USING GRANTS TO ENHANCE STUDENT LEARNING

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The Center for Research on Learning and Teaching (CRLT) has responded to faculty interest in enhancing teaching by offering programs to assist with classroom instruction and curricular change. These include instructional grants, which are identified by one educational researcher as "one of the most pragmatic, and potentially productive, ways of honoring teaching" (Zahorski, 1996, p. 89). CRLT sponsors or coordinates several grant competitions for faculty to enhance teaching and learning, including the Faculty Development Fund (FDF), the Interdisciplinary Faculty Associates Program, the Gilbert Whitaker Fund for the Improvement of Teaching, Lecturers' Professional Development Grants, and the Instructional Development Fund. (See descriptions of each of these grant programs on the insert.) The two grant programs on which this *Occasional Paper* focuses are the FDF, which awards an average of eleven grants per year, and the Whitaker Fund, which awards up to ten Stage I and three Stage II grants per year.

This *CRLT Occasional Paper* presents the findings of interviews with nine UM faculty members who received instructional grants, exploring the effects of grants on the process of instructional reform and offering useful steps for furthering funded initiatives.[1] Projects highlighted here include multicultural education, technology-based learning, introductory course revision, development of a thematic curriculum, and active learning. The five themes were chosen because they represent major initiatives within CRLT's mission, and they also are the areas for which faculty most often request funding.
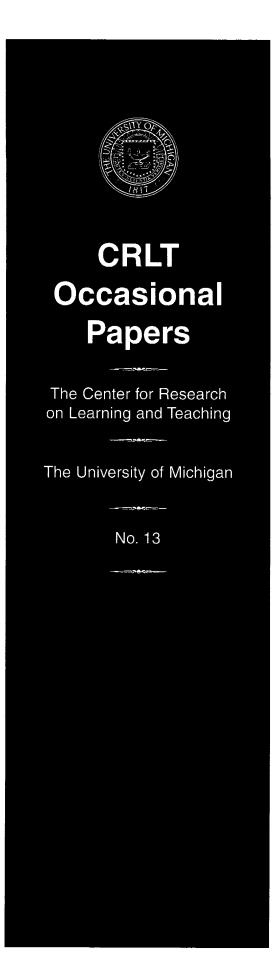
Description of the Grant Recipients and Their Projects

The Whitaker funds groups of faculty who wish to collaborate on projects that involve multiple course or curriculum-wide innovations. Two of the faculty interviewed used Whitaker monies to

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integrate new technologies into existing curricula. Loretta Staples and Michael Rodemer, School of Art and Design, received a Whitaker grant in 1996-97. Their project focused on the integration of the computer as an artistic medium into the undergraduate curriculum. They explored the pedagogical implications of such a move through faculty workshops, retreats and the creation of a computer workroom. As a result of retreats and workshops funded by the grant, faculty in the School unanimously approved new initiatives to incorporate a program of study in computing into the undergraduate curriculum.

Another project which addressed the incorporation of computing into the undergraduate curriculum was the Whitaker-funded "New Interactive Learning Experiences Project" in the School of Social Work. Funded in 1997-98 and 1998-99, Larry Gant, Sherrie Kossoudji and Richard Tolman created a proposal to pilot and assess a project that erases the distinction between on-campus and distance learning in the School. Assessment of their project revealed a high level of student satisfaction with the initiative, which was principally web-based. A hearing-impaired student (not in the pilot) said that "on the web, she felt the equal of other people for the first time in her life." One grantee noted in the interview that the School is now more prepared to incorporate distance learning into its permanent curriculum.

Two grant recipients used the grant as a catalyst for the development of multicultural initiatives. With her 1995-96 FDF grant, Lynne Robins, School of Medicine, created a videotape that addresses issues of cultural diversity in a medical setting. The videotape is used by the Medical School for its first-year-student orientation and is requested by medical school educators from across the country.

In the School of Public Health, Caroline Wang received a 1995-96 FDF grant to create a pilot course, "Multiculturalism and Health Education." The course addressed the School's need to prepare students to design, implement, and evaluate health promotion interventions in a multicultural society. In this course, Wang piloted as a new pedagogical technique a methodology that she developed, photovoice, through which students took photographs of scenarios depict-

ing structural inequalities in health and society. They then analyzed the social concern and developed possible responses to the issue. Wang described the students' photovoice projects as "one of our greatest successes," and the course has now been offered three times.

Three interviewees sought funding to redesign curricula, either on the departmental or the course level. Patricia Simons was funded by Whitaker in 1996-97 and 1997-98 to foster discussions about undergraduate curricular reforms in the Department of History of Art. Through the grant, the department reorganized the curriculum around the theme of "visual literacy." In a subsequent external review, the curriculum reform was highlighted as a major achievement, and Simons credits the initiative as one important factor in the department's recent LS&A Excellence in Undergraduate Teaching Award.

