

Long developmental math sequences are a barrier to success for many students. There are many promising strategies for addressing this issue by redesigning curricula to reduce the number of required courses or the amount of time required to complete them, by requiring or rewarding early and sustained attempts of math coursework, by modifying pedagogy or adding support services to increase course success rates, by training students in college success, etc. Although each institution must adopt strategies appropriate to local circumstances, one approach that seems likely to have a large positive impact at most community college is that of establishing a separate, more accelerated pathway through developmental math for students in non-STEM degree fields (non-Science/Technology/Engineering/Mathematics). The research supports that non-STEM students must have access to mathematics experiences appropriate to their chosen career paths and that the creation of an alternate mathematics pathway will reduce the number of exit points and decrease time to graduation.

We urgently recommend these actions:

1. Oregon colleges serving developmental math students must establish an alternate non-STEM pathway as appropriate for the student population and mission of each college. Such pathways utilize courses that prepare students to succeed in a college-level liberal arts mathematics course such as Math 105, Contemporary Math.
2. To ensure that Math 105 provides appropriate and sufficient mathematics education for non-STEM students, mathematics faculty representatives from Oregon two-year and public four-year institutions will convene during fall term 2014 to clarify and improve consistency in the outcomes for Math 105.
3. Currently, for a mathematics course to satisfy the Associate of Arts Oregon Transfer (AAOT) degree, it must have a prerequisite of Intermediate Algebra, Math 095. This implies that all degree-seeking students, regardless of degree field, must complete the traditional pre-calculus course sequence before attempting a gateway mathematics course. Therefore, the State must change this requirement to “Any transferrable 100-level mathematics course satisfying the AAOT must have a prerequisite of Intermediate Algebra or a Quantitative Literacy course.”
4. To support this new pathway, the State and its public institutions of higher education must agree that Math 105 fulfills the Baccalaureate Core Requirement in Mathematics for all non-STEM 2-year and 4-year degrees.

## **DRAFT RECOMMENDATIONS: Student Support Services**

The purpose of the following Student Services recommendations is to address the non-academic barriers to success that all college students, but especially developmental education students, may experience. The recommendations are based on current evidence-based and proven practices that are sustained, strategic, integrated, and holistic. More specifically, these strategies emphasize the creation of social relationships, clarify aspirations and enhance commitment, develop college know-how and make college life more feasible.

Development and implementation of such successful student support strategies require broad based collaboration among many partners, including but not limited to, counselors and other student development professionals, faculty, librarians and community partners.

The areas of focus are: admissions, registration, financial aid, financial literacy, tutoring and supplemental instruction, life issues, orientation, advising, first year experience and professional development.

### **Foundational Student Support**

- Institutions will develop and implement admissions, registration and financial aid practices that support successful retention and completion of all developmental education students.
- Institutions will develop and implement financial literacy practices that support student success and minimize student loan debt.
- Institutions will develop and implement tutoring and other supplemental instructional practices to support successful retention and completion of all developmental education students.
- Significant and under recognized barriers to student success include, but are not limited to, childcare and transportation challenges, physical/mental health issues, financial issues, lack of information and disabilities. Institutions shall develop and implement practices to explicitly address these barriers.

### **Advising**

- Institutions will create a mandatory advising process for all developmental education students.
- All developmental education student advising will be delivered by professional advisors and/or faculty who have received training in the CAS professional standards and/or current research in advising best practice.
- Institutions will implement a system designed to monitor student progress on an ongoing and consistent basis, and identify and address underperformance. (e.g., Early Alert Systems)

### **Orientation**

- Institutions will create a mandatory orientation for all developmental education students. Mandatory orientations for developmental education students shall be distinct from initial advising and shall include evidence-based student success strategies.
- Institutions will identify learning outcomes for each student success strategy, regularly assess these outcomes and make appropriate adjustments to the orientation curriculum.

