PLANNING AND EVALUATION SERVICE

GRANT REVIEW AND ANALYSIS:

Preparing Tomorrow's Teachers to Use Technology

U.S. DEPARTMENT OF EDUCATION ~ OFFICE OF THE UNDER SECRETARY

Grant Review and Analysis:

Preparing Tomorrow's Teachers to Use Technology

Final Report

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EXECUTIVE SUMMARY

INTRODUCTION

Preparing teachers to use technology effectively to improve students' learning is a major challenge facing our nation's schools, colleges, and departments of education (SCDEs). Technology preparation calls for not only reeducating the existing teaching force to take advantage of available new technologies but also ensuring that teacher preparation programs are graduating technology-proficient new teachers. In an effort to help educators meet this challenge, the U.S. Department of Education (ED) has established the Preparing Tomorrow's Teachers to Use Technology (PT3) grant program. The PT3 program assists consortia of public and private entities in developing teacher preparation programs that prepare prospective teachers to use technology for improved instructional practices and student learning opportunities in the classroom. The PT3 program offers support to teacher preparation programs across the nation through three types of grants as follows:

- Capacity Building Grants. Capacity Building grants assist grantees for one year in laying the initial groundwork for a teacher preparation reform strategy. Activities may include faculty development, curriculum redesign, and the formation of cross-disciplinary collaborations among university departments and between institutions of higher education and K-12 schools.

- Implementation Grants. Implementation grants provide support to grantees for three years to engage in systemic teacher preparation reform by implementing or significantly expanding a program to improve preservice teachers' technology proficiency. Activities may include strong and extensive faculty development through the application of high-quality learning resources and cross-disciplinary collaborations and strong partnerships with local educational agencies (LEAs) that place postsecondary faculty and K-12 educators in joint learning activities.

- Catalyst Grants. Catalyst grants assist grantees for three years in stimulating large-scale innovative improvements for preparing technology-proficient teachers. Activities may include technical assistance to teacher preparation programs, support for alternative teacher-development career paths, development of new standards in the use of technology, and evaluation of teacher training reform efforts.

During fiscal year 1999, ED awarded 138 Capacity Building, 64 Implementation, and 23 Catalyst grants for a total of 225 grants. This report summarizes the program goals and activities for all 225 grantees, both by grant type and cumulatively.

Analysis

An analysis conducted on the universe of 225 grantee applications from 1999 included a review of several aspects of the applications, such as targeted populations, consortia partnerships, and funding levels. A sample of grantee applications was randomly selected for a more in-depth analysis on additional features, such as project objectives, grade level and subject-

area focus of targeted preservice teachers, consortia characteristics, project activities, evaluation criteria and activities, and technology acquisition requests. The sample consisted of one-fourth of the Capacity Building grantees (35 applications), about half of the Implementation grantees (33 applications), and all the Catalyst grantees (23 applications) for a total of 40 percent of the universe (91 grantees). This report describes the results of both analyses.

All data in this report were obtained from grantee applications and are subject to the limitations of self-reported data.

Data from the following sections on Targeted Populations, Consortium Partnerships, and Funding Levels were extracted from all 225 PT3 grant applications.

TARGETED POPULATIONS

PT3 grantees aimed to assist 156,894 teachers in Year One of the grant period and almost 491,030 teachers by the end of the three-year funding period. On average, Capacity Building grantees planned to assist 411 future teachers during their one-year grant period while Implementation and Catalyst grantees planned to support an average of 1,899 and 16,244 future teachers over their three-year grant period, respectively.

CONSORTIUM PARTNERSHIPS

All Grantees

Ninety-two percent of the 225 grantees designated an institution of higher education (IHE) as the lead organization of their consortium. In addition, IHEs were the most common partner type; every consortium had at least one IHE (49 percent included exactly one). The second most frequent partner type, local educational agencies (LEAs), were members of 76 percent of the consortia (30 percent of all consortia contained exactly one LEA). Almost four of every 10 consortia (38 percent) included at least one nonprofit organization, and just more than three out of every 10 partnerships claimed one or more for-profit organizations. "Other" types of organizations and state educational agencies (SEAs) were partners in 29 and 21 percent of consortia, respectively. Finally, 4 percent of all consortia included at least one museum, and 1 percent named a library. For each category, consortia most typically contained one partner of each type.