Many instructors each year receive FDF funding to modify or create a single course. Although these reforms take place on a smaller scale, these projects have a significant impact on the undergraduate experience at UM. Susan Alcock, Department of Classical Studies and the Kelsey Museum of Archeology, sought FDF funding in 1994-95 to revise her course, "Food in the Ancient World." The revisions included an emphasis on active learning and the integration of resources from the Kelsey Museum. Her course resulted in a small museum display in the Kelsey as well as a student-created on-line exhibition.[2]

In the Department of Biology, Michael Martin and Marc Ammerlaan received an FDF grant in 1996-97 to assess the existing introductory biology sequence and make recommendations for revision. The assessment data they collected helped to shape a new introductory course that elicited much higher student ratings and greater faculty and Graduate Student Instructor (GSI) satisfaction. These course enhancements were noted by LS&A Dean Terrence McDonald in his announcement of the department's Award for Contributions to the Undergraduate Initiative, granted in April 2000.

What Can Grants Do?

Surveys of faculty, colleagues of grant recipients, and case studies of organizational change indicate that

an instructional grant program can help prioritize teaching and lead to innovative changes in an academic unit's instructional practice (Eble & McKeachie, 1985; Marker, 1980; Oliva, 1986; Pearson, 1998). Additionally, research shows that instructional grants enhance teaching and learning in individual courses. Instructional grants foster new teaching techniques and increase student satisfaction with revised courses (Blackburn, Boberg, O'Connell & Pellino, 1980; Eble & McKeachie, 1985; Kozma, 1978; Redman & Reynold 1988). Surveys of faculty development coordinators at colleges and universities in the US, Canada, the United Kingdom, Australia, New Zealand and Fiji indicate that grants are one of the most effective ways to improve classroom instruction (Centra, 1978; Konrad, 1983; Wright & O'Neil, 1995).

Similarly, faculty interviewees at UM found that grants were effective at addressing a wide scope of instructional needs. In grant recipients' narration of their experiences with the Whitaker and FDF awards, two main themes emerged about the effects of instructional grants on the process of instructional reform. First, recipients found that grants legitimized projects to enhance teaching and learning. Second, they noted that funding had a "domino effect," triggering opportunities for further instructional enhancements.

Legitimacy Afforded by Instructional Grants

External grant awards not only enable initiatives to occur that might not otherwise, but also signal a project's significance. When asked about the effect of her FDF grant, Lynne Robins replied:

> When you are awarded external funding in the Medical School, people sit up and take notice. In the case of my project, CRLT funding gave it both visibility and import. I don't believe the program would have received the visible support it did or have been as successful as it was had I just strung together funds from [internal] sources. The funding also legitimized time that I and others spent working on it.

Patricia Simons also found that grants afford legitimacy to instructional reforms: The instructional grant "says that what you're interested in doing strikes other people as being important too." Marc Ammerlaan indicated that the data he and Martin collected for their project were useful for justifying funding needs of the biology reform on the college level. He concluded: "I think the grant was a wonderful catalyst for change. It really helped us bolster our argument and gave us something to point to."

The Domino Effect of Instructional Grants

Many faculty found that the effects of the instructional grant award surpassed the scope of their initial proposals. Reform efforts can create a departmental culture conducive to further discussions about the curriculum. In her report on the effects of the Whitaker Grant, Patricia Simons described this change in culture:

> Our fundamental aim last year in History of Art was to bring curricular reform to the forefront of our departmental dialogue, and such a focus has indeed been achieved. We both addressed certain pre-existing problems and arrived at a better understanding of how to work toward a more refined set of objectives. Students are now more in touch with faculty and have a stronger sense of departmental identity. We are giving more shape and focus to our course offerings and have articulated some daring ways in which this can be developed further. This discipline of art history is changing and the department is bringing its teaching agenda more in step with this new set of interests, such as cross-cultural perspectives, a greater methodological self-consciousness, and a more systematic embedding of the work of art in a cultural context.

Other interviewees indicated that grants can have a cumulative effect by opening up spaces for other teaching and learning enhancements. Gant, Kossoudji and Tolman found that as a result of their distance learning project, other instructors have taken an interest in web-based learning tools. Sherrie Kossoudji described this "domino effect" by saying, "The grant provides visibility, and diffusion is one of the benefits."

