WHAT WORKS - A PKAL CASE STUDY

FIRST YEAR PROBLEMS & SOLUTIONS

These scenarios were prepared for the *2008 Center for the Integration of Research, Teaching, and Learning (CIRTL) Forum*.

Graduate students and early-career STEM faculty convened with members of the PKAL Faculty for the 21st Century to discuss the scenarios and the F21 members' similar experiences during their early career years.

Other participants engaged in at-the-table discussions about their experiences— as senior colleagues (faculty/academic administrators)— in circumstances similar to those described in one or more of the scenarios, from their personal or professional experience.

Groups reported out on emerging best ideas and promising practices in aligning approaches to professional preparation to particular circumstances STEM faculty encounter in the "real world."

Scenario 1

During your first year, you feel 'ok' about your teaching but feel clueless about how what you are doing fits in with the rest of the department. The culture seems to be "don't ask, don't tell" in regard to teaching unless there is a major issue that seems to affect everyone. However, you sense it would be really beneficial to have a series of department-wide discussions about student learning and teaching. You have a good relationship with your chair and the other new faculty members in the department. *What works?*

Scenario 2

In the process of hiring, it was clear that the department liked your experiences in CIRTL (or similar activities) that prepared you as a teaching scholar; both you and they anticipated that you would be able to make significant improvements during your first year in how the departmental introductory course is taught. Now, on board, you recognize the challenge of the "politics of change"— the difficulties of the new kid on the block— to suggest innovative approaches and ways to infuse them into the curriculum. *What works?*

Scenario 3

One of the joys of being a graduate student/post-doc was the sense of being a part of a community with a common vision and shared passions. Feeling lonely within your department and disconnected from peers, you are searching for a community that shares your vision and passion for undergraduate STEM learning and teaching. *What works?*

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Compiled from the PKAL Faculty for the 21st Century (F21)

The early-career STEM faculty member is faced with many challenges and opportunities that he or she may not have been prepared to deal with in graduate school. That is the bad news; the good news is that colleagues, who have faced similar challenges and opportunities, can share their "lessons learned" about understanding the culture, building networks for support, dealing with the politics of change.

These scenarios, which are taken from real-life, can catalyze conversations during formal new faculty orientation programs and/or during informal mentoring conversations. Even without having experienced a specific challenge, each of these scenarios provides an opportunity to ask:

- What does the new faculty member need to know as he or she moves forward in addressing this challenge?
- What first step might the new faculty member take in addressing this challenge?
- How might experiences of the new faculty member as a graduate student or post doctoral student be translated into a possible solution for a present-day challenge?
- How might experiences of colleagues offer insights about possible solutions?

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Scenario 4

Even though you made some progress in developing your research laboratory, you received two denials on two separate grant proposals at the end of the first year.

You are at a research active PUI, and the culture is that to receive a positive decision on tenure you must have produced several peer-reviewed publications with student co-authors, and have received external peer-reviewed grants at tenure time.

Compounding this situation, in the coming year, you are scheduled to advise six freshmen and teach an introductory course for majors—something you have not taught previously. *What works?*

Scenario 5

Your assigned teaching load seems overwhelming. You are the departmental representative on the team teaching of the well-respected general education courses for non-STEM majors.

You have also been given responsibility for shaping a new capstone course that would enable departmental senior majors to integrate insights from other disciplines into their studies during their final year. *What works?*

Scenario 6

As a new faculty member you have been slotted to teach one of the writing-across-disciplines seminars. Given the training you received in graduate school related to teaching writing, it seems like a good fit.

However, the time it takes to teach and grade for this writing intensive course makes your teaching load feel overwhelming. You enjoy teaching the course but are concerned about being "stuck." *What works?*

Scenario 7

In your new position at a community college you have classes of students with more diversity than you had anticipated or experienced before. These students are diverse on every perspective:

- with varied background preparation and levels of previous achievement
- with commitments to family and work that must be balanced with commitments to their academic studies
- with a range of ages and career aspirations (some are older than you are and most are part-time students as well as full-time employees).

You feel helpless about how to have them all learn up to their highest capacity. *What works?*

Scenario 8

During a casual conversation with a colleague, you make the observation that several of the students performing near the bottom of the distribution of your introductory science class are from minority backgrounds traditionally underrepresented in STEM fields.

You are seeking advice about how to best connect with and teach effectively ALL of your students, but your colleague makes a gruff remark about special treatment that certain people receive from the admissions office, almost implying that those students who are struggling should not even be in your class. How do you respond? *What works?*

Scenario 9

As a first year faculty, you have been advised by mentors and fellow young faculty to be an observer of your department dynamics and to keep your comments to a minimum in department meetings.

How do you heed this advice? What are the consequences of voicing your opinions early on in your career? At what point should you start interjecting your opinion? *What works?*

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Scenario 10

As a graduate student, you learned an array of effective contemporary pedagogical approaches. You also learned how to do teaching-as-research in order to find out what your students were learning and thereby improve their learning and your teaching.

But, in your new faculty position, you are teaching three courses a semester and barely have time to prepare for your daily duties in the classroom or to keep up with other teaching-related responsibilities.

You feel yourself falling back, taking the easy way out (lecturing), and are concerned your students aren't learning as well as you know is possible. *What works?*

Scenario 11

In the interview process, you got the impression that you'd be given the opportunity to teach upper-level courses that were currently being taught by other faculty.

Once there, you realize that faculty have been teaching the same courses for many years, and you will be teaching service courses and non-required majors courses for the next few years.

How can you influence a change in the culture of the department without jeopardizing your tenure prospects or waiting for someone to retire? *What works?*

Scenario 12

Your skills align strongly with one of your university's core missions, which is part of why you chose the position. You're excited about the possibility to exercise your expertise but envisioned that the time would come later in your career.

During your second year as a faculty member, you are approached to chair a campus-wide committee on the initiative. *What works?*

Scenario 13

You develop a new laboratory course that gives students a large amount of freedom in developing their own experiments and projects. This laboratory course provides research-like experiences in a classroom setting.

Sounds great from a pedagogical standpoint, but several of the student projects are not working out in the lab as planned and the students (and your colleagues) are starting to get a bit frustrated. *What works?*

Scenario 14

In your first semester you have the opportunity to teach an advanced course which can be modeled largely on your graduate school/post-doc research.

You are also asked to teach the departmental introductory course and its lab and your models for doing so are from your distant past.

How can you manage to do equally well in undertaking all these responsibilities, particularly as at the same time, you are eager to get your research lab up and running. *What works?*

Scenario 15

You were told when you were hired that you were obliged to teach in the department's core curriculum and to develop electives in your area of specialization.

After your first two years you have seen the energy and excitement among faculty colleagues about teaching in the first-year seminar program and you would like to participate.

How do you approach the senior members of your department with a proposal to reduce your teaching in the department's curriculum in order to contribute a first-year seminar? *What works?*

Scenario 16

You are teaching one of several different sections of the department's introductory course. Adopting active learning strategies you also give your students frequent assignments and even more frequent feedback.

A senior colleague comments that your more active approach stimulates more positive student comments about your teaching and has led to criticisms of his course strategy which is based on lectures and two tests.

How do you explore with this colleague and others in the department whether to continue with your more active-learning instructional strategies? *What works?* ■

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