

Designing and Implementing Transition Courses for College & Career Success

Many students in the Pacific region complete all the requirements for high school graduation but are still considered unprepared for credit-bearing courses in college and are instead placed in non-credit-bearing developmental courses when they transition into local community colleges.¹

Developmental Education: Potential Challenges

Developmental education can pose multiple challenges for students:



The additional time and costs associated with traditional developmental course sequences can serve as a barrier to success and persistence.²



Courses may not draw on best practices that support student learning, instead following a less effective knowledge transmission model, which is a model in which a teacher transmits knowledge directly from themselves to their students.³



The content often lacks relevance to students' interests and is focused on procedural knowledge and skill repetition rather than conceptual understanding.⁴



Because of a lack of knowledge of how to progress into credit-level courses and because they have not been supported in developing a growth mindset for mathematical learning, many students placed in developmental education find it difficult to persist through the course sequence.⁵



Students may face financial barriers because of additional course dues necessary to complete the developmental course sequence, and may run out of financial aid before finishing the course sequence.⁶



In the CNMI:

more than 90 percent of recent high school graduates placed into developmental education in mathematics...



...and only about 10 percent of those students graduated with a two-year degree within four years.⁷



10%

General Goals of Transition Course Implementation



Reduce the number of students placed into developmental courses by providing supplemental education prior to college.⁸



Align high school and college math instruction, assessment, and curricula.⁹



Support students in understanding how they can prepare to qualify for and succeed in credit-bearing math courses.¹⁰

Designing & Implementing Mathematics Transition Courses

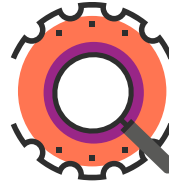
Multiple stakeholders in the Pacific Region are designing math transition courses intended to better prepare students for credit-bearing math courses at the college level.

Evidence-Based Design Principles for Transition Courses



To ensure that educators' practices are aligned with the pedagogical necessities of the course, provide professional learning that:

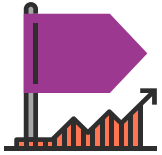
- is continuous.
- is aligned with transition course goals.
- enables the learning of new strategies.
- provides for collaboration and co-learning among teachers.
- involves ongoing feedback.¹¹



Focus pedagogy on conceptual understanding and sense-making rather than procedural knowledge and skill repetition.¹³



Incorporate continuous improvement into course development through Plan-Do-Study-Act (PDSA) cycles. The four steps of the cycle are planning, implementing, evaluating, and making iterative changes.¹⁴



Include a focus on productive persistence, which promotes strategies for persisting through coursework that students find challenging.

Productive persistence can:

- increase students' growth mindset.
- increase academic tenacity.
- increase positive academic behaviors such as turning in assignments and studying.
- improve students' capacity to learn new information.
- create feelings of belonging.¹²



Support student motivation by connecting the material with students' interests, experiences, and everyday lives.¹⁵

The best part about this course is...

Hear from students in the CNMI about their experiences with a mathematics transition course!

“ Working collaboratively to help increase our math knowledge by thinking quantitatively. ”

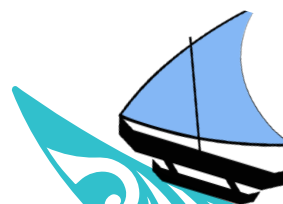
“ How I am able to not miss a year of math and am able to challenge myself. ”

“ It prepares us for college math and helps us to apply our math skills to real life situations. ”

Mathematics as a Pacific Tradition

Seafaring technology and navigational methods developed by Pacific peoples enabled them to discover and settle every remote land mass within the largest ocean on earth, demonstrating their deep understanding and direct application of principles known in Western cultures as “mathematics.”

With great pride in these voyaging traditions, educators in Pacific jurisdictions continue to innovate by designing and implementing locally relevant mathematics transition courses that draw on key local issues and knowledge to help ensure the successful passage of students from high school to college and beyond.



Resources

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