THE ROLE OF ENGAGEMENT IN HIGHER EDUCATION: FOCUS ON ENGINEERING AND ENGINEERING TECHNOLOGY – KEY CONCEPTS AND EXAMPLES THAT STRENGTHEN OUR FUTURE

This session will build on the reports from the Kellogg Commission on the Future of State and Land Grant Universities: Returning to our Roots. The new terminology of learning, discovery and engagement will be defined and discussed. The focus will be on engagement at state and land-grant universities with examples related to engineering and engineering technology education. The importance of engaging business and industry AND K-12 will be the primary focus. Reasons for powerful examples of ways that engineering technology programs can engage with the social and economic communities that house them will be shared as will be to create win-win conditions and faculty reward mechanisms for such activity.

Moderator

Michael T. O’Hair, Associate Dean
College of Technology
Purdue University

NEW MISSION LANGUAGE FOR THE ENGAGED UNIVERSITY: LEARNING, DISCOVERY AND ENGAGEMENT

Presenter

Michael T. O’Hair, Associate Dean
College of Technology
Purdue University
THE IMPORTANCE OF ENGAGING BUSINESS AND INDUSTRY

Presenter

Jerry Alberts, Senior Director
Corporate Relations
Clemson University

Like it or not, universities are being drawn into the world economy competition arena. The pressures of competing in a global economy have changed the way business and industry – and even some state governments – are partnering with universities.

More and more companies are taking a hard-line strategic approach when selecting the university or universities they support. Traditional spread the wealth philanthropic attitudes are quickly being replaced by return on investment formulas. If a university is not producing the graduates, performing the research, or teaching the curriculum that benefits the company then the organization will most likely no longer support or strongly recruit at that university.

State governments are also beginning to get involved in the corporate/university partnership arena. Some states have introduced financial incentives to encourage corporate/university partnerships with the intent to boost the state’s economy, enhance workforce development initiatives, improve the environment, and positively impact the state’s overall image. Again, university performance is critical for inclusion in these opportunities.

Engaging business and industry in the classroom is critical if universities are to remain competitive for industry support. Partnerships lead to enhanced learning initiatives important for student recruitment, graduate job placement, faculty support, program support, and facility upgrades. Not engaging business and industry in the classroom is a risky call at best. Which side of the debate are you on?
IMPORTANT OF ENGAGING K-12

Presenter

Anne Spence, Assistant Professor
Department of Mechanical Engineering
University of Maryland

Industry has realized that the number of students graduating from engineering programs is far below that needed to eliminate the shortage of engineers that is expected within the next ten years. In their efforts to stem this tide, industry is asking higher education to provide larger numbers of graduates from engineering programs.

Higher education has begun to face the reality of a small pool of students from which to draw to fill their engineering programs. In order to create a larger pool of students, higher education must work with the K-12 community to identify other students who have the potential to become engineers. It is a fact that most K-12 students, especially girls and underrepresented minorities, make career decisions as early as 6th grade. In order to impact that career choice it is critical to provide opportunities for students as young as elementary school to experience the joys of solving engineering challenges.

Most teachers in elementary, middle and high school have little experience with engineering and engineering technology. This is where higher education and K-12 must come together to share their expertise in the areas of engineering and engineering technology content (higher ed) and pedagogy (K-12). As the chasm between university faculty and K-12 faculty begins to narrow, both entities will benefit from the increase in engagement.