Capacity Building Grantees

Ninety-two percent of Capacity Building consortia lead organizations were IHEs. The remaining 8 percent were split among nonprofit organizations, LEAs, and "other" organizations (2 percent each) and SEAs (1 percent). All 138 Capacity Building consortia included at least one IHE (60 percent had exactly one IHE). LEAs, included in 80 percent of Capacity Building consortia, were the next most frequent partner. Slightly more than one in four consortia partnered with nonprofit organizations (30 percent), "other" organizations (29 percent), and for-profit organizations (27 percent). Among those consortia that included these partners, the highest proportion of consortia consisted of exactly one of each type. SEAs participated in 15 percent of Capacity Building collaborations (only one consortium included more than one SEA). Finally, 2 percent of consortia included a museum and 1 percent a library.

Implementation Grantees

IHEs constituted 95 percent of the lead organizations in Implementation consortia. Nonprofit and "other" organizations made up the remaining 5 percent. As with Capacity Building grantees, every Implementation consortium included at least one IHE (39 percent of consortia had two IHEs and 38 percent had one IHE). At least one LEA participated in slightly more than four of every five Implementation consortia (81 percent), with 25 percent of all Implementation grantees including exactly one LEA. One or more nonprofit organizations appeared in 45 percent of the Implementation consortia, and one or more for-profits participated in 34 percent. A majority included exactly one of each type of organization. SEAs were represented in one-fourth of all Implementation consortia (25 percent), and only one consortium included more than one SEA. Twenty-three percent of consortia contained at least one "other" organization. Finally, 6 percent included a museum and 1 percent a library.

Catalyst Grants

Lead organization types were slightly more diverse among Catalyst grantees than the other two grant types. While 61 percent of lead organizations were IHEs, 17 percent were SEAs, 9 percent were nonprofit organizations, and 4 percent each were LEAs, "other" organizations, and museums. Every Catalyst consortium included at least one IHE, and more than half of these (52 percent) encompassed more than four IHEs. The next most frequent partner type was the nonprofit organization, which was involved in 65 percent of all Catalyst consortia (most contained two nonprofits). Slightly more than half (52 percent) included at least one for-profit organization (typically, one or two for-profit organizations). Less than half of the Catalyst consortia (48 percent) included an "other" type of organization, an SEA (43 percent), or an LEA (35 percent). Finally, 4 percent of consortia (one grantee) had a museum and none a library.

FUNDING LEVELS

All Grantees

In Year One, grantees requested a median of $173,177 in federal funds, which they proposed to match with a median of $238,673 in partner contributions during the entire grant period. Overall, grantees who requested funds for evaluation (141 of 225 grantees) stated they would use about 8 percent of their requested federal funds (a median of $14,750) for evaluation activities in the first year of the grant period. Funds requested for evaluation ranged from less than 1 to 32 percent of the total grant request. Grantees planned to spend an average of 16 percent of federal funds in Year One (a median of $24,750) on technology purchases (among grantees who requested funds for technology).

Capacity Building Grantees

Capacity Building grantees requested a median of $136,199 in federal funds for their year-long grants and planned to match the funds with a median of $154,477 in partner contributions. Grantees who requested funds for evaluation expected to spend 8 percent of the federal funds requested (a median of $10,000) to conduct evaluation activities. Funds requested for evaluation ranged from less than 1 to 32 percent of the total grant requests. Capacity Building grantees who requested funds for technology budgeted 18 percent of their requested one-year federal funds (a median of $19,148) for technology items.

Implementation Grantees

For the entire three-year period of their grants, Implementation consortia requested a median of $1,237,738 in federal funds and proposed to match the amount with a median of $1,464,223 in partner contributions. Implementation grantees who requested evaluation funds planned to use just more than 8 percent of their requested federal funds (a median of $31,960) to evaluate project activities and outcomes in Year One. Evaluation budgets ranged from less than 1 to 17 percent of total budget requests. In Year One, Implementation grantees who requested technology funds expected to spend 16 percent of their requested federal funds, or a median of $58,500, on technology.

