating students prepared to contribute as entrepreneurs, employees, and citizens (Colorado Department of Higher Education, 2016).

One stakeholder group's insights on developmental education has not been a focus in recent research: high school teachers. The current study gathered data on the views of math and English teachers who prepare students to attend college with the goal of better understanding their role in the transition that takes place between high school graduation and placement into developmental courses at the community college.

Purpose

The purpose of this study was to examine the perceptions of high school teachers regarding the factors that affect the placement of recent high school graduates into developmental courses at the community college. The intent of the study was to allow teachers to have a voice in the scholarly discussion of this topic and to enhance the relationship between community college leaders and instructors and high school administrators and teachers.

This study was guided by the following research questions:

1. What are perceptions of high school teachers at school districts in Virginia and Georgia regarding the factors that affect the placement of recent high school graduates in developmental courses at the community college?
2. What do teachers believe should be done to reduce the number of recent high school graduates who place into developmental courses at the community college?
3. How can high school teachers collaborate with community college instructors and administrators to reduce the number of recent high school graduates who place into developmental courses?

Methodology

Teachers from six high schools (three in Virginia and three in Georgia) in five school districts participated in the focus groups conducted for this study. The high schools involved in the study represent various locations within each state (urban and rural), and the schools are diverse with regard to the cultural and socioeconomic backgrounds of the students. All focus group meetings were conducted in the high schools. A Focus Group Protocol was developed including a series of initial questions which were used in all focus group sessions; the protocol and initial interview questions can be found in the Appendix. The protocol was reviewed by two university faculty members with expertise in developmental education; minor revisions were made based on the feedback of the reviewers.

Each focus group was asked the same initial questions to begin the discussion. Follow-up questions were customized based on the responses to the initial questions in order to probe for deeper, richer data. Notes were taken by the researchers during each of the focus groups and later organized and combined. Focus group participants provided validation of the notes from the focus groups through a member checking procedure which was conducted to improve the accuracy and validity of the data collected.

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Analysis

Since this study was designed to give a voice to high school teachers in the debate on developmental education, the goal of each focus group was to engage teachers in a conversation about their perceptions of developmental education, why they think the number of students requiring developmental coursework has increased, and their ideas to address this problem. The comments from the focus group participants were organized, coded, and analyzed for salient themes. Analysis was focused on word-based techniques, primarily word repetitions, which reflected the idea that if researchers want to comprehend and appreciate what people are talking about, they need to carefully and comprehensively examine the words they use (Ryan & Bernard, 2003). The researchers for the current study also used what Ryan and Bernard (2003) called "pawing" through the written data: marking key phrases with different colored markers to identify themes.

Participating High Schools

Focus Group A was held in an urban high school in Georgia. The school is located in a small city with a population of approximately 38,000 people. The high school has approximately 2100 students and offers Advanced Placement and honors courses; it also offers vocational curricula. For this district, the graduation rate was 79%; the percentage of students from a racial minority group is 80%, and the percentage of students who are economically disadvantaged is 69%. The focus group consisted of three men and three women, and all of the participants were mathematics teachers.

Focus Group B was conducted in a rural high school in a countywide district in northern Georgia; the county has fewer than 28,000 residents. There is only one high school in the county, with approximately 1100 students. The school offers Advanced Placement, Dual Enrollment, and Georgia's new dual enrollment program that allows high school students to earn college credit while working on their high school diploma: Move on When Ready (MOWR). The district has a graduation rate of 91%. In total, 9% of the students are from a racial group minority, and 47% are economically disadvantaged. The focus group consisted of two female teachers (one math and one English) and one male administrator.

Focus Group C was held with math teachers from a small high school in rural eastern Georgia. The county has a population of approximately 19,000. There is only one high school in the county, with just over 900 students. The schools offers Advanced Placement and MOWR programming. The average graduation rate at the schools was 92%. Minority students comprise 16% of the student population, and 56% of the students are economically disadvantaged. Three female teachers participated in this group: one math, one science, and one language arts.

Focus Group D and E were conducted in two high schools in Virginia in an urban district with over 7,200 students. The school district has a graduation rate of 86%. The minority population is 79%, and 54% of the students are economically disadvantaged. Focus Groups D and E were combined to have four math teachers, four English teachers and a science teacher.