Suggestions for Working with an Instructional Grant

What are the lessons that emerge from these faculty experiences with instructional grants? Interviewees

suggested that the following tactics were useful in furthering their initiatives:

• *Create forums for collective input into the project.*

One important theme reverberated throughout many of the faculty interviews: collective discussion around instructional changes is imperative for a successful project. There are a number of possible "constituents" who may have a stake in the funded project's outcome, such as students, faculty and administrators.

To balance the needs of these constituents, several faculty members stressed the key role that collective input plays in developing successful curricular reforms. Faculty emphasized that consensus-building, through multiple discussions in a number of contexts, is key to making curricular changes. For example, faculty in the School of Art and Design unanimously approved of the computer curriculum that was developed as a result of the Staples and Rodemer grant. To achieve this agreement, they organized faculty retreats, student-faculty discussions and trips to other institutions – initiating each forum with a statement indicating their openness to all ideas. Loretta Staples explained: "We had a multi-pronged approach to try to develop consensus, exposure and to build support. Without the funding we wouldn't have been able to do that because it took time to accomplish it."

Three grantees indicated that they arrived at consensus by creating a context for discussion that appeared less driven by personal interest. They used empirical data, such as the results of student surveys and focus groups, to construct their cases about the merits of change. As Marc Ammerlaan remarked, "The strength and the intensity of the comments helped make it easier for me to justify to the rest of the faculty that 'It's not just me saying this. Here it is.'"

While it is imperative to draw constituents into discussions about instructional changes, faculty, students and administrators have other demands on their time. Patricia Simons commented, "What the Whitaker doesn't pay for directly is a lot of time from faculty, which you've always got to require for it to really work, especially when you're talking about an entire departmental sort of discussion on the curriculum as a whole. So, to have some of those 'dangling hooks' – outside visitors, meals – all of those things can help." Other grantees also noted that small incentives helped to draw constituents into the collective process.

• *Take advantage of institutional opportunities.*

Grant recipients suggested that those contemplating an instructional grant application should be alert to periods when projects may resonate with departmental or school administrators. Changes in departmental priorities or needs raised by curriculum assessments provide a window of opportunity for grant applicants to move forward with significant projects. For example, Lynne Robins described the confluence of events that made her initiative possible: "All sorts of things came together. I was searching for a project that I would find meaningful....And really, I just stepped into a place where I had an idea about what needed to happen and then I had the funds to make it happen."

A faculty member's career path may also play a key role in creating institutional opportunities, although interviewees disagreed about what career stage is best. Loretta Staples found that new faculty in the "honeymoon phase" may have a unique opportunity to direct attention to curricular reforms, while Patricia Simons advised faculty to wait until they are at a stage in their careers when they effectively can manage a curricular reform project. Again, this may be a contextual issue. Grant applicants will need to judge the prospects for success by assessing the fit between their own career path and organizational opportunities.

• *See the grant project as an ongoing process rather than as an end product.*

All grant recipients noted that patience and commitment are needed to sustain project reforms. As Lynne Robins said, a project funded by an instructional grant needs to be seen as "evolutionary." Several grant recipients admitted that their projects were less successful in their first iterations. Only through evaluation and subsequent changes did highly effective projects emerge. Loretta Staples laughed about the "three and a half years or so" she had devoted to the project, explaining, "The challenge was being patient and also really maintaining commitment to this project for its duration."

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• *Realistically assess what small grants can do.*

Several grantees recommended that changes in instructional practice must be incremental, as "too much, too soon" can thwart effective reforms. Sherrie Kossoudji noted that small grants work well to promote enhancements in teaching and learning as the funding limitations necessarily force recipients to work with one element of the instructional reform at a time. She elaborated:

> Something that my partners and I saw early on [was] that you couldn't jump in. You had to take one tiny step at a time. And that, in fact, is the reason why these CRLT grants are good because they're small enough that you really *can't* jump in. You have to pick a piece and work with that particular piece. They are very good for these incremental steps that we need to take.

However, in some cases, grant recipients should recognize that sustainability of a project may be limited without additional funding. For example, a course-level change may not be as self-sustaining as one that addresses a departmental concern because it may not be accompanied by as much collective discussion about distribution of internal instructional resources.

• *In developing a new course, involve colleagues, both faculty and GSIs.*

According to grant recipients, the initial development of courses should not be a solitary process. Colleagues can help to clear away the many roadblocks that can arise in the planning and implementation of new class offerings.

Team teaching is one strategy that can help, espe-cially in a course with multicultural content, where challenges can be magnified. As Caroline Wang noted, multiple instructors can serve as additional resources "to navigate the emotional terrain that emerges as a result of course content."