Catalyst Grantees

Catalyst grantees requested a median of $1,893,648 in federal funds and proposed to provide a median of $2,188,994 in matching funds. In Year One, grantees who requested evaluation funds expected to spend 8 percent of the federal funds requested (a median of $54,500) on evaluation activities. Catalyst grantees who requested funds for technology budgeted about 6 percent of the overall requested federal funds in Year One (a median of $31,779) on technology.

Data from the following sections on Objectives and Grade and Subject Focus, Activities, Evaluation, and Technology were extracted from a random sample of 91 PT3 grant applications reviewed in greater detail.

OBJECTIVES AND GRADE AND SUBJECT FOCUS

Objectives at the State, Regional, and National Levels

Almost seven of every 10 sampled grantees (68 percent) had set forth objectives specific to the needs of their partners. Of those whose project scope extended beyond their immediate partners, 15 percent proposed focusing on objectives at the state level, 8 percent at the regional level, and 9 percent at the national level.

Though most focused on their partners (89 percent), 11 percent of Capacity Building grantees had proposed state-level objectives. Implementation grantees also specified a localized project scope, although 9 percent developed state-level objectives and 3 percent (one grantee) national-level objectives. Catalyst grantees were most likely to have a broader project scope, as 30 percent each were focused on state, regional, or national goals.

Grade and Subject Focus

Approximately 91 percent of grantees planned to train all K-12 preservice teachers, and 84 percent included preservice teachers concentrating on any subject (rather than limiting grant activities to preservice teachers at or in a particular grade level or subject area).

ACTIVITIES

All Sampled Grantees

The two activities proposed most frequently by sampled grantees were faculty professional development (88 percent) and curriculum redesign aimed at including a greater integration of technology (85 percent). Six of 10 grantees (60 percent) said they would expand field services to

increase preservice candidates' exposure to technology in a K-12 setting. Nearly half (49 percent) planned to develop and field-test new techniques or strategies for preparing future teachers to use technology in the classroom; assess the technological skills of the faculty and current preservice students in their own programs; disseminate new strategies, techniques, and materials to other preservice teacher preparation programs across the state, region, or country; or develop an "electronic community" to help foster communication and collaboration among grantee participants.

Capacity Building Grantees

Sampled Capacity Building grantees most frequently listed faculty professional development (89 percent) and curriculum redesign (86 percent) as planned activities. Capacity Building grantees were more likely than either Implementation or Catalyst grantees to propose to assess technological skills and needs (69 percent), improve their own technology (57 percent), create steering committees (49 percent), or obtain the necessary technological equipment (43 percent). They were less likely than other grant types to state that they would expand field experiences (54 percent), develop and field-test new techniques and materials (31 percent), or disseminate new materials (17 percent).

Implementation Grantees

Similar to Capacity Building grantees, Implementation grantees frequently stated that they would provide faculty professional development (88 percent) and redesign curricula (79 percent). These grantees were more likely than Capacity Building or Catalyst grantees to focus on expanding field experiences (76 percent). They were less likely than the other two grant types to assess the technological skills at their institutions (27 percent) or to identify model programs (18 percent).

Catalyst Grantees

As with both Capacity Building and Implementation grantees, Catalyst grantees were most likely to propose redesigning the preservice curriculum (91 percent) and providing professional development for faculty (87 percent). They were more likely than other grantee types to disseminate materials (78 percent) or develop an "electronic community" among consortia members (70 percent). Conversely, Catalyst grantees were less likely to acquire hardware and software (17 percent).

EVALUATION

All Sample Grantees

Slightly more than half of sampled grantees (56 percent) proposed to use an external evaluator. Evaluation plans for at least nine of 10 grantees included many explicit research questions and evaluation goals and objectives (91 percent) and demonstrated internal consistency (90 percent). Nearly as many planned assessments for all or most activities discussed in the applications (86 percent) and specified multiple types of evaluation methods (84 percent). Fewer grantees (38 percent) identified benchmarks to measure project outcomes.

The most common type of proposed evaluation activity was a written or Web-based survey (91 percent), often administered to both preservice students and faculty to monitor changes in attitudes toward technology. The next most common evaluation activity was the document

review, which was proposed by 78 percent of all grantees. The review called for analyzing different materials, including newly redesigned course syllabi and student portfolios. More than half of all grantees stated that they would conduct observations and site visits of grantee activities (58 percent) or that they would conduct interviews, particularly with preservice students and faculty (54 percent). Forty percent said they would conduct focus groups with cohorts of preservice teachers and faculty, and 34 percent planned to use test assessments, often to measure increases in technological proficiency among grantee participants.