Focus Group F was conducted at one high school in a large urban district containing five high schools and a total student population of 9,300 students. The district had a graduation rate of 89%. The minority population is 78%, and 63% of the students are economically disadvantaged. This focus groups consisted of two math teachers, two English teachers, and a government teacher.

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Findings and Discussion

From the six focus groups, a remarkable consistency emerged. Three themes—eagerness of the teachers to be heard, curricular issues, and lack of communication and collaboration—were universal; that is, they emerged in each of the six focus groups. Within these themes subtopics were identified, some of which appeared in all focus groups and others which emerged in some, but not all, as indicated in the following.

Theme One: Teachers' Eagerness to be Heard

Teachers were very eager to participate in the study and to have a voice in the debate on issues related to developmental education in college. Many expressed a frustration at (a) being blamed for the problem of increasing numbers of students who require developmental courses in college, and (b) not being invited to participate in discussions on potential solutions.

Student preparation. For example, several teachers had strong opinions on the use of placement tests. Many were very familiar with placement tests such as ACT's COMPASS® test, which is used to measure the knowledge of incoming college students in math and English so they can be placed into appropriate courses in college. Although teachers generally felt the COMPASS® test was fair, they thought the timing of the test was disadvantageous to students. They suggested, for example, that the math being taken in the students' senior year of high school often has no relationship to the math on the placement test. These teachers wanted Georgia to follow the example of other states to allow students to take the COMPASS® at the end of the junior year in high school so the school could offer

> a senior-year math class which could address the students' deficiencies which were identified by the placement test . . . . Why wait to find problems when the kid starts college? They could then re-take the COMPASS® at the end of the senior year or at the beginning of college and, hopefully, be more likely to immediately place into college-level course.

The teachers clearly wanted their students to be prepared to take the COMPASS® (or any other placement test), and they wanted to offer courses that would be relevant to their students' needs in college but "also prepare them for the high stakes test on which we are judged."

Although they were keenly aware of the discussion about high school graduates not being prepared to do college-level coursework, it should be noted that in two of the districts participating in the study, teachers did not immediately recognize the term "developmental education." This finding led to further discussion about placement tests and the placement process. In three of the six focus groups, teachers were generally unaware of the placement process. Given the nationwide scrutiny of developmental education in recent years, including data analytics, program reform, and performance-based funding (Bailey, 2009; Bailey et al., 2015), it was surprising that high school teachers in the focus groups were somewhat or mostly unaware of college placement processes and costs related to developmental education.

One possible reason for this lack of knowledge is most teachers probably never took placement tests or enrolled in developmental education courses while they were in college; perhaps their own children have never taken developmental courses. Another explanation, per two teachers in Focus Group C, is that high school teachers are so focused on helping all of their current students meet minimum standards (particularly in math) that they do not discuss how former students are doing at the college level. It is not that teachers do not care about the success of former students, they just feel a pressure to center faculty meeting discussions on challenges related to current students.

Teachers have expressed some frustration about not being heard concerning student characteristics that affect student placement.

It should be noted, however, that some teachers do talk about developmental education; the discussion, however, is not with colleagues, but with students. As one example, a teacher in Focus Group C in Georgia said that, although teachers do not discuss the topic among themselves,

> I do discuss this with my students. I mostly inform them to encourage them. If they don't get the material here and now at the high school and they don't test well enough, they'll basically have to repeat at the college level. . . .and then they'll have to pay for it in time and money.

Student characteristics. Teachers feel they can be particularly constructive in the conversation on the increasing need for developmental courses in college related to the topic of student characteristics. They know the students who will be taking the placement tests and the challenges these young people face. Additionally, teachers have expressed some frustration about not being heard concerning student characteristics that affect student placement into developmental courses in college.

In the focus groups in both Georgia and Virginia, many of the comments from the teachers were related to student characteristics that influence performance: socioeconomic status, maturity, and preparedness. The importance of a family or other support networks to student success was emphasized by the teachers. If the parents were able to complete college, they could pass this knowledge and experience to their children; they understood how to prepare their children and what students have to do in the summer to avoid placing into developmental classes. Teachers speculated, however, that students who would become first-generation college students had a much greater likelihood of placement into development courses.

