

College Transitions:

Ensuring High School Graduates are College Ready through Partnerships with the Community College

A Report of the High School and Community College Developmental Education Partnerships Working Group



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Background

Developmental education has been a critical mission of Iowa’s community colleges since the formation of these two-year institutions in the mid-1960’s. Also referred to as remedial education, developmental education provides the opportunity for entering postsecondary students to gain or enhance their skills in math, reading, and/or writing, thus preparing them for success in college-level coursework. The process for placing students into developmental level courses varies by college. Many community colleges also use placement tests, but may or may not require students to take remediation coursework. Developmental education credits do not count toward a degree and usually must be completed prior to attempting college-level coursework.

In Iowa, a high percentage of graduates do matriculate into college; however, many are placing into at least one developmental course based on the assessment practices of the college or university. According to the Iowa Postsecondary Readiness Reports (State of Iowa, 2017b and 2017c), 70.8 percent of Iowa public high school graduates (average of 2013, 2014, and 2015 high school cohorts) enrolled in a postsecondary institution within one year of high school graduation. Of those who enrolled in a public Iowa college or university, 21.6 percent (average of 2013, 2014, and 2015 high school cohorts) took at least one developmental English or math course during the first year of postsecondary enrollment (State of Iowa, 2017b). Black students enrolled in developmental coursework at nearly twice the rate of White students (48.8 percent and 19.6 percent respectively), indicating an equity gap in the preparation of college-ready high school graduates (State of Iowa, 2017a).

The Iowa Core standards are designed to prepare high school students for college-level coursework and experiences. However, concerns about the missed opportunities for college credit in high school, as well as the college success of recent high school graduates, spurred conversations between several Iowa community colleges and local school districts. Recent initiatives, in Iowa as well as in other states, have included partnerships at the local level among community colleges and high schools to define curriculum alignment for college-readiness and to provide early intervention to students demonstrating learning gaps within the standards for math, reading, and writing.

Most recently, the Future Ready Iowa Alliance provided recommendations for moving Iowa forward to achieve the Governor’s goal that 70 percent of Iowa’s workforce completes some form of postsecondary education or training by 2025. The recommendations specifically call for a reduction in the need for developmental education at the postsecondary level by addressing the issue during high school. Recommendation 2C states, *“Improving remediation, including (1) remedial coursework in high schools, rather than at community colleges lets students improve their skills in condensed periods rather than re-taking entire courses...”* (State of Iowa, no date).

Addressing learning gaps in the standards while in high school allows for opportunities to close the achievement gap, ensures all students graduate prepared for success after high school, and increases access to the vast array of joint enrollment opportunities Iowa’s high schools offer. This, in turn, directly addresses recommendation 4F of the Future Ready Iowa Alliance, which is to *“maximize and further expand dual credit/concurrent enrollment opportunities...”* (State of Iowa, no date).

This report was developed by a statewide group of Iowa secondary and postsecondary stakeholders who have implemented various forms of the college transitions model. The information and recommendations presented in this report are drawn from the key factors and components of these models. It also proposes several regional and state initiatives which would facilitate the widespread adoption of the high school-college transitions model.

The Work Group

In response to Future Ready Iowa recommendation 2C, and in acknowledgement of the recent research conducted and pilot projects designed by several community colleges and local high schools, a work group was convened in December 2017 consisting of representatives from each of the five pilots. Members included representatives of secondary and community college leadership, program coordinators, and faculty with key involvement in the design and implementation of the current pilots from five community colleges, an area education agency, and four school districts. The goal of the work group was twofold: (1) identify the components of an effective college transitions model; and (2) develop recommendations to scale across Iowa.

Components of an Effective College Transitions Program

A review of the pilot programs in Iowa, as well as several other successful models outside of Iowa, highlights several necessary components for an effective college transitions program. The pilot programs' effectiveness center on components of strong partnerships, use of assessment tools, and program delivery. These three components are described further below. The need for resources is also a recurring theme, as course development and delivery, student identification/assessment and advisement, and program coordination all require human and financial resources. Finally, outcomes analysis is necessary for overall program evaluation and impact. Thus far in Iowa's pilot programs, this analysis has been a bit limited at the local level; however, a wider lens of outcomes measurement could be provided through the use of state and national databases. Data points to review for program success include high school graduates' identified developmental education need (if any) in college, their completion of gateway courses (e.g. Composition 101 or Statistics), their persistence (retention), and their subsequent completion of a postsecondary degree or program.