Where co-teaching is not feasible, GSIs can provide effective assistance with new course development. Susan Alcock did not team teach her "Food in the Ancient World" course, but she indicated that the graduate student hired with FDF funding provided essential assistance. Alcock noted in the interview that even when the class was oversubscribed, the GSIs and other resources provided by the grant enabled her to continue offering the course. She concluded, "I couldn't have done it without that financial help. Period." Whether a GSI or a faculty colleague, grant recipients indicated that assistance from others is needed to get a new course off of the ground.

Using Grants Effectively

Instructional grants can be one of the most effective ways to improve classroom instruction and foster curricular change. Funding can legitimize teaching and learning initiatives, and it often has an effect far beyond the project. However, the receipt of an instructional grant does not automatically translate into positive outcomes. According to initiators of successful Whitaker and FDF-funded projects, plans must have a realistic and accomplishable goal, be implemented strategically to take advantage of opportunities for curricular reform, involve colleagues, spark collective engagement, and be seen as iterative. Properly implemented, instructional grants can bring to fruition significant instructional enhancements, thereby maximizing UM's investment in teaching excellence.

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How Do I Apply for an Instructional Grant?

Those considering an instructional grant application are encouraged to consult with CRLT staff about their initial ideas and proposals. Additionally, CRLT can provide follow-up support with implementation and evaluation of the project. The guidelines for all CRLT grants competitions can be found on the CRLT website, <<http://www.crlt.umich.edu, and can be submitted electronically. To consult with a CRLT staff member, please call 734-764-0505 or email [crlt@umich.edu].

The two grant programs profiled here, the Faculty Development Fund and the Gilbert Whitaker Fund for the Improvement of Teaching, are available to all tenured, tenure-track, and Lecturer III faculty with appointments on the Ann Arbor campus:

• *Faculty Development Fund*

The Faculty Development Fund awards grants of up to $6,000 for individuals and $10,000 for academic units or faculty groups who plan innovations that will enhance the quality of student learning. Priority is given to proposals that emphasize multicultural perspectives and active learning strategies. Application guidelines are mailed to all eligible faculty members in the early part of the Fall Term. Proposals typically are due in mid-October.

• *The Gilbert Whitaker Fund for the Improvement of Teaching*

The Provost and Executive Vice President created the Gilbert Whitaker Fund to support initiatives to enhance teaching and learning by collaborative faculty groups. Application guidelines for the open competition, Stage I, are mailed to all eligible faculty in November. Proposals should be submitted to the appropriate Dean's Office, and typically are due in mid-February. Recipients of Stage I funding must assess the accomplishments of their projects by the summer following the academic year in which the funded project took place. Stage II Whitaker grants are available to three recipients of Stage I funding, based on reports of the projects' accomplishments. The Provost and Executive Vice President makes all final decisions regarding Whitaker Fund grantees.

Additionally, CRLT sponsors two other instructional grant competitions open to all tenured, tenure track, and Lecturer III faculty with appointments on the Ann Arbor campus:

• *Interdisciplinary Faculty Associates Program*

Interdisciplinary Faculty Associates Awards are granted to faculty who plan to teach an undergraduate course that involves team-teaching across departmental boundaries and, preferably, across disciplinary boundaries. Each year, the program awards stipends of $10,000 to at least four teams of faculty members. Prior to the initiation of the course, teams must meet together to share course planning ideas and, concurrent with the course, teams meet at a monthly gathering to discuss emerging issues. Additionally, teams are responsible for creating a course portfolio that documents course goals and student learning. Applications typically are due in early October for courses to be taught in the subsequent academic year.

• *Instructional Development Fund*

The Instructional Development Fund awards grants of up to $500 for innovative projects to improve teaching and learning. In the past, such awards have been made to cover supplies and equipment, research or programming assistance, and conference fees. Applications for grant money from the Instructional Development Fund are accepted on a rolling basis throughout the year. To apply, applicants must write a short memo (or an email message) to CRLT indicating the need for the grant, the expenses that will be covered, and an estimated budget.

All Lecturers with continuing teaching appointments on the UM-Ann Arbor campus are eligible for the following grant:

• *Lecturers' Professional Development Grant*

The Lecturers' Professional Development Grant awards up to $2,000 for activities that promote research, scholarship, teaching, or creative endeavors. Examples of appropriate activities include travel and conference fees for professional meetings, pedagogical projects, computer hardware or software, graduate student or work study assistance, and subscriptions to professional journals. Applications are mailed to all Lecturers in early Winter term, and proposals typically are due in mid-March.

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[1] Interviews with faculty were conducted in fall 1999.
[2] Available at
http://www.umich.edu/~kelseydb/Exhibits/Food/text/Food.html

CRLT Occasional Paper No. 13

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on Learning and Teaching**

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