Teachers expressed irritation at never having the opportunity to be heard on issues related to high school students' motivation. They feel "blamed" for poor-performing students (i.e., students who place into developmental courses soon after high school graduation), but college instructors and researchers have not understood the conditions which make it difficult for teachers to lead students into deep learning. For far too many students low self-efficacy has affected not just performance on college placement tests but the things students need to do to simply prepare to take the test. One teacher explained it this way:

> I would imagine a number of our kids who would test into the remedial are told you need to come and take the test on this day and here's some practice materials you can go online and do it. There are probably a number of them that would not be able to negotiate that on their own, would not be able to know what question to ask, and would not have access to the Internet to find the materials.

High school teachers have explained that for many students whose parents never attended college, awareness of higher education is superficial, with significant gaps in knowledge and understanding. This ignorance ranges from the conceptual to the concrete. For some high school students, college is for those who want to be teachers, doctors, or lawyers, and these students do not see themselves in those roles; they do not understand how college will fit into their lives until it is too late. According to teachers in Focus Groups D and E, both because of immaturity and the lack of resources in their lives, many students lack understanding of the value of college, and there is no one helping them to see the effect of present behavior on future success.

Some students simply do not consider the likelihood that they will enroll in some type of postsecondary program at some point in their lives, so they put little effort into high school studies. Teachers believe these students are at elevated risk

for placing into developmental classes because they, "cannot envision any kind of school setting that isn't like what they have experienced all of their lives." Teachers also want to emphasize the need for college officials to understand the lack of self-efficacy among many high school graduates. This affects not just student performance on college placement tests but the things students need to do to simply prepare to take the test.

Communication. The current study has found communication between community colleges and high schools often does not extend past high school administrators and guidance counselors to reach teachers. Students, however, spend far more time with teachers than with administrators or guidance counselors; communication with the community college needs to include teachers. If teachers are not fully aware of the importance of placement tests, the placement process, and the role of developmental education, it is little wonder students also lack this information.

The teachers in the focus groups were not only eager to be heard on the topic of developmental education, they were eager to learn. They wanted information, asking a number of questions about the placement tests, community college curriculum policies, pedagogy, and outcomes.

Nevertheless, it is not clear that outreach by community colleges to high school teachers would have a powerful impact on student success. According to study findings, a primary reason teachers rarely discuss developmental education among themselves or with their students is the heavy focus on end-of-grade performance testing in high schools. Teachers are bound by a high school curriculum that leaves little room for discussion of ancillary topics and creates constant pressure to get students to high school graduation.

Theme Two: Curricular Issues

Curricular topics dominated the discussion in almost all of the focus groups. A primary topic was the purpose of the K-12 curriculum: is it to prepare students for college or to prepare students to pass an examination with standards of knowledge? All of the teachers in the focus groups in both states, regardless of academic discipline, felt these two purposes were in conflict with each other. In Focus Groups D and E for example, teachers suggested that the Virginia's Standards of Learning (SOLs) tests, the results of which are the basis upon which schools are accredited by the Virginia Department of Education, are not in alignment with the requirements of the placement test used by community colleges. According to the teachers, the focus on SOL pass rates, almost to the exclusion of the wider ecosystem of learning including college preparedness, distorts teaching and learning in the schools. As one mathematics teacher put it, "Everyone teaches kids how to solve the SOL test instead of showing them how to really solve problems."

In urban and very rural school districts represented in this study teachers perceived pressure to be especially focused on minimal competence because, as a matter of survival, they must try to help meet the cut off line rather than focusing on elevating students to superior levels of achievement. This has, as more than one teacher claimed, increased the focus on teaching to the test. The result is that "critical thinking and creativity have been destroyed by the testing that doesn't allow [students] to think outside the box." Additionally, high stakes testing has placed immense pressure on teachers and made minimal competence, test preparation, and effective test-taking (not learning) the classroom goals. The concept "minimal competence" was discussed by teachers in both states. Teachers and schools are rewarded (or punished) based on how many students pass the standardized tests, not on how well students have learned the material. In Virginia, for example, one teacher reported that a student only needed to correctly answer 27 of 50 questions on the math SOL test to earn a passing grade. Thus, in instruction, resources are focused on getting as many students as possible to achieve minimal competency; there is no extrinsic reward for developing deep learning in students, and teachers are less concerned with issues related to preparing most students for college, including whether students will need developmental courses.