Capacity Building Grants

Capacity Building grantees in the sample were more likely to rely on an internal evaluator (63 percent) than were either Implementation or Catalyst grantees. In addition, Capacity Building grantees reviewed in detail were slightly less likely than other grant types to plan assessments for all or most grant activities (77 percent) or to propose many different evaluation activities (74 percent). The most frequent evaluation activity proposed by Capacity Building grantees was a written or Web-based survey (89 percent). Sixty-three percent of Capacity Building grantees planned to conduct document reviews.

Implementation Grantees

Seventy percent of sampled Implementation grantees planned to use an external evaluator. Compared with Capacity Building or Catalyst grantees, fewer Implementation grantees identified many benchmarks to measure performance outcomes (24 percent). Ninety-one percent of Implementation consortia had internally consistent evaluation plans, and 88 percent stated sufficient goals and objectives. The most frequent activities proposed by Implementation grantees were document reviews (91 percent) and written or Web-based surveys (88 percent). Almost seven of 10 Implementation grantees (67 percent) planned to conduct observations or site visits and interviews.

Catalyst Grantees

Sixty-five percent of Catalyst grantees planned to use an external evaluator. Every Catalyst grantee developed an evaluation that was internally consistent; 96 percent set forth goals and objectives for the evaluation and planned to conduct multiple evaluation methods, and 91 percent expected to conduct assessments for all or most grant activities. Every Catalyst grantee planned to conduct a written or Web-based survey, and more than eight of 10 (83 percent) stated they would review relevant documents. A majority of Catalyst grantees listed interviews (65 percent) and observations or site visits (61 percent) among their planned evaluation activities.

TECHNOLOGY

The common technology items for which the sampled grantees budgeted federal funds were laptop computers (30 percent) and computer workstations (27 percent). Slightly more than two of 10 grantees (21 percent) requested federal funds to purchase printers and digital cameras. Capacity Building grantees were most likely to budget federal funds for the purchase of laptops (40 percent), while computer workstations were the most frequent request among both Implementation (36 percent) and Catalyst grantees (22 percent).

I. INTRODUCTION

A. BACKGROUND

Preparing future teachers to use technology effectively to improve student learning is a major challenge facing our nation's schools, colleges, and departments of education (SCDEs). In an effort to help educators meet this challenge, the U.S. Department of Education (ED) has established the Preparing Tomorrow's Teachers to Use Technology (PT3) grant program. The PT3 program assists consortia of public and private entities in developing and implementing teacher preparation programs that prepare prospective teachers to use technology for both improved instructional practices and student learning opportunities in the classroom. To ensure that teacher preparation programs meet this challenge, the 1999 PT3 grant competition asked prospective grantees to address the following areas regarding teacher education and staffing (U.S. Department of Education, 1999):

- ***Quantity***--In less than a decade, K-12 schools must recruit more than 2 million teachers to replace retiring teachers, meet increasing student enrollment standards, and achieve smaller class sizes.

- ***Quality***--If information technology investments are to lead to improved education, SCDEs must produce technology-proficient educators who know how to use modern technology tools to improve teaching and help students meet high standards.

- ***Equity***--SCDEs must work to close the digital divide by staffing low-income and rural areas with technology-proficient teachers.

Though all teacher preparation programs have the responsibility of meeting the technology demands of quality, quantity, and equity, the programs are at different stages in the process of responding to those needs. By supporting the three types of grants noted below, PT3 addresses the various needs of SCDEs across the country:

- ***Capacity Building grants*** are competitive one-year grants awarded to consortia that need resources and time to scale up to full programmatic implementation of a technology-based teacher preparation improvement program. The grants lay the initial groundwork for a teacher preparation reform strategy. Grant funds may support activities that include acquisition of new learning resources, faculty development, curriculum redesign, and formation of partnerships among academic departments and between institutions of higher education (IHEs) and local educational agencies (LEAs).

