

Getting Results Overview

NARRATOR: One of the toughest things for all of us as teachers is that we tend to teach as we were taught. Teaching is an experiment. And I think one of the parts of the experiment is we have to experiment with our own ideas and our own creative abilities of how we get students engaged.

MAN: Part of the trick in engagement is can I get you to become interested in a problem for which you have some knowledge and some intuition? We're talking about continuity through similar outcome.

MAN: What is it that I want my students to know and be able to do and why? And ideally, that knowledge connects to what's needed out in the real world, not just in the mind of the professor. It's about envisioning the results and then working to get those results.

NARRATOR: As science, technology, engineering and mathematics become essential to our society, community colleges are exciting places to be for teaching and learning in these fields. Community colleges are well positioned to offer state-of-the-art instruction with strong connections to industry.

MAN: It's washing the heavies out of the acid that has impurities in it.

NARRATOR: Many community colleges are now integrating Advanced Technological Education programs into their curriculum. These ATE programs, funded through the National Science Foundation, connect a unique community of traditional and nontraditional learners to this country's leading-edge technology industries.

MAN: The disposal is "autoclave, then drain."

WOMAN: One of the real strengths of these programs is the range of students you'll find in the classroom--from the student that's just graduated from high school to a single mother returning to school, to a C.E.O. who has either retired or decided to make a career change.

MAN: You know , we made an assumption that the angles were 45 degrees, and perhaps that's not the correct way to do it.

MAN 2: Yeah, I wouldn't assume that.

MAN 1: Okay, we won't assume that, then.

MAN: Community colleges are actually the great hope of the country. I mean, this is where more people who are going to become... go on beyond high school go through community colleges, I believe, in this country than anything else.

WOMAN: Rinse it with water, blot it dry...

NARRATOR: With a wide diversity of learners and extensive options for programs ranging from biotechnology to manufacturing, the thinking about teaching and learning is changing.

MAN: The focus will be getting in your groups today, so we'll set you up in tables so...

NARRATOR: Instruction focuses more on student-centered collaborative learning.

WOMAN: Yeah, let me go ahead and get that.

NARRATOR: Adjunct and full-time faculty are becoming part of a larger learning community.

MAN: We could cover the physics part of Newton's law of cooling, but maybe Milt can use the calculator...

NARRATOR: And teachers are finding innovative ways to connect their students' classroom experiences to real-world learning outcomes.

WOMAN: You kind of look at your surroundings, compare it with your map, sort of figure out where your strip is going to start.

WOMAN: Innovations in the engineering technology curriculum have resulted in students being successful in the study of engineering technology who have never been successful before. They find with the new teaching and learning environment and the new teaching methodologies that are being used that they can be successful in math where they've never been successful before. What is really unique about some of these technological programs and in community college teaching in general is that there is a real effort to be hands on.

WOMAN: So when they're done with that, we're going to take this vessel and put it onto the heat exchange vessel.

BRANSFORD: A lot of these students are used to wanting to see the relevance of what they're taught, and wanting to see as quickly as possible what it's like to use the knowledge they're learning in the context of doing things.

NARRATOR: Getting Results is a multimedia tool to help community college faculty develop innovative teaching and learning practices.

MAN: I don't want you to just tell me that "I'm going to put R21 there." I want you to tell me why.

NARRATOR: The six modules are: "Creating a Community of Learners", "Planning for Outcomes", "Active and Collaborative Learning", "Moving Beyond the Classroom", "Teaching with Technology" and "Assessing Teaching and Learning". Each module includes an anchor video to introduce key ideas.

MAN: To remind them that this is the same thing that you did in intro.

NARRATOR: Along with additional vignettes that illuminate specific instances of these practices.

WOMAN: Don't forget that I have asked you to create a brief but informative presentation...

NARRATOR: The companion curriculum materials provide background information, user activities and resources.

MAN: Basically we want to try to take a look at how much material is being produced by these foam fractionators if we have a certain level of ozone going into it compared with air.

WOMAN: The first question you want to ask is, What do these students need to be able to do with what they learn with me in here? And it's always what they're able to do out there. When a student learns the theory in class, they still will need to learn the specifics of individual equipment, machinery, practices, policies, just climate of an employer that they go to work for.

MAN: Well, today in operations class, we're going to run the glass distillation column. Before we do that, I want to give you a real brief orientation on it. And in a week or two, I'm not going to be the one running this thing. You guys are going to be running this thing.

HAUSE: These programs are geared to take someone who doesn't have this background and provide them with all the tools so they can achieve their educational goals.

MAN: Okay, so when we go start the unit up, what's the first thing we do?

MAN 2: Well, we turn on the feed pump.

NARRATOR: Engaging students, reaching all levels of learners and building a foundation that will allow for teaching the most advanced concepts in technology is a challenge that requires a new way of thinking about the learning environment and learning outcomes.

WOMAN: Do you see any green?

WOMAN 2: No. Maybe other than GFP.

Yeah, that's what she told us.

STIEHL: With student learning outcomes, we really are very student centered, in that we know that teaching and learning is about the student's journey, not about the instructor's journey. And so our job as instructor is more as guide than teacher, and this is really becoming true in community colleges all across the country now.

WOMAN: I'm going to look over your shoulders, but we'll see how you can do in terms of setting up the gel box, okay?

BRANSFORD: There's a way to think about the design of any learning environment, and it's just four lenses. One is the knowledge-centered lens. What is it that I want my students to know and be able to do and why? The second thing is learner centeredness. What do I know about my learners? What special skills might they have of technology or life experiences that I could build upon in various ways? The third is assessment centered, and here the major issue is formative assessment. And then, finally, community centered. How do I create a community within my classroom so that they work together, they collaborate and so forth? And then the other thing is, how do I really make the community of the school part of the larger community?

MAN: We're going to go over to the Oregon Coast Aquarium and look at the ozone generators over there.

NARRATOR: The six modules in Getting Results are designed to help users reflect more deeply about learning communities and provide guidance on putting these ideas into practice.

NARRATOR: Getting Results, an innovative multimedia tool for teaching in the community college.