

Danville Area Community College

Underrepresented Groups Report 2015

Institutional Practice/Topic #1: Assisting the Under-Resourced Student through Staff, Faculty, and Community Professional Development

Purpose, Goal, or Objective

DACC has made great strides over the last year in our efforts to scale up our work in equity, understanding poverty and helping alleviate the educational barriers poverty creates. The Equity and Inclusion sub-team has made professional development in understanding and working with students from poverty a main priority over the last several years, but this year, this work expanded to the businesses of our community and community members through collaboration with the Small Business Development Center (SBDC). Our Director of Career Services and coordinator for the WISE African-American female support group, Carla Boyd, attended a *Framework for Understanding Poverty* training hosted by aha! Process in Santa Fe, New Mexico in June 2013. In July 2013, she shared this information at a presentation for the Institutional Effectiveness, Assessment, and Small Business Development Center staff. The Director of the Small Business Development Center, Carol Nichols, who had attended a *Framework for Understanding Poverty* presentation in 2004 when the Danville District #118 school district had provided the training for their K-12 teachers and other community members, became interested in the business-related ramifications of employees living in poverty and asked to work with Carla on any future projects.

Date of Implementation

While our professional development concerning under-resourced college students started in 2009, this specific project started in July 2013.

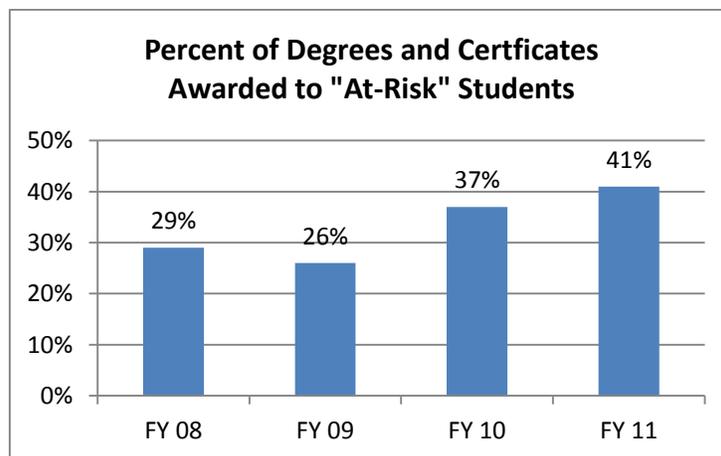
Description of Program Elements or Strategies that Make the Program Successful

In February 2014, Carol and the SBDC hosted a *Bridges for Business* workshop, led by aha! Process presenter Ruth Weirich for area business owners, managers, and supervisors. This workshop centered on how employers can work with employees living in “daily instability” where the employee either lacks the understanding or resources to meet the expectations of the company for which he or she is working. Representatives from local government, economic development/Chamber of Commerce, social services, manufacturing, retail, and food service attended this workshop, and attendees found the information very helpful and necessary for our area. From here, Carol and Carla, as well as a caseworker from the East Central Illinois Community Action Agency, attended a second aha! Process training in Indianapolis, IN in April covering the *Getting Ahead* community program. Carla and Carol both plan to incorporate their training in two aha! Process solutions over the next year. Carla plans to use the *Investigations*

into *Economic Class in America* program to explore the very real differences in economic class levels with her WISE students. For the general population, Carol and Carla are also planning to facilitate the community portion of Getting Ahead network called *Getting Ahead in a Just Gettin' By World*. This 16-week program focuses on facilitating small groups of under-resourced adults to help them understand what resources they currently have and what resources they need to build to help them create and work toward their desired future story. A pilot for this course ran during the Fall 2014 semester.

Evidence of Success

Our focus on increasing understanding of under-resourced college students has made an impact in many ways. Looking at overall numbers, the portion of degree or certificate completers who are considered economically disadvantaged has steadily increased over a three-year time period (from FY 2009 to FY 2011). Even though there has been an economic down turn and more of our students are being considered economically disadvantaged than in previous years, this percentage is rising faster than our peer colleges. Our peer college average percentages for the same period were 32%, 38%, 26%, and 41%.



We will continue to review this data to determine if this is a continued trend after incorporating more student instruction in terms of helping under-resourced students eliminate barriers and reach their educational goals.

Institutional Practice/Topic #2: Assisting Student Success through Improvements in Math Pathways and Remedial Instruction

Purpose, Goal, or Objective

One way we plan to improve our student success rates is through improvement of our math courses. Three math interventions the Math and Science Department developed and fully implemented this past year to increase student success are the scaling of flipped learning in MATH 105 Intermediate Algebra courses, the creation of the MATH 107 Applied Mathematic

Concepts course and an online math boot camp to help students review content and retake the placement test for possible advancement into a higher level math class.