Strong Partnerships

Collaboration between the high school and the community college is strong among all of the Iowa pilots, as was the case for the successful statewide implementation of the Tennessee (TN) SAILS program (for more information on the TN SAILS, see <https://www.tn.gov/thec/bureaus/academic-affairs-and-student-success/academic-programs/sails.html>). **Alignment** between secondary and postsecondary expectations with a shared **definition of college readiness** must be achieved before a course or program can be developed. This can be difficult if conversations have not previously occurred between secondary and postsecondary educators. In fact, transition program efforts outside of Iowa have often found a disconnect between K-12 and higher education expectations, in particular in the definition of "college ready" for reading, writing, and math. In-depth review and alignment of curriculum pathways, gaps, and outcomes also are vital to the partnership. **Continued support and guidance** from the community college through professional development and shared **program coordination** will ensure sustainability of the collaborative efforts.

The biggest barrier for local program expansion is retaining the necessary resources – for each of the current pilot programs, adding more schools would require a coordinator at the community college to assist with the design of any new intervention course, provide initial and ongoing professional development, coordinate the guidance and support provided, and collect and analyze the data for continued success and improvements. In one Iowa pilot, Eastern Iowa Community Colleges and Mississippi Bend Area Education Agency have partnered to provide coordinated oversight and instructional support, thereby easing some of the local burden.

Use of Assessment Tools

A standards-aligned **assessment with a diagnostic tool** is necessary for identifying learning gaps. A clear diagnostic of a student's needs in the subject area enables advising into appropriate coursework to address the gaps prior to graduation. Ideally, the assessment tool used will also provide corresponding learning modules and resources for students to complete either on their own or as supplemental materials with their formal coursework. The timing of the assessment and **identification of students** with a level of need should align with the appropriate point at which to provide support and remediation. The best practice approach will utilize an **early intervention approach**, with assessment before or by the junior year and a focus on the senior year to ensure meaningful course taking based on the assessment results. **Re-assessment** with a standards-aligned tool after any intervention to address learning gaps is necessary to show improvement and skill gain.

Program Delivery

As noted above, program delivery should utilize an early intervention model with assessment during the junior year and includes a **focus on the senior year** with **meaningful course taking**. Relying on strong **school counselor involvement**, students register for appropriate senior year coursework that meets their identified needs and moves them closer towards their postsecondary goals. The collaboration with the community college should extend beyond competency expectations to include **college advisor involvement**, who may provide college planning and application services to students multiple times throughout the year. Capitalizing on actual time spent with students, high school staff and teachers can also be **trained to advise** on general college content and the implications (time and cost to postsecondary degree) for students if they do not satisfy required high school Iowa Core standards. **Curriculum development** may be necessary to design coursework to meet the identified learning gaps, by either maximizing the high school's current offerings or by creating a new course designed in collaboration with the community college based on their developmental education competencies. Additionally, a district may elect to provide an **alternative math pathway** meeting Iowa Core standards for students planning for non-STEM majors.

Alignment Model

This section describes a model for incorporating the identified components, thus allowing a school and community college to develop a collaborative partnership around a blueprint for a college transitions program. The Alignment Model requires a sincere alignment between secondary completion and postsecondary readiness expectations, with a shared definition of college readiness. The model is structured to extend throughout all four secondary years, with curriculum alignment beginning in the ninth grade, assessment of skills and identification of gaps in the junior year, and meaningful use of the senior year with courses matched to the student’s needs and future goals (see Figure 1). This timing allows for a final year of meaningful course taking to address any identified gaps, as well as provide advanced level and college credit opportunities for students identified as college ready in each subject. This model also relies on the use of advising tools to clearly communicate postsecondary expectations and implications to students and families (see Figure 2).

