**STEM Council – Pathways to Student Success**

Dr. Jeremy Parra is a member of the STEM Council at Portland State University.

*Can you describe the STEM Council at Portland State University?*

**Dr. Parra:** The STEM Council is an initiative to draw together people, on campus and off-campus, who are very interested in STEM education, making connections of postsecondary to K-12 and also to internships and industry. The council members themselves are actually very broad-scoped. There are people who are interested in higher-ed and K-12 curriculum and include those from the PSU Graduate School of Education, there are people from the various science and math programs, and there are those in other PSU departments who work with data – for instance, Jim Hook from Engineering was on the committee as well as Kathi Ketcheson from OIRP. We hosted a retreat where we worked to clarify our mission, set goals, and form sub-committees in order to produce some products that would push the agenda forward. One such group was the data sub-committee, chaired by Paul Latiolais of the Mathematics Department.

*Why did the Council get involved in the Pathways Project? Please also describe some of the processes the Council used to ask questions/find answers.*

**Dr. Parra:** As one of the *Rethink Provost Challenge* proposals, Paul and the team put forth the idea of looking at data to guide decisions about how to improve STEM education pathways to success. The team really examined - what are the paths leading students from Point A to Point B to be successful? We also talked a lot about what we thought would be the best analytical approach. The team decided on cluster and also other types of analyses and that got the ball rolling on this initiative.  

*(next column)*

**Meet Our Members …**

**Amy Donaldson – ASD Researcher**

Dr. Donaldson is the Director of the Autism and Child Language Disorders (ACLD) at Portland State, and is an Assistant Professor in the Dept. of Speech and Hearing. Her research focuses on the assessment and intervention of social communication skills of children with Autism Spectrum Disorders (ASD) in the natural environment, using in part innovative communication techniques of sibling mediation and video modeling.

*(STEM Pathways, cont’d.)*

**Dr. Parra:** A real benefit of a diversity of members was a body of knowledge of how a college functions. We tried to address various assumptions and we had anecdotal data to discuss things such as, what is a general science student’s pathway? We began to realize that students may desire to get into medical school and so they may consider earning a general science degree a success [rather than pursuing a specialized science degree - Ed]. Exploring these many points of view helped us hone in on questions.

Math is a big part of STEM curriculum so we observed how students took algebra here and at a community college and in calculus, and how they might do in a next big gateway course such as physics. I taught a section of physics with calculus - it was presented as an active-oriented class, not standard lecture. We looked also at differences in classes and in students, and some data was also drawn from that.

*(to be continued in upcoming issues)*

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*Dr. Yves Labissiere introduces one of the e-portfolio vendors presenting to the PSU campus community. The PSU e-portfolio team has gathered the input of multiple campus stakeholders through a process of needs assessments, research, focus groups, surveys, and interviews with other campus communities who have adopted e-portfolio systems. More in next month’s issue.*
Focus Group Resources

This month we are highlighting considerations for and tools for using focus groups in assessment. Here is a guide on focus groups from Dr. Vicki Wise, of Enrollment Management and Student Affairs (EMSA):


This presentation by Dr. Greg Benson of the University of San Francisco, on “Focus Groups and Student Learning Assessment” gives examples of how U.S. colleges are using focus groups to: evaluate objectives and student performance, increase response rates, and gather feedback:


Focus Groups vs. Individual Interviews

When selecting research strategies for assessment, should one plan to use focus groups, individual interviews, or a combination of both? Dr. David Morgan, Professor of Sociology at Portland State University, suggests the following “The most common use of individual interviews before focus groups is to hear from key informants who can help you do a better job with things such as recruiting participants, writing interview guides, and moderating effectively.

This approach is particularly appropriate if you are less familiar with the interview topic or a set of participants, or if you are more familiar with some categories of participants and stakeholders than others. You typically would not include these key informants in the subsequent focus groups.

Alternatively, when starting with focus groups and then moving on to do individual interviews, the typical goal is to get more depth and detail on the topics that appear in the group interviews. That might involve identifying people who seem to be "typical cases" or you might pick people with more unusual experiences to expand your coverage of the topic. Either way, the idea is to follow-up by interviewing the people who can do the most to advance your understanding.”

Dr. David Morgan is considered an authority on the subject of focus groups. His book, “Focus Groups as Qualitative Research”, SAGE 1996, discusses this in more detail. Comment post was on:

http://www.researchgate.net/post/How_do_you_best_combine_focus_groups_and_individual_interviews_in_qualitative_research