## First Year Experience

- Institutions will create a mandatory first year experience program and set of activities for all developmental education students that include evidence-based student success strategies to provide academic, career and social support throughout the students' first year. (For example, AVID)

### DRAFT RECOMMENDATIONS: Placement

#### Statewide Common Placement Processes

To create a statewide system that uses effective placement processes and strategies that recognize that students arrive at community colleges with different education backgrounds, life experiences, skills and goals, Oregon community colleges should create a common set of practices and commitments for the placement of students. The Developmental Education Redesign Work Group recommends that a body of community college, university, and high school representatives with appropriate expertise convene in Spring 2015 to make recommendations to the State around placement that consider the following:

- Using multiple measures to place students, including the use of non-cognitive variables/domain/aspects (e.g. work schedule, child care, motivation, self-confidence); the GED exam, Smarter Balanced, Engage, HS transcript and/or GPA, AP/IB, etc.
- Using common "decision zones" for placement, with decision zones defined as a range of scores and non- cognitive measures that would indicate placement at a certain level;
- Identifying common course outcomes for similar courses in developmental education and gateway English and Math courses to allow for a more meaningful placement discussion;
- Exploring how supplemental learning activities (e.g. tutoring, math labs, study groups, self-paced faculty developed activities, use of computer labs, library, student services activities) factor into placement decisions; and
- Assessing the effectiveness of the common placement processes and/or instruments or measures on a regular basis and how the processes should occur.

### Test Preparation Practices

- Institutions should have a test/placement preparation program that meets the following standards:
  1. It improves students' knowledge of the content, format, policies and purpose of the placement.
  2. It promotes messaging that exam preparation is appropriate.
  3. It provides study materials that include guidance about how to review for the exam.
- For students who require a placement test, institutions should consider requiring test preparation. If a student is required to take the placement test that placement test should take place only after review of test preparation materials.

## DRAFT RECOMMENDATIONS: Reading and Writing

Typically students must pass a long string of developmental reading and writing courses to complete a degree. Because multiple exit points interfere with student success, retention and completion, institutions should adopt models that accelerate learning to reduce exit points and support students' entry to college (including career and technical, CTE) courses.

- Students must be encouraged/advised/allowed to complete developmental education classes in one to two terms. In the accelerated model, students complete their developmental coursework in one or two terms while they are simultaneously introduced to college and/or transfer level coursework. In all models for acceleration, college-level work must be included/contextualized in the curricula. Models of acceleration will focus on reading as meaning making, writing as inquiry, and the development of academic literacies including information literacy.

Various models for acceleration from which institutions can choose include:

- ✓ Integrating Reading and Writing courses ;
  - ✓ Combining levels of Reading or Writing (i.e. Reading 80 with Reading 90);
  - ✓ Providing an option of a Reading and Writing developmental course co-requisite with a college level course
  - ✓ Enhancing the combined course or co-requisite models by creating intentional learning communities so that students experience a culture of success
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- Institutions should consider establishing a multiple path approach to reading/writing/literacy to reflect professional/technical students' degree and certificate requirements as different from transfer students' endpoints in reading and composition.
  - Although the goal should be acceleration for most students, colleges should continue to provide options for students who need more than two terms to achieve proficiency.
  - The developmental education course of study must be constructed from college-level curriculum (backward design, an approach that begins with the desired outcomes and works backwards through the curriculum design process to achieve them) and includes state standards for all programs. Course design also should embed research-based practices that affect progression and completion (i.e., grit, a growth mindset, habits of mind and student success).
  - To implement the backward design mandate, colleges will create structures in which conversation among all faculty members who teach reading/writing/ literacy curriculum can occur. This includes reading/writing participants in the developmental education work group, representatives from developmental education reading and writing departments, those in the college-level English departments (where they are distinct from developmental education staff), colleagues in the ABE/GED/ESOL departments, colleagues in paired "content" areas, and appropriate colleagues in the Oregon University System and local high schools.

### **DRAFT RECOMMENDATIONS: Professional Development**

- The state will provide an oversight committee that promotes ongoing research-based support in student success for all community colleges.
- The state will provide ongoing research and professional development resources to aide in the continuation of this work.
- Institutions will endeavor to use existing resources to provide professional development as part of continuous improvement around best practices identified by collection, analysis and evaluation of data.

### **DRAFT RECOMMENDATIONS: Data Collection**

- The state and/or colleges should collect data to provide institutions and the state with insight into what approaches to developmental education lead to student success.
- Institutions and the state should disaggregate the data to ensure equitable education opportunities for under- resourced, underserved, underrepresented and historically excluded student populations.
- Institutions in coordination with the state governing body should agree on what data to collect, how it is collected, by whom it is collected and how it will be interpreted for comparative purposes.
- The state will provide an entity dedicated to the collection, analysis and dissemination of data to inform this work for all community colleges.

### **DRAFT RECOMMENDATIONS: The Creation of an Advisory Group**

- The state should commission, recognize and support an Oregon developmental education advisory group that includes faculty from developmental education , transfer and CTE faculty, student services personnel and campus administrators.