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From The Midyears Editor

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Emphasis in colleges of engineering to recruit, retain, and graduate larger numbers of engineers that are more diverse has only increased over the past decade. To this end, the first-year experience has become a well-known and practiced set of theories, programs, and pedagogies where many institutions spend a lot of time, money, and expertise to ease the transition from high school to college. The capstone experience is also a known practice in engineering and one that is not only required for accreditation but one that has a long history of refinement. If we consider these two experiences the bookends of the undergraduate engineering experience, the mid-year experience would be what is found in the middle. This special issue highlights works focused on the student experiences within these years. With improvements mounting on addressing the freshman or first-year of engineering, the next large hurdle, especially with respect to retention, is the sophomore year where there can be even larger losses than the freshman year. Just like in sports, record albums, and even faculty hiring, this second year or second experience is often referred to as the Sophomore Slump or the Invisible Year. Following successful retention from the sophomore to the junior year, the emphasis shifts to discipline specific and professional preparation often referred to as the Junior Jump. Thus, this special issue is focused on the Sophomore Slump to the Junior Jump.

These papers focus in two key areas; transfer student experiences and pathways and junior year course experiences. Transfer students' words were analyzed for their recommendations focused on support that can assist transfer in these mid-years at both the sending and receiving institutions when the receiving institution is classified as a Hispanic-Serving Institution (HSI). Authors Ogilvie and Knight present concrete recommendations from their analysis of over 300, largely Hispanic/Latino, transfer students' responses to an open-ended survey item probing successful (retained) transfer students' thoughts on what did assist or could have supported this typically sophomore transition. Often these transfer pathways are supported by formal partnerships between the sending and receiving institutions. Laugerman, Rover, Mickelson, and Shelley share promising practices found in analyzing a five-year partnership between two such institutions presenting four foundational practices to these types of partnerships.



Moving to the classroom, a mixed learning approach integrating lectures and laboratory work in both a studio and take-home lab format for a junior level course is presented by authors McPheron, Thangaraj and Thomas. With the need for our engineers to not just understand theory, but also have hands-on design experiences, these authors offer a demonstration for other mid-year courses wishing to combine lecture, lab and hands-on learning. Continuing to focus on junior year experiences, authors Orr and Jordan present a similar mixed learning approach to shift from a previous lecture-only course to a hands-on design focused course by adding a Rube Goldberg Machine Contest® project.

Please enjoy these mid-year experience papers.

AUTHOR



Teri Reed is assistant vice president of faculty research development for the Office of Research, University of Cincinnati and professor of Chemical and Environmental Engineering. She was the 2016–2017 President of the Women in Engineering ProActive Network (WEPAN) and currently continues as its Immediate Past President. She is a Board Member and Fellow of the American Society for Engineering Education (ASEE) and a Distinguished Member of the Society of Petroleum Engineers (SPE). She serves as an ABET Engineering Accreditation Council Commissioner for ASEE, is the past co-chair of ASEE's Undergraduate Experience Council, and past chair of the Diversity Committee. Teri was co-winner of the 2015 ASEE William Elgin Wickenden Award for best *JEE* paper, the 2013 ASEE Sharon Keillor Award for Women in Engineering Education, and the 2008 ASEE Outstanding Service Award from the ERM Division. She received her BS in petroleum engineering from the University of Oklahoma and the PhD in industrial engineering from Arizona State University.