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Since there is an emphasis on minimal competence, students often lack the foundation they need to perform well beyond their current classes or on placement tests. For example, as a teacher in Virginia pointed out, in geometry students often do not possess a firm grasp of essential vocabulary, such as line, point, or plane, and they are unable to connect what they are learning in class to their lives. In English, they cannot build complex arguments in part because they lack an understanding of basic transition words and how they are used to construct sentences and paragraphs. In both examples, if students do not understand the logic behind base material, they are incapable of deep learning of new material. High school teachers see a direct connection between this loss of deep learning, poor student performance on college placement tests, and the increase in the number of students requiring developmental courses in college.

Although the focus groups emphasized teachers' perceptions of developmental courses in college, teachers at one Virginia high school noted that academically underprepared students are a problem in high school classes as well. Not all students are ready for the rigors of the classes they take in high school, whether that be by grade level or by level within a grade. As one teacher in Virginia said, "I've got students in my geometry class that have taken it, the first semester geometry, four and five times, and it's like, that's just mean."

In Focus Group A, teachers in Georgia called for a system that will assess which students are headed directly to the workforce, which students may be on a technical or community college track, and which are preparing for a bachelor's degree. Proper placement in high school will create more homogenous classes of students who are at the same level of ability and intrinsic motivation to learn, allowing the high school teacher to target instruction a little higher than their level and ensuring students have the background they need to meet their goals. Teachers in all three focus groups in Georgia also wondered why some students attending a community or technical college were required to complete advanced levels of math. Members of Focus Groups A and B, for example, wondered if students who are attending a two-year technical college would ever use the higher level math they were required to take. Their primary concern was that an advanced level of math would force some of their former students–who need the job skills that come with a two-year technical degree–to drop out of college. The teachers felt a requirement to take a course such as Algebra II, would in effect turn away students who otherwise would benefit significantly from attending the technical college. As one of the teachers in Focus Group A said,

> It would seem the college will be teaching mathematics at a level they will never use, not later in college, not later in life. Not every student in Georgia needs to take Algebra II. Why does every student need to follow the same path in math? Algebra II is an advanced standard, just like being able to do 100 push-ups in gym class is advanced. Does every student need to be able to do 100 push-ups before moving on?

Changing high school math curriculum. In each of the focus groups in Georgia, math teachers expressed concern about constantly changing high school math curriculum. Teachers indicated they had taught from four different curricula in just 7

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years. Students who attended high school during this 7-year-period may not have received what college instructors would find to be "adequate preparation in math." This frustrating situation occurred not because of poor teaching or lack of effort by the students; it was due to state officials constantly changing the math curriculum in high school. Two comments, the first from a teacher on Focus Group B, and the second from a teacher in Focus Group C, are relevant.

> Even kids going to universities may have huge gaps in their background because of changes in the curriculum while they were in high school, particularly in geometry. People do not realize the effect of these changes–well intended as they may have been–on teenage learners.

> The DOE for Georgia has forced its will on the curriculum without input from anyone with experience in a [math] classroom. There is no textbook that matches the current math curriculum the state puts forth. None of the material or language out there matches the EOC test. There is no alignment between those three items.

Moving students through. In Virginia, high school teachers expressed a feeling of being caught between college instructors who demanded better prepared students and elementary and middle schools who moved students through the system into the high schools. The high school educators did not blame their colleagues at the lower level schools, but they did refer to a system that rewards minimal competency rather than the mastery necessary for scaffolding the next level of concepts and procedures into their abilities and skills. They expressed concern that the current test-driven system leads to the "passing along" of underprepared students from primary to elementary to middle to high school. According to the teachers, this type of system "catches up with many students" when they enter college and are required to take placement tests for which "the expectations for performance are much more rigorous."

Likewise in Georgia, teachers indicated that students had been moved along through elementary and middle school.

> The students that we keep getting at the high school, the "end of the pipeline," have dealt with many curriculum changes over the years. They have holes in their knowledge . . . their prerequisite skills. Another limiting factor is the [lack of] depth we can go into at the high school because we are also forced to spend time covering material they are supposed to already have mastered before getting to us. I'm teaching algebra to some students who cannot add positive and negative numbers together.

