

PRACTICES EXCHANGE

NEWSLETTER

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Institutional Resources/Practices

Career Development and Community Partners

The Center for Community Engagement & Career Competitiveness (CCECC) at **Averett University** (VA) functions as the regional hub for linking students and faculty with community partners to create distinct learning experiences, internships and career opportunities, and to strengthen the social and economic vitality of our region. In addition, the CCECC not only helps to connect students to volunteer and service learning activities but is also a major supporter of the region's Engaged Employers, a group of 20 companies and businesses that work together to identify service projects for employees of participating organizations. Engaged Employers also has access to Averett's new volunteerism software, Get Connected, which enables employees to identify community needs and projects that match their interests and availability.

During the fall 2015 semester, the CCECC helped establish the Career Development Advisory Committee (CDAC). Meeting once per semester, the CDAC is comprised of local business and industry representatives and is charged with helping guide Averett University's career development efforts. The close relationship the CCECC has been able to establish with so many businesses and organizations in the region has led to the establishment of a number of internship opportunities and placements for students in a wide variety of areas, effectively aligning career pathways with a substantive learning experience. For further information, contact Dr. Billy Wooten, Executive Director of the Center for Community Engagement and Career Competitiveness, at bwooten@averett.edu.

Project Based Learning

Mercy College (NY) has integrated Project Based Learning (PBL) into both lecture and laboratory courses in the biology curriculum, with the goal of increasing student engagement and motivation. Project Based Learning is a pedagogy that has been found to promote student learning in all disciplines and help close performance gaps, while at the same time building 21st-century skills, including collaborative project work, critical thinking, and communication skills. PBL projects that are most effective include the following core elements: a challenging problem or question, sustained inquiry, authenticity, reflection, student voice and choice, critique and revision, and the generation of a public product. PBL is particularly suited to biology and related science courses since it integrates key concepts essential for success in science courses.

To gain initial training in using PBL as a vehicle to help drive student success in the biology program, a group of Mercy College faculty attended the Institute for Project Based Learning at the University of Worcester. Biology and Chemistry faculty then piloted various modes and

iterations of PBL in lecture and laboratory biology and chemistry courses. The model of PBL we have found effective typically involves a four-to-eight week module as part of a laboratory course. Students in Cell Biology (200-level), Developmental Biology and Molecular Biology of the Cell (300-level courses) work in groups of four to design and conduct projects. All phases of project work involve close consultation with faculty and reflection. The learning becomes the process of working on solutions to complex real-world biological questions. In this mode, the instructor is a collaborator with students and leverages his/her expertise to help guide them as the students perform authentic research. Students gain experience with how science research is done by working on projects with faculty who have expertise in the particular project topic under investigation. In all PBL courses the student groups generate a public product such as a poster, which is presented by each team.

An essential element of Project Based Learning is the use of a trained peer instructor. We have found the use of trained peer instructors essential for enabling 4–6 groups of students to execute fairly complex projects in these courses. The peer instructor also provides a source of motivation and helps to increase student engagement and self-efficacy.

One example of a model for PBL used in our 200-level Cell Biology lab course is to include a 6–8 week research module where students use cultured cells to investigate the cytoskeleton. Students learn techniques such as the care and use of cultured cells and immunostaining in the first portion of the course and build on this knowledge in projects in the second half of the semester. In the course Molecular Biology of the Cell, students engage in a semester-long project where they clone GAPDH genes from various plant species. This activity can provide novel sequence information on GAPDH genes in diverse plants. In all cases the projects synergize and build on lecture concepts.

Student comments suggest their PBL experiences have increased their confidence in doing research and their willingness to pursue science in graduate school.

We are currently working to expand the use of PBL in key science gateway courses including General Biology. The infusion of PBL into the Biology curriculum, complemented by increasing opportunities for students to engage in research with faculty early on, is expected to increase the number of well-prepared Mercy College Biology degree recipients.

For further information, contact: Anthony Canger, Associate Professor of Biology, School of Health and Natural Sciences. ACanger@Mercy.edu.

Yes We Must Coalition National Conference October 24–26, 2018, Austin, Texas

Registration for the YWM National Conference is still open. A team discount of \$55 per person is available when three (3) or more people from the same institution register. To register and for more information, go to: <https://yeswemustcoalition.org/meetings>.

Submissions for Future Issues

YWM members are encouraged to submit examples of policies, practices and/or resources that you have found to be effective in promoting student success and that you would like to share with your YWM colleagues. Send brief descriptions to Nia Lane Chester, YWM Program Manager. niachester@gmail.com.