- ***Implementation grants*** are competitive three-year grants awarded to eligible consortia to support a comprehensive effort to infuse technology into the teaching and learning experiences of prospective teachers. The consortia are currently ready to implement full-scale improved programs to develop technology-proficient teachers. Funds may support a wide range of program activities, including strong and extensive faculty development by using high-quality learning resources; cross-disciplinary collaborations and strong partnerships with LEAs that place postsecondary faculty and K-12 educators in joint learning activities; and systemic teacher preparation reform that results in sustained and institutionalized changes that continue after federal funding is terminated.

- ***Catalyst grants*** are competitive three-year grants awarded to eligible regional or national consortia to stimulate and support significant reforms and large-scale innovative improvements in the preparation and certification of technology-proficient teachers for 21st century schools. Technical assistance is provided to support faculty development and the infusion of technology into the postsecondary curriculum on either a regional or national basis; develop knowledge to evaluate the efforts of Implementation grantees and others who are working to improve teaching and learning with new technologies; create new career paths to support promising teacher development alternatives to provide schools with well-prepared technology-proficient educators; construct new learning resources with strong learning content and instructional strategies to help future educators infuse high-quality modern technologies into the curriculum; and develop performance-based standards for the use of new technologies to improve teaching and learning.

During fiscal year 1999, the first year of the PT3 program, ED awarded a total of 225 PT3 grants: 138 Capacity Building grants, 64 Implementation grants, and 23 Catalyst grants. This report summarizes the program goals and activities for all 225 grantees, both by grant type and cumulatively. It also provides detailed information on a sample of grantees, highlighting innovative or noteworthy activities and strategies.

B. METHODOLOGY

ED was interested in an overview of the 225 grants as well as in the identification of innovative and exemplary projects. To describe the current PT3 projects, an analysis of all grantee applications was conducted following a two-step process. First, the universe of 225 applications was reviewed along several variables, including the following:

- ***Goals*--**The overall purpose of the grantees' PT3 projects.
- ***Target population*--**The number of teachers benefiting from the grantees' project in Year One and during the three-year period.
- ***Award amount*--**The amount awarded to grantees in the first year and during all three years.
- ***Amount budgeted for technology and evaluation*--**The percentage of grant funds targeted for purchasing technology and for conducting a project evaluation.
- ***Type of consortium members*--**The number and classifications of grantees' partners.

From the above information, a picture was developed of the size of the PT3 projects and the composition of the consortia.

Second, to view the projects in greater depth, a random sample of grantees was selected. The sample included one-fourth of the Capacity Building grantees (35 applications), about half of the Implementation grantees (33 applications), and all Catalyst grantees (23 applications), for a total of 40 percent (91 applications). Several additional aspects of the sampled projects were analyzed, including the following:

- ***Project objectives*--**The proportion of grantees with state, regional, or national-level objectives.

- ***Grade level and subject focus--***The grade levels and subject areas of the preservice teachers targeted for grant activities.

- ***Characteristics of the consortia--***The demographics of the population served by the consortia, including location and minority or low-income status.

- ***Project activities--***The types of activities undertaken by grantees to integrate technology into teacher preparation programs.

- ***Evaluation--***The types of evaluation activities and qualitative assessments of activities underway.

- ***Technology requests--***The types of technology equipment requested for purchase with federal funds.

All information detailed in this report was extracted from the grantee applications. Accordingly, the report's findings are subject to the limitations of self-reported data. Some of the more common data ambiguities uncovered in the applications include the following:

- ***Data inconsistencies--***There were inconsistencies in reporting the number of partners in each consortium. Sometimes an inconsistency occurred when a lead organization's included itself in the count of "members other than the lead." At other times, the reasons for the difference between the number of partners reported and other partner information were unclear.

- ***Different interpretations of application terms--***In classifying partners, applicants followed various approaches. For instance, some applicants counted each single K-12 school as an LEA; others listed a K-12 school as an "other" type of organization. Such differences affect the data reported on the composition of each consortium (see Chapter IV).

