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Center for Effective Undergraduate Teaching (864) 388-8426

Join the Club: The Benefits of Getting Students Involved with Departmental Clubs

FACULTY MENTORSHIP is widely seen as an important factor in a successful undergraduate education. A recent 2018 Strada-Gallup Alumni Survey, "Mentoring College Students To Success" shows that successful faculty mentorship is critical in encouraging students to pursue their careers and dreams. Yet, only 64 percent of students had a mentor and the number is less for underrepresented groups. As faculty, how can we connect to students outside the classroom beyond merely hoping they show up to office hours?

In our physics department at Adelphi University (AU), the "secret sauce" has been to activate our award-winning physics club. By getting involved in physics club, students are (often unknowingly) building their own safety net through a connection to the department and informal mentorship by their peers and faculty. Joining the club also provides two other advantages. It allows them to create their own environment where they define success, and it gives access to additional resources, such as funds to go to conferences and for scholarships. Physics Club Vice President Zafir Momin said at a recent meeting, "Physics Club is the only reason I'm still here. I have become something other than just a student."

A current trend in parenting tells people to stop asking kids "…what they want to be when they grow up but what problems do they want to solve." The departmental club is a structure that allows for innovation at the student level. In an age of active learning, this is exactly the kind of thing we want our students doing: innovating, thinking for themselves, and learning outside of the structure of the stuffy classrooms.

Students can use the club to work in teams to design projects of their own creation. For example, our physics club tackled a four week long workshop on building a robot. The officers in the club determined the project, bought and tested the equipment, developed a plan to teach their peers, and launched the workshops. We want to encourage peer-instruction in the academy; in department clubs, it's already here and is entirely organic.

Whether we are doing an egg drop competition, building a robot, or out for our annual archery night, the students and the faculty are interacting. It gives me the perfect opportunity to chat with the students in small groups or one-on-one. When student problems or issues come up, I can address them in an informal manner and without making a big deal about it. Conversely, when I have called students into my office to discuss similar types of physics problems, their anxiety is often through the roof. Keeping stress low tends to keep attrition rates low, too.

In addition, women in physics seem to strive for leadership roles in our physics club. Right now, about 25 percent of our physics majors are women, though it does creep up to 35 percent from time to time. (This is an undesirable disproportionality, but it's better than the national average, which sits around 20 percent.) Yet, of our six leadership positions in our physics club, four are women. This has not been an isolated incident; women have made up a large fraction of the physics club leadership for the last few years, (64 percent over the last four years). And it's not just at Adelphi University where this is occurring. It's become common for me to visit another institution and find the president of the physics club is a woman.

Tips for getting started

Launching a successful departmental club is not without challenges. There are four groups you need to work with: the university club management organization, your department, the national club office, and, of course, students. The key is to listen to all parties. Each will have a list of requirements. At first, these requirements will seem like they are going to get in the way. Allow the students to set the agenda. Simply ask them what they want to do and have them develop events that fit into your budget (it doesn't take much money). You may need to do some "packaging" of your events so they fulfill national club and university requirements. For example, our university club management organization has lots of requirements for interclub activities and volunteer work. We tweak the events so that they fit the model activities without getting too far away from the core mission: the students.

The national office is very important. For us, it is the Society of Physics Students. They provide small grants to support outreach activities and club events and offer helpful instructional tools, such as their career toolkit—a step-by-step guide designed

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Exams - May 1-7
Grades Due - May 9
Commencement - May 15
Summer 1 Classes Begin - May 15
Withdraw - May 17-23
Memorial Day - May 27

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Recipe for Teaching: Cue-Do-Review

WHEN A FAMILY GATHERS around the table to share a meal, the one who prepared and served the fare most likely spent time pondering the recipes, considering the meal's consumers, and selecting the right balance of protein, carbohydrates, fruits, and vegetables. As in the kitchen, so it is in the classroom. Faculty also ponder content, consider the lesson's recipients, and select the right balance of lecture, group processing, and independent demonstration of competence. We decide upon our objectives for the lesson and we build our processes around the objectives, seeking to ensure that we reach everyone in our classrooms, online or face to face.