Over the past few years, MATH 105 Intermediate instructors have been studying the use of the Flipped Learning classroom model. While in the traditional classroom model students are presented material during class time which is followed by an assignment done outside the classroom, in the flipped model students are presented new material outside the classroom and work on their assignments during class time. This leads to more cooperative learning and student engagement within the classroom to build a better sense of understanding.

MATH 107 Applied Mathematic Concepts creates a new pathway for students in programs that do not require the business or STEM track of MATH 111 College Algebra or MATH 105 Intermediate Algebra specifically. After students successfully complete this course with a C or better, they will be able to take MATH 115 Survey of Statistics. This course allows students to advance to college-level math classes quicker, since they will be required to take only one semester of gateway math as opposed to the two semesters that many students are currently required to take depending on placement (Basic Algebra and Intermediate Algebra). The department feels this class will help student success, because it exposes students to content and ways of thinking about math that are more relevant to their educational goals. This course was developed over the 2013-2014 school year and offered for the first time this Fall 2014 semester.

Math Boot Camp is a self-paced online tutorial available to students who place into MATH 101 Basic Algebra, MATH 105 Intermediate Algebra, or MATH 107 Applied Mathematic Concepts. This free tutorial reviews concepts and skills essential to MATH 101, MATH 105, and MATH 107, and any student that completes the module successfully prior to the fall semester qualifies to take the math placement test again. The tutorial was also designed this past year and was implemented over the summer for the Fall 2014 semester. The college decided to start this intervention based on best practices from other ATD schools, and we have started gathering data to determine if this technique is aiding our student success efforts.

Date of Implementation

The planning for MATH 107 Applied Mathematic Concepts and the online Math Boot Camp started during the 2013-2014 academic year. The flipped learning model used in MATH 105 started in 2009 with pilot studies but was scaled up to include all MATH 105 courses the Fall 2014 semester.

Description of Program Elements or Strategies that Make the Program Successful

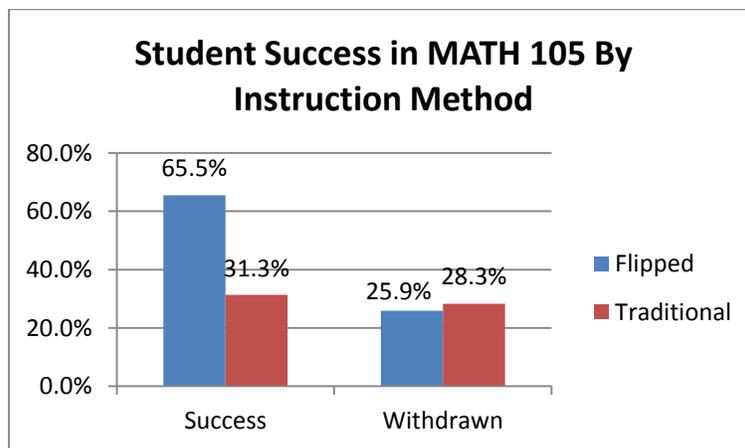
For the implementation of flipped learning in MATH 105 Intermediate Algebra, instructors created video explanations as well as assembled other tools for students to use so that the course material could be learned outside the classroom setting. Now, the classroom focus is on mastery of the material by doing. Students work in cooperative groups, with assistance from their instructor, to complete problems assigned to increase the students' skills and eventually master associated course outcomes.

Although having many similar concepts to MATH 105 Intermediate Algebra, MATH 107 Applied Mathematical Concepts is founded in practical applications using extensive problem solving examples. In the classroom, cooperative learning is used as students learn new concepts and how to analyze situations as a team.

Outside the classroom, assigned problems are given in four categories: (1) skill practice, done through the artificial intelligence assessment and learning system ALEKS, (2) technology infusion, practicing newly learned skills in Excel or some other tool, (3) application, which is a direct extension of the day's lesson, and (4) reflections, so students can express their thoughts of the lesson material. Compared to Basic and Intermediate Algebra, MATH 107 Applied Mathematical Concepts course is more problem based and verbally challenging.

Evidence of Success

While piloting the flipped classroom at DACC over past semesters, it became apparent that students in the flipped classroom sections were having more success than those being taught through a more traditional approach.



DACC is currently offering six sections of MATH 107, including one in the evening and one at the Higher Education Center in Hoopston. Although new, instructors are considering ways to measure the effectiveness of the course in hopes that it continues to meet student needs.