Figure 1. Alignment Model

Grade	Curriculum Alignment	Assessment with Diagnostic Tool	Intervention with Meaningful Course Taking
9	✗		
10	✗		
11	✗	✗	
12	✗	✗	✗

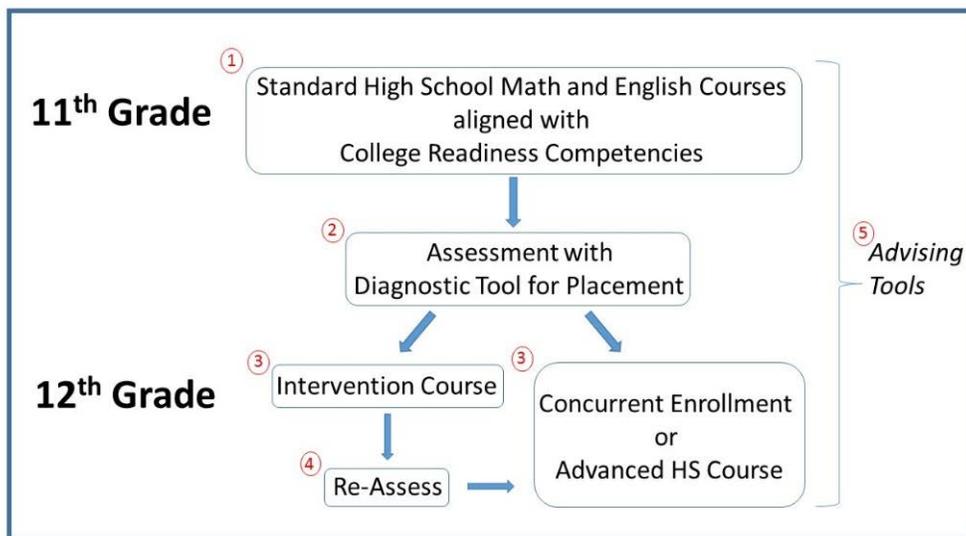
1. Curriculum Alignment

The anticipated success of the Alignment Model begins with a shared definition of college and career readiness which outlines expectations of students ready for postsecondary coursework and experiences. Iowa’s current definition (adopted by the State Board of Education in 2016), which was developed in partnership with K-12 and postsecondary educators as well as employers, and includes outcomes and benchmarks for achievement, provides a strong foundation to build upon. With a shared college and career readiness definition in place, high school curriculum (college preparatory courses in particular) should then be aligned with the Iowa Core standards, ensuring that the foundational skills and knowledge lead the way to success in advanced coursework (see Figure 2). This can be accomplished through a crosswalk of community college developmental education curriculum and the high school curricula which align with the Iowa Core.

Necessary for shared expectations and alignment, a strong collaboration among the school and community college in two current partnerships resulted in a clearer understanding of the high school offerings. In particular, Kirkwood Community College math faculty are working closely with two high schools to conduct a thorough review of the ALEKS assessment tutorials and online resources with the goal of mapping each of these to the high school math courses and curriculum. This mapping of competencies to coursework will be utilized by the high school math teachers and

counselors to interpret individual ALEKS results and more accurately advise students into math courses that meet their current learning needs in line with their future goals. In another local example, Des Moines Area Community College and Southeast Polk High School compared the competencies for the high school Algebra II course and the college’s developmental math course (MAT064). The close alignment between the two courses confirmed postsecondary readiness concepts are being taught, clarified for the high school math teacher the math skills expected of incoming college freshman, and indicated which students were ready to move into concurrent enrollment (college credit) coursework while still in high school.

Figure 2. Alignment Model - Assessment and Intervention



2. Assessment and Diagnostic

While curriculum alignment extends throughout all four of the secondary years, student learning gaps should be identified at least by the junior year with an assessment aligned with the defined college and career readiness Iowa Core standards. As has been shown in the current pilot projects, this timing of the assessment allows for early intervention and maximizing concurrent enrollment opportunities (in the pilot with Hawkeye Community College, high school students may complete the Accuplacer assessment at the end of their sophomore year to qualify for concurrent enrollment courses beginning their junior year). In order to determine the appropriate senior year intervention, the assessment (1) must include a placement tool to screen against a college’s entrance requirements; and (2) should include a valid diagnostic tool to determine and evaluate a student’s remediation needs.

3. Intervention through Meaningful Course Taking

Assessment scores should be reviewed at an individual level for accurate and meaningful placement into senior year course work. This model capitalizes on utilizing the senior year of high school, by providing either an intervention to address learning gaps identified through the placement and diagnostic exam or ensuring students take advantage of the opportunity for advanced and concurrent enrollment coursework. Junior year students may also take advantage of the college prep courses, helping them to become eligible for concurrent enrollment coursework during their senior year or earlier.