Cue-Do-Review, a teaching sequence that can be used in any lesson, regardless of content level, is one way to help ensure classroom instruction time is used effectively and efficiently. By purposefully targeting specific instructor behaviors at the beginning, middle, and end of a lesson, students are more likely to connect with and remember content.

Quality instruction begins with an opening that engages the learners in the lesson's purpose and processes, and also helps the learner make connections. A critical element in the beginning of a lesson is linking new information to prior knowledge. The opening minutes of class offer a rich opportunity to capture students' attention and get them prepared to learn. Students have complex lives, and it is incumbent on instructors to begin class with deliberate efforts to bring their focus to the lesson of the day.

Cueing

Cueing is like an appetizer, whetting the learner's appetite for what is to come. During this phase, faculty inform students what will be taught, identify the process by which instruction will be carried out, give an explanation regarding how the process will help students learn, and identify their expectations for students. Typically, instructors ask students to attend to and participate in a learning activity. Cueing can take as little as a few minutes and serves to focus candidate attention on what will transpire as the lesson unfolds.

Do

In the "Do" phase, instructors lead the learning activities while eliciting responses from students regarding their understanding of content and concepts presented. The "Do" phase shapes candidate responses by asking higher order questions and helps students evaluate the accuracy of the information they are learning. This phase is typically the main course of the lesson. Although most instructional time is spent here, the likelihood that information will be assimilated and applied effectively is largely dependent on the degree to which the lesson was initiated with a "cue" that focused on rationale, processes, and expectations.

Review

Finally, in the "Review" phase, the instructor checks students' understanding of the processes used to teach, reinforces learning, and asks students how the process guided their learning. In essence, both critical content from the lesson and processes used in teaching are discussed and reviewed. Thus, the lesson ends with a brief review phase bringing the meal to a close, much like a dessert.

During the last few minutes of class, many instructors use the time to cram in additional information, make added points, or issue reminders as students are packing up and ready to go. Not only are these last-minute admonishments and bits of information largely ignored, but faculty miss opportunities to collect rich learner feedback when they neglect a purposeful class closure. This cramming on an already full stomach frequently leaves the learner with a bad taste.

By purposefully spending time cueing, doing, and reviewing, instructors are enhancing both the beginning, middle, and end of a well-developed lesson. When this is done, all learners are given the ingredients they need and the optimal conditions to leave the instructional table well-satisfied.

Patty Kohler-Evans is the director of the Mashburn Center for Learning at the University of Central Arkansas. Chayla Rutledge is a graduate assistant at the University of Central Arkansas.

Patty Kohler-Evans, EdD, and Chayla Rutledge; "Recipe for Teaching: Cue-Do-Review;" Faculty Focus; April 8, 2019 [https://www.facultyfocus.com/articles/effective-teaching-strategies/recipe-for-teaching-cue-do-review/] April 30, 2019.

Clubs

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to help students transition from college to the professional world. They also hold national conferences specifically tailored for undergraduate physics students. We tap into their resources whenever we can. A $300 grant may seem small and insignificant, but they add up over time. Each one supports another student opportunity for growth and learning.

Existing student efforts in a department are often understated or undervalued. For many departments, especially those that do not have graduate students, the undergraduates are the reason the department exists. So, come "join the club" to help reach those students.

Matthew Wright is associate professor and chair of the physics department at Adelphi University in New York.

Matthew Wright; "Join the Club: The Benefits of Getting Students involved with Departmental Clubs;" Faculty Focus; April 22, 2019 [https://www.facultyfocus.com/articles/teaching-and-learning/join-the-club-the-benefits-of-getting-students-involved-with-departmental-clubs/] April 30, 2019.