Theme Three: Lack of Communication and Collaboration

Teachers in both states reported a lack of communication between high school teachers and college instructors; not a lack of communication between the institutions, but a lack of communication between like-discipline faculty members at the two institutions. There is a need for continuous dialogue on issues related to curricula, standards, testing, and placement. As an example, a math teacher at one of the urban schools shared an experience of one of his recent graduates who had attended a state university. In one of the first classes the student attended in college, there was an expectation for prior knowledge in a statistics class. The student returned home and asked the high school teacher when she was supposed to have learned this material. "Nowhere," the teacher said, "because the material is not covered in any math class in our school." The bottom line is that public schools and public institutions of higher education in the same state are implicitly "expecting the kids to put it all together."

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The findings of the current study indicate that teachers believe better communication along the entire PreK-16 path would only be beneficial if it led to curricular change and alignment. For example, the math teachers assume, rather than know, what skills students need to develop at what level in order to place out of developmental education and succeed in college classes. Teachers, particularly in math, rely on their own memories of college, however near or distant, to identify fundamental skills that need to be developed in students in high school, but there is often no direct communication, coordination, or alignment between the two educational levels. This leads to questions regarding who is responsible for college preparation. One teacher said colleges "get students from us, we get them from middle school, and middle school gets them from elementary school." The teacher questioned colleges' abilities to remedy this: "How can you go back and give students those experiences? They're either ready for you or not."

Indeed, some teachers do not see where they have a direct role in the college placement process. From their perspective, their responsibility is to prepare students for high school graduation; the state mandates the curriculum and the teachers' job is to teach the curriculum. The teachers questioned whether these requirements align with the skills students need to be successful in college or to place into college-level courses, but one observed, "We can't have any role in that."

Others, however, wanted to know more about placement, and cited the placement process as an area for needed communication. High school teachers had a number of questions about the college placement test: Are calculators allowed on the test? Is the test multiple choice? Is there a direct assessment of writing? One teacher, for example, would like information from colleagues at the community college regarding the use of calculators on placement tests. Most high students last used a four-function calculator in middle school, and instead relied on a graphing calculator in high school, "but [a] graphing calculator and standard calculator would be a huge difference in math [test performance], not just a small difference."

Another teacher, in Focus Group C, expressed concern that most high school teachers were not aware of the content of the placement test.

> If what we teach is not aligned with this test, this must be one reason for high placements into developmental courses. We need to be aware of the test content and design; this will give us some guidance about how to prepare students to avoid remediation.

Teachers in both Virginia and Georgia said community and technical college officials need to analyze their placement test data and then share them with high school teachers (not just administrators or guidance counselors) so curricula can be better aligned.

Limitations

This study has clear limitations. The study focused on teachers from only six high schools in two states. Although sample size is less relevant in qualitative research, the findings of the current study would be strengthened by quantitative research with a large sample of high school teachers. Additionally, the lack of prior research on teachers' perceptions of developmental education and ways to reduce the necessity of placing recent high school graduates in developmental courses hindered the building of a foundation for understanding the research problem. This study begins to fill that gap in the literature. Although the current study uncovered important perspectives on developmental education not previously present in the literature, more study

is needed and to explore in more detail the themes that emerged, such as influence high school teachers might have to reduce developmental education placement rates.

Implications for Practice

High school teachers should be a part of the national discussion of developmental education. Their views and perceptions need to be heard by leaders and practitioners at community colleges and four-year institutions as well as by those who conduct research on this important topic. Researchers must acknowledge the important role teachers can play in addressing issues related to the placement of recent high school graduates in developmental courses and include them when examining the factors affecting developmental placement. College instructors, administrators who supervise developmental programs, and institutional leaders should reach out to high school teachers (in addition to school administrators) to open lines of communication on topics such as curricular alignment in order to enhance interinstitutional cooperation which will be beneficial to students, parents, and taxpayers.

As a start, postsecondary institutions could provide public school administrators and high school principals with data about the placement decisions and rates disaggregated by individual schools and important demographic groups (Achieving the Dream, 2017; Henry & Stahl, 2017). High school and college faculty should work together to specifically detail the outcomes of their curricula in order to identify areas of convergence, divergence, and omission (Henry & Stahl, 2017; Schak et al., 2017). They should follow up with a concrete plan of action to address curricular alignment (Achieving the Dream, 2017; Elgin Community College, 2017).

