

Creating a Ripple Effect from an IT Grant

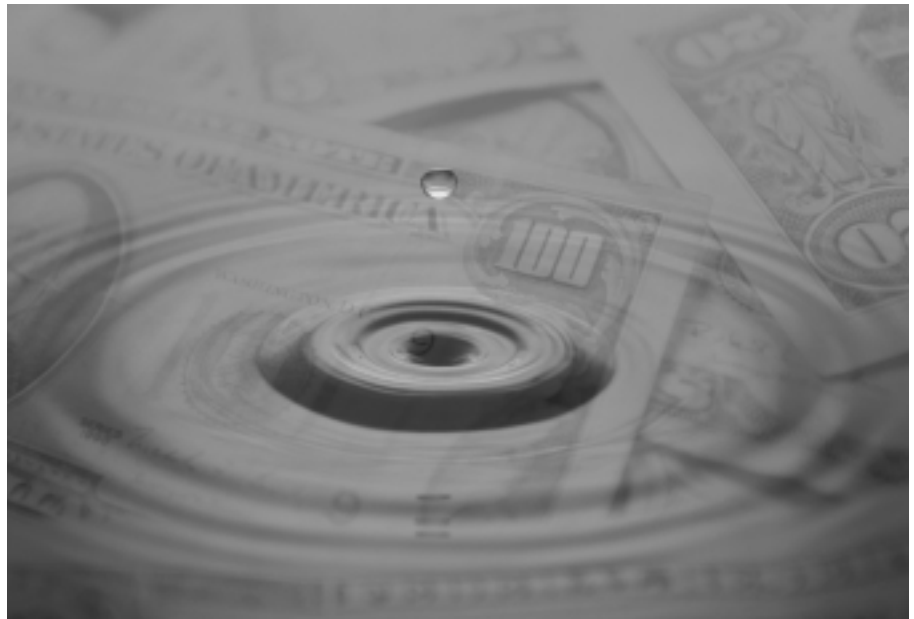
Planning ahead permits writing an IT grant in a way that creates ripple effects when the grant is put to use

By **Joshua Searle-White**

In an era of tight budgets, we can benefit by creating multiple effects from any expenditure of funds — making one thing count for two (or more). Information technology investment is no different. The primary purpose of an IT grant in a college or university is usually to support hardware, software, or training. However, if designed and managed correctly, an IT grant can have effects that go far beyond the immediate goal of improving technology and can contribute in a number of indirect ways to the experience of faculty and students. This article describes how one liberal arts college implemented an IT grant and then created ripple effects, ultimately providing professional development opportunities for faculty that went beyond employing new technology. The ingredients necessary for such additional benefits occur in nearly any higher education setting, hence these suggestions may prove useful to others in designing, proposing, or implementing IT grants.

Background

Allegheny College is a small liberal arts college in northwestern Pennsylvania. Allegheny faces challenges similar to those of many other liberal arts colleges. It recognizes the great importance of technology in students' lives and how technological innovations can enrich teaching and learning. Yet large differences exist in how comfortable individual faculty members are with technology and how willing they



are to engage in learning new techniques. Some faculty, often in the natural sciences, have integrated technology quite comprehensively into their teaching, while others, often in the humanities and social sciences, are puzzled about how to do so.

Allegheny also prides itself on providing students with a well-rounded liberal arts education, with significant emphasis on the connections among disciplines and on interdisciplinary thinking and research. Many faculty are in principle very interested in establishing such connections. However, in practice, most have little time to engage with each other in such interdisciplinary work because of the heavy demands of teaching, advising, and research.

In 1997, three faculty members, with the help and support of Allegheny Educational Computing Services, devised a project funded by the Buhl Foundation that addressed both technological literacy and interdisciplinary teaching. The project had three phases.

First, the three faculty (two in the English Department and one in Environmental Science) would create and conduct an interdisciplinary course that would emphasize writing and technological literacy. This process would support interdisciplinary connections among the faculty involved and would help students improve communication skills using the latest technologies.

Second, part of the funds, supplemented by those from an Allegheny

alumnus, supported the construction of a multimedia classroom. In this room faculty could teach writing by projecting student papers onto a screen in front of the room and collaboratively editing and revising them in class for all to see.

Third, the software obtained through grant funds, most notably a package allowing students to post paper drafts in an electronic room and have other students critique them using on-line discussion, would be made available to other faculty across the college.

One unique feature of the grant design was the inclusion of three faculty evaluators, one each from the natural sciences, social sciences, and humanities. Their purpose was to sit in on classes, talk periodically with faculty teaching Buhl-supported courses, and ultimately report their observations to the outside evaluator. The outside evaluator would eventually create a final report. The grant proposal authors believed that these faculty would have a better sense than an outside evaluator of how the grant-funded activities fit into the overall culture and climate of the college. Therefore, they could provide unique information for both formative and summative evaluations of the grant.

