

InTeGrate Faculty Stories

InTeGrate Facilitates Pedagogical Changes

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The perspective summarized in this brief is from a faculty member who primarily teaches introductory level courses to non-science majors, as well as some online courses, participated in the Earth Educators’ Rendezvous (EER) and a workshop about teaching online. She was motivated to participate in InTeGrate programming to gain ongoing professional development (PD) in Earth Science Education, as well as to learn more about pedagogy for online teaching. A big draw for the online teaching workshop was the opportunity to connect with a larger group of educators to talk about pedagogical issues, ways to engage students more, and to collaborate on new ideas. For this faculty member who has been teaching for several years, this was an uncommon and very valuable professional development opportunity.

INFLUENCE ON TEACHING AND LEARNING

This PD led the faculty member to incorporate more active learning in the classroom. Prior to InTeGrate, she mainly lectured, and used only a couple short activities such as “think, pair, share.” After attending EER, she switched completely to active learning teaching methods, drawing from strategies learned from the PD, and sharing, “I came back with this toolkit of active learning strategies, and ended up taking that lecture course and flipping it around to a completely active learning classroom, so I did no lecturing”. The faculty member described this as a “huge shift.” Even though the InTeGrate material was too advanced for the courses she taught, much was gained in terms of teaching techniques, as described below:

I think it’s more of the pedagogy than the materials. I’ve been using the InTeGrate materials for ideas . . . so I’m not using everything, but getting really good ideas and pulling parts of those out to make an activity that would work for my students.

Active learning techniques were also applied to the online course. Prior to InTeGrate, assignments in the course consisted of reading, quizzes, and a project. After EER and the teaching online workshop, she still used reading and quizzes, but she also introduced different types of writing assignments geared towards increasing engagement. The assignments

included reflections to connect personal experiences to the material, as well as working with authentic data.

Utilizing real-world data to learn scientific methods of inquiry was one of the guiding principles in the creation of the InTeGrate material. As a result, this faculty member now uses more real-world data in her classes. She said:

I was always scared to use data before . . . But through both of those [EER and the workshop on teaching online] and the website, I’ve been able to find activities they [students] can work on that use data without being overwhelming.

The faculty member also highlighted InTeGrate materials to her institution during meetings that were focused on ‘high impact practices’ for increasing student classroom engagement. She used InTeGrate as an example of how fellow faculty can increase active learning techniques.

HOW PD SUPPORTED FACULTY DEVELOPMENT

The active learning structure of the PD was a welcome contrast to lecture-oriented conferences the faculty member previously attended. She appreciated getting to work with experienced InTeGrate curriculum developers on how to use materials, and to “actually . . . be involved in creating materials” that could be used in her own classroom right away. The faculty member connected these high-value learning experiences to an overall motivation to continue professional development:

. . . [E]very semester I want improve my classes. I want to keep up with what the trends are. I want to keep up with ways to help students succeed, and I really feel like the only way I can do that is to go out and hear what other people are doing . . .

Though the material content did not fit this faculty member’s classes, the InTeGrate PD and materials served as a resource to increase active learning in her classroom. She also shared it as a ‘tool kit’ to her whole institution. Overall, the PD fulfilled her commitment to continuous teaching improvements and she will continue to seek similar PD.