Creating a Culture of Evidence-Based Teaching through Faculty Professional Development

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Creating a Culture of Evidence-Based Teaching through Faculty Professional Development
Dr. Kirsten Fleming and Dr. David Polcyn
California State University, San Bernardino

Title of presentation: Creating a Culture of Evidence-Based Teaching through Faculty Professional Development

Primary presenter information and curriculum vitae or short biographical sketch:

Dr. Kirsten Fleming   Email: kfleming@csusb.edu

Kirsten Fleming, Dean of the College of Natural Sciences, is in her ~~five~~ fifth year at CSUSB. She brought to her position a strong commitment to evidence-based teaching and evaluation, which she developed during her five years as Executive Director of the Kentucky Center for Mathematics. As Dean, her goal is to work collaboratively with faculty members to create the systemic change necessary for STEM majors to be successful. She is particularly interested in creating a culture of evidence-based teaching and learning that fosters deep learning in students and provides sustained faculty development opportunities.

Additional presenter information (if applicable):

Dr. David Polcyn   Email: dpolcyn@csusb.edu

David Polcyn, Professor of Biology and former department chair (2005 – 2014), has been involved in science education for more than 10 years. He has experience with both pre-service teacher education and in-service professional development for K-8 teachers. He has a solid understanding of evidence-based science teaching practices at the K-12 level and a growing understanding of such practices at the postsecondary level.

Presentation topic theme: Leadership and Management.

Presentation type: Interactive workshop (105 mins)

Target audience: All department chairs.

Learning objective(s) of the presentation:

After participating in this session, participants will be able to:

- Implement strategies for creating the cultural change needed to offer professional development models that foster the use evidenced-based, equity-minded, teaching
- Describe characteristics of an effective professional development model
- Identify the obstacles and opportunities for change on their campus
- Articulate actions he/she might take as a result of the information shared in the session

Abstract for program and website: This session will focus on leading change designed to instill a culture of equity-minded, evidence-based teaching and learning. Drawing on a community of practice model, a variety of professional development opportunities will be explored that enable STEM faculty members to redesign courses in ways that intentionally incorporates evidence-based teaching practices.

Keywords: Change, culture, evidenced-based teaching, diversity, inclusivity, professional development

Description of the session (300-500 words):

The fundamental goal of this session is to explore strategies by which departments and colleges may, through facilitating a culture of evidenced-based equity-minded teaching practice, improve student success in the STEM disciplines by: improving student learning for all students studying in STEM fields; improving success rates in STEM courses; and improving graduation rates in the STEM disciplines. The particular focus is to consider implementing a sustained holistic, coherent approach to supporting STEM faculty teaching. An example, of a professional development model which will be described is a community of practice model of professional development that will encompass four different types of faculty learning communities: a new faculty orientation program; STEM institutes for experienced faculty members; department chair learning communities; and a facilitators' learning community.

Institutions of higher educations are facing increased accountability, particularly in the area of student success as measured by retention rates, and graduation rates. In addition, this accountability is taking place as the student body changes, which demands a focus on diversity and inclusivity. Department chairs play a pivotal role in fostering student success. This session will be relevant to them in that it will address ways in which to facilitate the success of an increasingly diverse student body through strategies that are faculty-centered and through which faculty members benefit.

A typical activity used to engage the audience would be as follows:

For a small audience
- Participants select a partner
- Each person takes a turn discussing their responses to the prompts that are provided
- Each person reports either their responses or the other persons responses to the group

For a larger audience
- Participants form groups of three to four people
- The group discusses their responses to prompts that are provided
- The group comes to consensus about the top three responses
- The top three responses are reported to the entire audience

Possible prompts:

- What are the obstacles, if any, to sustained faculty professional development on my campus?
- What steps might be taken to overcome these obstacles?
- Which synergistic projects exist on my campus? In what ways might I connect to these projects?
- What funding sources exist on my campus that might support faculty professional development? What steps would need to be taken to leverage these funds for ongoing faculty professional development?

Culminating task:
- Each individual writes a brief response to the question: What actions might I take as a result of the information shared today?