Colleges and high schools should collaborate to assess students' reading, writing, and math abilities before they exit high school, such as at the end of their junior year (Henry & Stahl, 2017; Schak, et al., 2017). Students who demonstrate the appropriate skills should be placed directly into college-level coursework when they enroll in college (Achieving the Dream, 2017). Students whose skills need further development should be served in one or more classes in their senior year; if designed jointly by high school and college faculty, such classes may better align high school to college skill sets (Henry & Stahl, 2017; Schak et al., 2017; Washington Student Achievement Council, 2017). Henry and Stahl (2017) noted that Elgin Community College's Alliance for College Readiness, a Bellwether Award winner for innovation in higher education, provides an example of how the high school-college collaboration can reduce the need for developmental education and address areas of need. California and Washington employ statewide assessments and remediation in high school (Fensterwald, 2015; Washington Student Achievement Council, 2017).

Community colleges compile data on the high schools attended by incoming students. These data could lead to focused faculty-to-faculty collaborations to reduce the skills gap between what is taught in high schools and what is expected at community colleges. Further, if data are available regarding the number of students from each high school who place into developmental education, the collaborations can be more tightly focused at the schools with the greatest number of students placing below college-level classes.

High schools and colleges should continue the expansion of dual enrollment programs, which similarly will require assessment of college readiness in high school (NACEP, 2017). More ambitiously, college and high school officials should lobby at the state level for alignment--such as common outcomes and assessments for college readiness, use of multiple measures (e.g., placement tests, SAT/ACT tests, high school transcripts)--and standards for dual enrollment eligibility, curricula, and transferability to colleges and universities (NACEP, 2017; Schak et al., 2017). Most states already identify high school outcomes and college readiness; what is needed is closing of the loop from

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setting standards to assessing outcomes to addressing skills deficiencies to revising outcomes and assessments with alignment occurring through the high school to college pipeline (Schak et al., 2017).

Conclusion

Sixty-eight percent of community college students enroll in at least one developmental course (Jaggars & Stacey, 2014), yet fewer than half of these students complete their developmental education requirements, and even fewer earn a college degree (Bailey, 2009; Perin, 2006). The focus of this study was to understand high school teachers' perceptions of the factors that contribute to developmental education placement and strategies that might improve students' readiness for college. Three main themes emerged from the focus groups: (a) high school teachers were eager to be heard on the topic, (b) curricular issues dominated the discussion, and (c) communication and collaboration between community colleges and high school teachers needs to be more intentional. This study leads to opportunities for action. Some, such as enhancing communication with high school teachers, may be relatively easy to initiate, while others, such as aligning high school and college curricula, will require significant changes at the state and local levels. Including high school teachers in collaborations about aligning curricula and closing the skills gap can potentially reduce the number of recent high school graduates who place into postsecondary developmental education and increase student success and completion.

References

Achieving the Dream.(2017). *Developmental education initiative.* Retrieved from http://achievingthedream.org/resources/initiatives/developmental-education-initiative

ACT. (2013). *ACT national curriculum survey, 2012: Education and work in a time of change.* Retrieved from http://www.act.org/content/dam/act/unsecured/documents/NCS-PolicySummary2012.pdf

ACT. (2016). *ACT national curriculum survey, 2016: Education and work in a time of change.* Retrieved from http://www.act.org/content/act/en/research/national-curriculum-survey.html

Arendale, D. R. (2011). Then and now: The early years of developmental education. *Research & Teaching in Developmental Education*, *27*(2), 58-76.

Asera, R. (2011). *Innovation at scale: How Virginia community colleges are collaborating to improve developmental education and increase student success.* Boston, MA: Jobs For the Future.

Bailey, T. (2009). *Rethinking developmental education in community college* (CCRC Brief No. 40). New York, NY: Community College Research Center, Teachers College, Columbia University.

Bailey, T. R., Jaggars, S. S., & Jenkins, D. (2015). *Redesigning America's community colleges: A clearer path to student success.* Boston, MA: Harvard Press.

Brothen, T., & Wambach, C.A. (2012). Refocusing developmental education. *Journal of Developmental Education, 36*(2), 34-39.