Capitalizing on the senior year with meaningful course taking is especially important in the math subject area, as research has shown a time delay between secondary and postsecondary math coursework exacerbates the math skills gap. Through their own institutional research, Eastern Iowa Community Colleges found that incoming students who did not take a math course during their senior year of high school were more likely to place into a developmental level regardless of their high school math course performance. Additionally, the Iowa Board of Regents, in partnership with the Division of Community Colleges and Workforce Preparation, is conducting an analysis of factors that predict college readiness in math for a joint Statewide Longitudinal Data System (SLDS) project involving data from the community colleges, public school districts, and the public universities. The preliminary examination revealed students who scored 24 or 25 on the ACT during their junior year and did not include a math course during their senior year of high school scored up to 11 points lower on the ALEKS assessment at the time of university enrollment than their counterparts who did include a math course their senior year (Iowa Board of Regents, 2017). This preliminary analysis indicates a skills (or learning loss) due to the time gap for incoming college freshman (recent high school graduates) who did not take a math class during their senior year of high school.

While students who assess as college ready in a particular area (reading, writing, or math) are encouraged to take an advanced or concurrent enrollment course during their senior year, interventions to address identified learning gaps may take many shapes and depend on the level of need a specific student has shown. Several examples of program structure are offered by the current pilot projects: Iowa Central Community College, Eastern Iowa Community Colleges, and Hawkeye Community College have each worked closely with their partner high schools to design a college transitions course for students with identified learning gaps. In one example, Eastern Iowa Community Colleges has co-designed a new Math Literacy course with the pilot high schools. The curriculum aligns with and utilizes course materials for developmental education coursework which prepares students for general liberal arts math, and is thus appropriate for non-STEM majors. The course engages students through active learning and group work, provides study skills, utilizes realistic applications of math concepts, and centers on critical thinking.

Utilizing a different approach, Kirkwood Community College has worked with their pilot high schools to capitalize on the high school's course offerings with a more deliberate and informed course taking process. In this pilot, school counselors utilize a competency map while interpreting individual assessment scores to advise students into the appropriate senior year course. Students with identified learning gaps are required to take a senior math course, which may include personalized learning tools and supplemental materials to focus on the identified gaps.

4. Reassessment

Students who place into the remedial intervention course should complete the standards-aligned assessment again to show improvement and skills gain. The timing of the re-assessment may be based on the student's initial identified level of need or the structure of the course. Ideally, the timing of the reassessment would allow students to demonstrate proficiency in time to also take advantage of concurrent enrollment opportunities during the senior year.

While the Eastern Iowa Community Colleges pilot has built multiple assessment points into a yearlong course, the Hawkeye Community College pilot incorporates the placement and diagnostic exam as the end-of-course assessment for the remedial intervention course. Each of these structures allows the student to demonstrate progress prior to the end of the senior year.

5. Advising Tools

Substantial involvement by the counseling and advising teams is necessary for a successful program. The primary planning team for the Kirkwood Community College pilot includes the school counselors from each of the two high schools. Hawkeye Community College works closely with the high school counselors so they are able to interpret individual assessment scores, discuss options with each student, and accurately advise them into coursework to best prepare them for their postsecondary goals. Counseling students on meaningful course taking can also involve identifying students' future goals and aligning math options by postsecondary program intent (e.g., STEM, business, non-STEM, etc.).

This model also relies on the use of advising tools to clearly communicate postsecondary expectations and implications to students and families. Developing and sharing robust advising tools requires providing counselors and teachers with professional development regarding developmental education and its impact on college costs and time to degree.

Recommendations for Regional and Statewide Expansion

Adhering to the principles outlined in this report for high school to college transition programs will help to ensure equity in program quality and access for all students. There are, however, steps that could be taken at the regional and state levels which would support wide-spread development and adoption of these programs. The following recommendations will assist in a broader statewide implementation of the packaged transitions model.