Ripple Effects

The grant accomplished many of its goals. Students became much more competent in a variety of technologies, as did faculty. The interdisciplinary course was a success; students used technology to do extensive peer reviewing, both with students in their own courses and with students in other courses. New software and hardware were added to the tools that faculty across the college could use for their teaching.

Perhaps more striking than the intended results of the grant were its unintended ones — the ripple effects that broadened the grant's impact far beyond its original goals. Foremost among those unintended consequences were the many ways in which faculty began to talk with each other

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about teaching. Because the grant involved training in the new multimedia classroom and in the new software package for online discussions and peer reviewing, the grant organizers set up training sessions for faculty. However, they recognized that the use of technology in teaching must be driven by pedagogical needs rather than by the technology available. As a result, many of the discussions in those training sessions, which the grant organizers attended, focused not so much on the new technologies as on the use of technology — when it is appropriate, when it is not, and what kind of goals it might facilitate.

The Computing Services staff, involved in the project from the beginning, were as well versed in these philosophical issues as the faculty, and they engaged in the discussions too. Thus faculty members from many departments had the opportunity, within a technology training session, to talk with colleagues from other disciplines about what they hoped to accomplish in their teaching. Faculty talked to people they wouldn't talk to ordinarily. Junior faculty became better acquainted with their senior colleagues, providing an opportunity for mentoring and for sharing experiences. The instructional technologists gained a greater understanding of the faculty's teaching and learning goals, which enhanced their ability to provide support to faculty. All of these activities broadened not only the direct impact of the grant, but the excitement and interest of the faculty in general.

Similarly, as part of the project's evaluation, the original organizers

gathered the participating faculty together (ultimately 28 faculty from 14 different disciplines) to discuss how well the technology had been incorporated into their teaching. That, too, became a forum for interdisciplinary discussion about the goals of liberal arts teaching and the ways in which to accomplish those goals. The ongoing contact with the internal evaluators also offered an opportunity for interaction, so much so that the internal evaluators actually adopted some of the ideas from the grant in their own teaching.

These interactions are exactly the kind of interdisciplinary discussions that faculty at Allegheny hope to have but often do not. They needed the time and a forum, a reason to come together — the grant provided them. As a result of these discussions, faculty created connections with each other that enhanced their ability to teach effectively.

Suggestions

How might others create such ripple effects from IT grants in other settings? First, the design of the grant might include a focus on an area that bridges gaps naturally existing in the faculty. For example, Allegheny's grant was designed to use technology to enhance the quality of the teaching of writing. Students write in all disciplines. Therefore, our grant provided a forum in which natural scientists could talk with scholars in the humanities about how to teach writing — an opportunity rarely available before. These faculty then became resources for each other as they began to implement changes in how they taught writing in their various disciplines.

Many other potential grant themes (such as the use of online class discussions, course Web pages, or electronic resources) could provide a way to establish such connections. If a grant introduces any kind of new technology, the training sessions can be designed so that they include ways of getting faculty to talk to each other about the issues they find compelling.

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to take advantage of the natural spectrum of interest in technology issues across the campus. Typically, a few faculty embrace technological innovation readily. Some are interested but might feel overwhelmed at the investment of time involved, and others will be resistant or even hostile to any use of new technologies. Ordinarily, these disparities might be seen as a liability, but if the grant authors assume they exist and build them into the grant, they can actually become an asset. The faculty who adopt technology early might serve as a pilot group and then become resources for the other groups as the technology gradually becomes available to all faculty. Again, forums created for interchange among faculty ultimately enhance their experience as well as that of the students.

Each of these techniques plants seeds for cooperation early in the grant process. They also help diffuse ideas through the faculty, so the grant's effects have a better chance of lasting instead of disappearing after

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the grant period ends. Bringing new people into the process of innovation also can help avoid some of the burnout that the early adopters of technology often experience and increase the chances of the innovations becoming part of the institution's fabric.

Finally, since any IT grant will include evaluation, building a formative element (discussions held during the grant period to permit changes in how the activities are conducted) into the grant can also provide ways to engage more of the campus commu-

nity in the project. Such practices can help broaden thinking about the grant beyond those directly involved.

Conclusions

Following these suggestions should help broaden the effects of IT grants and potentially increase their appeal to funding agencies and college administrations. Obviously, the general principles of using technology in education — for example, that innovations must be driven by pedagogical needs rather than by the availability of technology — remain important. Burnout among faculty who spearhead such initiatives is always a risk. However, the more that IT grants become part of the institution's everyday working life, the more widespread their impacts are likely to be. Everyone, especially students, will benefit. *e*

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