Brubacher, J. S., & Rudy, W. (1968). *Higher education in transition: A history of American colleges and universities*, 1636-1968. New York, NY: Harper & Row.

Carroll, R., Kersh, L., Sullivan, E., & Fincher, M. (2012). Developmental education in Arkansas: Practices, costs, and a model approach. *Community College Journal of Research and Practice*, *36*(10), 743-751. doi:10.1080/10668920903178961

CCCSE (Center for Community College Student Engagement). (2016). *Expectations meet reality: The underprepared student and community colleges.* Austin, TX: The University of Texas at Austin, College of Education, Department of Educational Administration, Program in Higher Education Leadership.

Chen, X. (2016). *Remedial coursetaking at U.S. public 2- and 4-year institutions: Scope, experiences, and outcomes* (NCES 2016-405). Washington, DC: U.S. Department of Education, National Center for Education Statistics. Retrieved from https://nces.ed.gov/pubs2016/2016405.pdf

Colorado Department of Higher Education. (2016). *2015 Legislative report on remedial education.* Retrieved from https://highered.colorado.gov/Publications/Reports/Remedial/FY2015/2015_Remedial_relMay2016.pdf

Developmental English Curriculum Team. (2011). *Curriculum guide for developmental English.* Richmond, VA: Virginia Community College System. Retrieved from http://cdn.vccs.edu/wp-content/uploads/2013/07/VCCS_DevEng_CurriculumGuide_2012-02.pdf

Dougherty, K., Jones, S. M., Lahr, H., Natow, R. S., Pheatt, L., & Reddy, V. (2016). *Performance funding for higher education.* Baltimore, MD: Johns Hopkins University Press.

Education Reform Now. (2016). *Americans spending at least $1.5 billion in college remedial courses; middle class pays the most: Lack of rigor in high schools adds to cost of college.* Retrieved from https://edreformnow.org/release-americans-spending-at-least-1-5-billion-in-college-remediation-courses-middle-class-pays-the-most/

Elgin Community College. (2017). *Alliance for college readiness.* Retrieved from http://elgin.edu/community.aspx?id=2664

Fensterwald, J. (2015). New tests to tell juniors if they're college-ready. *EdSource*. Retrieved from https://edsource.org/2015/new-tests-to-tell-juniors-if-theyre-college-ready/77378

Gaudiani, C. L., & Burnett, D. G. (1986). Academic alliances: A new approach to school/college collaboration. *Current Issues in Higher Education, 1.* Retrieved from https://www.aahea.org/articles/AcademicBook.pdf

Griffith, K. L. (2016). *High school graduates' perceptions of college readiness.* (Doctoral Dissertation, Wilmington University). ProQuest document ID 1746693532. DAI-A 77/04(E).

Grigg, W., Donahue, P., & Dion, G. (2007). *The nation's report card: 12th-grade reading and mathematics 2005* (NCES 2007-468). Washington, DC: U.S. Department of Education, National Center for Education Statistics. U.S. Government Printing Office.

Grubb, W. N., Worthen, H., Byrd, B., Webb, E., Badway, N., & Case, C. (1999). *Honored but invisible: An inside look at teaching in community colleges.* New York, NY: Routledge.

Henry, L. A., & Stahl, N. A. (2017). Dismantling the developmental education pipeline: Potent pedagogies and promising practices that address the college readiness gap. *Journal of Adolescent & Adult Literacy, 60*(6), 611-616. doi:10.1002/jaal.640

Jaggars, S., & Stacey, G.W. (2014, January). *What we know about developmental education outcomes.* Retrieved from Community College Research Center website: http://ccrc.tc.columbia.edu/media/k2/

Kalamkarian, H. S., Raufman, J., & Edgecombe, N. (2015). *Statewide developmental education reform: Early implementation in Virginia and North Carolina.* New York, NY: Community College Research Center, Teachers College, Columbia University.

Mathai, M. J. (2014). *Perceptions and lived experiences of traditional community college developmental mathematics students.* (Doctoral Dissertation, University of Phoenix). ProQuest document ID 1552487247. DAI-A 75/10(E).

NACEP (National Alliance of Concurrent Enrollment Partnerships). (2017). *Strategic plan.* Retrieved from: http://www.nacep.org/about-nacep/strategic-plan/

Perin, D. (2006). Can community colleges protect both access and standards? The problem of remediation. *Teachers College Record, 108*(3), 339–373.

