



INNOVATION ABSTRACTS

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SABBATICAL LEAVE: AN OPPORTUNITY TO BRING SOMETHING BACK

The essence of a sabbatical leave is to enrich oneself and the college by bringing back fresh perspectives on learning, an opportunity after seven years to re-charge the battery, a break from the daily routine of teaching, advising, and research to devote oneself to projects that cannot be accomplished on a full-time teaching schedule.

There are applicants each year from all 12 community colleges in the Connecticut Community Colleges system. Writing an innovative proposal does not ensure that a candidate will be chosen; availability depends on the availability of finances reserved for leaves each year.

From my experience, one way to see the application process in action is to run for election to the "Sabbatical Leave Committee" a year or two prior to applying. Seeing the process from the inside gives candidates an understanding about what to expect and how to put forth their best application. Committee members are responsible for reading and categorizing all proposals submitted for the next academic year. At our institution, proposals are divided into several categories: applications for a semester leave with full pay, for a semester leave at half pay, and for a full year leave at full or half pay. The applications are ranked from the best down in each of the respective categories. The committee uses guidelines established by the Connecticut Community Colleges system and reviews, discusses, and votes on each application to establish the ranking. The ranked applications are submitted to the college's president and then to the chancellor.

My sabbatical proposal was inspired by the idea of expanding the college's community service through outreach programs in science education focused on middle schools. My goal was to develop and implement a large-scale plan to expand the college's community outreach to as many young students as possible.

In developing this concept, I looked to my previous experiences with middle school science projects. In

past years, I have had the opportunity of creating and performing science demonstrations for several middle schools in Fairfield County (CT) and worked with middle school students in Cambridge (MA), in conjunction with the MIT Museum and the First Annual Cambridge Science Festival. These experiences of working hands-on with middle school students gave me some insight into the resources necessary to enhance their classrooms. During my research, I found an article in a MIT alumni newsletter. The title immediately caught my eye: "Volunteers Can Enhance Science Teaching in Schools." Massachusetts' schools are seeking volunteers to assist in teaching science classes to middle school students and some districts are developing programs focusing on minorities and girls. "Project RE-SEED (Retirees Enhancing Science Education through Experiments and Demonstrations) recruits, trains, and places volunteers into middle school classrooms." RE-SEED participants are asked to attend a 13-week training program, one day a week for about four hours each day, and then receive an assignment, usually one day/week for at least one academic year at a participating middle school. During the training, "volunteers learn to use hands-on activities to engage middle school students and facilitate their understanding of the basic concepts of physical science." Each volunteer receives an experimental kit of science materials and a source book with over 200 activities."

"RE-SEED was developed in 1991 at Northeastern University under grants from the National Science Foundation and the Noyce Foundation." The program was inspired by the 1989 AAAS Project 2061 Report, "Science for All Americans," addressing inadequate science education in public schools. "The report recommended that scientists and engineers become involved in pre-college activities and that curriculum focus on scientific principles rather than facts and figures." RE-SEED was then born in Boston with just a handful of volunteers. Since 1991, close to 500 volunteers have offered more than 500,000 hours of their time in about 100 school districts across 12 states including: Alabama, California, Colorado, Maine,



Maryland, Massachusetts, New Hampshire, New York, Rhode Island, South Carolina, Vermont and Virginia, but not Connecticut.

Based on my experience with middle schools, I observed many science teachers, even the most prepared, could be overwhelmed in science classrooms and labs. Young inquisitive minds would ask all sorts of spontaneous questions and need counterintuitive answers. This is when RE-SEED volunteers could provide assistance. Professional scientists, engineers and physicians would bring their lifelong experiences into middle school science classrooms. They could spark discussions when students ask questions outside the teacher's depth of knowledge, or be an extra set of eyes in troubleshooting an experiment, and provide one-on-one assistance for students who are struggling with basic science calculations. They would share with students the application of course material related to the students' daily life. They would act as advisors, contributing their experiences to students' science projects, improvising them when they are not going as planned. They could fix broken instruments in inadequate classrooms and modify old equipment and make it functional in some other way.

After further researching programs to enhance middle school science education, I concluded that RE-SEED was the most promising since it has been successful elsewhere. Connecticut seems to be a reasonably fertile ground to grow the RE-SEED program. For example, in Fairfield County, there are many retired scientists and engineers from industrial and research institutions who have the motivation and potential to serve the community. Presently, Norwalk Community College has a group of over 800 Life Time Learners with an office on campus. I have worked directly with this group on many college events including the Academic Festival, Open Classroom Day, and tours to a nuclear power plant. I know these people look forward to getting involved with young students as part of their life-enrichment experience.

Previously, I attended some training classes and learned the RE-SEED methodology, which "integrates science and mathematics from the start by linking proportion to measurement, and ratio to similarity" with materials that "simulate critical thinking and instill conceptual understanding of basic and often counter-intuitive physical concepts, such as Newton's laws of motion." During those training sessions, our class had fun answering the most basic questions.

RE-SEED's annual meetings bring volunteers from all across the country to exchange ideas and experiences. The dedication of this group of professionals who have stayed on for five, 10, and even 15 years—some even

using their own money to buy equipment to make tools to improve the classroom—is readily apparent. Even more apparent is the students' and teachers' appreciation of the volunteer's efforts to change the way science is taught in the classrooms. Our vision for the program is for it to spread from Fairfield County throughout the entire state of CT, just like it grew out of Boston, which is the very essence of RE-SEED.

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