Recommendation 1: A Common Assessment and Diagnostic Tool

Adopt a common assessment and diagnostic tool available for use no later than the end of junior year and reassessment during the senior year as needed. (Note: This recommendation is most appropriate for use with students who are on track during their junior year to meeting the state graduation requirements.) In order to determine the appropriate senior year intervention, the assessment (1) must include a placement tool to screen against a college's entrance requirements; and (2) should include a valid diagnostic tool to determine and evaluate a student's remediation needs. The current momentum in Iowa with the increasing use of the ALEKS math assessment and associated diagnostic tools provides a potential opportunity to build in a college transitions initiative. Current work with ALEKS involves eight of the community colleges and all of the public universities, as well as several high schools as they pilot early intervention programs. In addition to pairing diagnostic tools with the assessment, and web-based modules for skills gain, ALEKS is building a portal for institutions to share scores and ease the transfer process for the student. Exploring new funding for the assessment and diagnostic tool would facilitate adoption and help to ensure accessibility while easing the burden of a new expense on local districts. In lieu of negotiating a statewide contract, implementing a selection process for a state-identified tool could lead to cost efficiencies for local districts.

Recommendation 2: Support the Development of a Statewide Electronic High School Transcripts System

Create a steering committee, to include Iowa State University (ISU), the Iowa Department of Education, and the Iowa Board of Regents in a strong partnership, to support the development of a statewide electronic high school transcripts system. The resulting system should increase the detailed documentation on student transcripts of individual student knowledge, competency, and skill attainment.

Recommendation 3: Educate Students and Parents on the Importance of Math during Senior Year

Educating students and parents on the importance of math coursework during the senior year is a responsibility not only of the high school counseling team, but also of the postsecondary institutions. Thus, community college and public university marketing materials should emphasize need for four years of math in high school, explicitly outlining the potential impact on the student's college experience (i.e., time and cost to degree completion).

Recommendation 4: Ensure the Completion of a Math Course during Senior Year

Require all students to complete a math course during the senior year to blunt the erosion of math skills between high school and college. This recommendation enhances the recent recommendation of the Computer Science Education Work Group, which seeks to expand the reach and rigor of math and computer science.

Recommendation 5: Collaborate beyond the School District and Community College

Coordinate collaboration beyond the school district and community college through the inclusion of regional partners. In an effort led by the Mississippi Bend Area Education Agency, Eastern Iowa Community Colleges have partnered with four high schools to increase postsecondary readiness in math. As regional partners in the educational mission of Iowa's public school system, the area education agencies can provide leadership within their respective regions to coordinate district and college partnership development and sustainability, bridge relationships where needed, and provide the base for professional development in partnership with the community college. Regional professional development opportunities ensure greater consistency in the course content across the state. Leverage the momentum and reach of other regional planning entities addressing education priorities, such as the Secondary Career and Technical Education Regional Planning Partnerships.

Recommendation 6: Utilize a Regional Approach to Pool and Share Resources

Pooling and sharing resources benefits small districts who may not have the capacity to offer a wide array of transition course options. A regional approach pools limited resources and ensures equitable access to services for students with identified needs and goals. This model need not involve daily student travel time as technology allows for student/teacher interaction in a multitude of ways, and a variety of learning modules and resources are increasingly available in web-based formats.

Recommendation 7: Increase Efforts on College and Career Readiness

Create more focused local efforts on college and career readiness (CCR) through increased awareness of the State Board of Education approved definition, understanding of the benchmarks within each of the four identified domains, and targeted guidance on standards alignment between the Iowa Core and state-adopted CCR definition. The Department can also offer further guidance on how development of transition courses (i.e., math or English literacy courses) are approved to meet state graduation and offer and teach requirements.

Conclusion

Developmental education is necessary for many postsecondary students to ensure they are appropriately prepared to succeed in college-level coursework. But often, for numerous reasons, developmental education is a barrier to student completion of a postsecondary credential. In response, education practitioners are pioneering new developmental education strategies which deliver the necessary remedial content through models which reduce the time and cost of completion and increase the likelihood of student success.

The focus of this report is one developmental education strategy: the college transitions model for high school students. This model employs innovative partnerships between secondary and postsecondary institutions to develop interventions which identify and address skill deficiencies at the high school level. Addressing learning gaps in the standards while in high school allows for opportunities to close the achievement gap, increases access to the vast array of joint enrollment opportunities Iowa's high schools have to offer, and ensures all students graduate prepared for success after high school. Each of these in turn contributes to increasing the number of students who will complete a postsecondary credential, and advances our state in reaching the Future Ready Iowa goal for a skilled and sustainable workforce.

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