Roksa, J., Jenkins, D., Jaggars, S. S., Zeidenberg, M., Cho, S., & Columbia University, CCRC, (2009). *Strategies for promoting gatekeeper course success among students needing remediation: Research report for the Virginia Community College System.* New York, NY: Community College Research Center. Retrieved from https://ccrc.tc.columbia.edu/media/k2/attachments/strategies-promoting-gatekeeper-course.pdf

Ryan, G. W., & Bernard, H. R. (2003). Techniques to identify themes in qualitative data. *Filed Methods, 15*(1), 85-109. Retrieved from www.analytictech.com/mb870/readings/ryan-bernard_techniques_to_identify_themes_in.htm

Schak, O., Metzger, I., Bass, J., McCann, C. & English, J. (2017). *Developmental education: Challenges and strategies for reform.* Washington, DC: U.S. Department of Education. Retrieved from https://www2.ed.gov/about/offices/list/opepd/education-strategies.pdf

Virginia Department of Education. (2017a). *Graduation requirements.* Retrieved from http://www.doe.virginia.gov/instruction/graduation/index.shtml

Virginia Department of Education. (2017b). *Standards of learning.* Retrieved from www.doe.virginia.gov/testing/sol/standards_docs/

Washington Student Achievement Council. (2017). *College readiness.* Retrieved from http://www.wsac.wa.gov/college-readiness

Weissman, J. (1995, May). *Assessing developmental education through student tracking.* Paper presented at the Annual Forum of the Association for Institutional Research. Boston, MA. Retrieved from https://files.eric.ed.gov/fulltext/ED386983.pdf

Wyatt, M. (1992). The past, present, and future need for college reading courses in the U.S. *Journal of Reading, 36*(1), 10-20.

Including high school teachers in collaborations about aligning curricula and closing the skills gap can potentially reduce the number of recent high school graduates who place into postsecondary developmental education.

Appendix
Focus Group Protocol and Initial Interview Questions

OPENING SCRIPT FOR FOCUS GROUPS

Good afternoon, I am a member of a team of researchers who are requesting your participation in a study on the perceptions of high school teachers regarding the need for developmental coursework for recent high school graduates who are attending community colleges or four-year institutions.

This focus group is designed to be approximately one-half hour in length. However, please feel free to expand on the topic or talk about related ideas. Also, if there are any questions you would rather not answer or you do not feel comfortable answering, please say so and we will stop the focus group or move on to the next question.

I want to ensure you understand your participation in this focus group is voluntary. Please be aware that information gathered in this study is confidential, and we will protect your personal identity as well as the identity of the school for which you work.

You have the right to review and comment on information from this focus group prior to the end of the study. Thank you for your willingness to participate. Do you have any questions?

Let's begin. I will ask you initial questions on four topics. These questions will be asked to all of the teachers at six high schools in two state who are participating in this study. As you respond, I will ask follow-up questions in order to obtain more detailed information about certain topics.

INITIAL FOCUS GROUP QUESTIONS

How often do you and your colleagues discuss topics related to the need for developmental coursework for recent graduates of this high school? What is the nature of those discussions?

1. What are your perceptions regarding the factors that affect the placement of recent high school graduates in developmental courses at the community college?

2. How do you view the placement process used at community colleges and universities? What is your perception of high school teachers' role in the placement process? What curricular factors do you feel affect the placement process?

3. What, if anything, do you feel can be done to reduce the number of recent high school graduates who place into developmental courses?

    a. Are there curricular issues?
    b. Are there process issues?
    c. Are there communication issues between high schools and postsecondary institutions?
    d. How can high schools and postsecondary institutions collaborate to address the placement of recent high school graduates in developmental courses?

CLOSING SCRIPT FOR FOCUS GROUP

I would like to thank you all of you for your participation in this study. As mentioned previously, all information will be kept confidential. I will keep the data in a secure place. Only the four members of the research team will have access to this information. Please feel free to contact me or the lead researcher, Dr. Mitchell Williams (mrwillia@odu.edu or 757/683-4344) if you have any questions or concerns. After the study is completed, all data will be destroyed or stored in a secure location.

Do you have any questions, or is there anything additional that you'd like to share with me?