- ***Completeness of information--***Applicants differed in the extent to which they described characteristics of their partners. For example, grantees did not always specify that an institution in their consortium was a Historically Black College or University (HBCU) or a Hispanic Serving Institution (HSI). In addition, some applicants noted that they planned to undertake activities targeted toward high-need populations including low-income or minority students or those residing in rural and urban areas. Others--perhaps working with similar proportions of students in high-need areas--did not specify their target population. In addition, those applicants that reported targeting high-need areas often failed to specify what constituted "high" levels of those students. If the information was omitted from the application, then it was not included in the analysis.

The analysis of grant funds, also based solely on information from the applications, reflects only the funding levels that grantees requested, not the actual award amounts. Any differences related to grant funds affect data on reported funding levels, such as the partner contribution and federal fund matching rate and the proportion and dollar amounts of funds spent on both technology and evaluation activities.

C. ORGANIZATION OF THE REPORT

The remainder of this report is organized into seven chapters. Chapter II examines grantees' goals and objectives and includes a description of where grantees are concentrating their efforts (at the state, regional, or national level; at particular grade levels; and in particular subject areas). The award information in Chapter III reviews the fund amounts requested by grantees and examines the proportion of funds that applicants proposed to spend on evaluation and technology. Characteristics of consortia members are described in Chapter IV. Chapter V gives an overview of grantees' planned project activities. Chapter VI summarizes the activities planned for grantees' project evaluations and describes evaluation plans as a whole. Chapter VII discusses the types of technological equipment requested by grantees.

II. GOALS AND OBJECTIVES

Chapter Highlights

Based on the sample of the 91 PT3 grant applications reviewed in detail:

- PT3 grantees (68 percent) as well as Capacity Building (89 percent) and Implementation (88 percent) grantees were more likely to concentrate their activities on one or more objectives aimed solely at the local level (the level of their own consortium) (see Table 2) than the state, regional, or national levels.

- Catalyst grantees were more likely to assume a broader focus than the teacher-training programs within their consortia. Their objectives were equally likely to be at the state, regional, or national level (30 percent of all grantees set forth objectives at each of those levels), with only 9 percent of grantees directing their objectives toward teacher preparation programs within their consortia (see Table 2).

- The majority of all grantees specified objectives covering preservice teachers in general subject areas (84 percent) and at the K-12 grade levels (93 percent) rather than in or at a particular subject or grade (see Table 3).

UNIVERSE OF GRANTEE APPLICATIONS

The data in the first two sections, Section A. Goals and Section B. Targeted Populations were drawn from the universe of the 225 PT3 grant applications.

A. GOALS

1. All Grant Types

The primary goal of the PT3 grant program is to assist consortia in developing and implementing teacher preparation programs that will produce technology-proficient teachers with the ability to integrate technology into instruction for improved teaching and learning. Each

grant type in the PT3 program supports consortia at different stages in this process. Grantees' goals and visions vary by type of grant.

2. Capacity Building Grants

Capacity Building grants help teacher preparation programs achieve the following commonly proposed goals:

- to develop an effective and innovative program that will meet the needs of faculty, students, and the teacher preparation program as a whole;
- to offer technology training and support to help increase faculty and preservice teachers' knowledge and skills regarding the use of technology for improved teaching and learning; and
- to enhance partnerships to provide increased opportunities for preservice teachers to work in well-equipped K-12 schools with technology-proficient K-12 teachers.

3. Implementation Grants

Implementation grants support institutions and consortia that are currently ready to implement full-scale, improved teacher preparation programs to develop technology-proficient teachers. Implementation consortia often set forth the following goals:

- to train current faculty in both basic technology skills and the pedagogical uses of technology that allow faculty to adapt and enhance their individual course curriculum to include more teaching and learning through technology;
- to redesign, across the board, the current preservice teacher curriculum to increase the integration of technology in both content and pedagogy and to improve the instructional use of educational technologies in methods courses to enhance teaching and learning; and
- to partner with LEAs, particularly those in predominately rural, low-income, or high minority enrollment districts, to expand technology-related field experiences and to develop a strong mentoring system between K-12 teachers and faculty and preservice teachers.

4. Catalyst Grants

Catalyst grants support regional or national consortia that command the resources to encourage large-scale innovative improvements for developing or certifying technology-proficient educators. Catalyst grantees frequently established the following goals:

- to modify or standardize statewide educational technology standards or to assist in the development of statewide educational technology competency assessments;
- to research, develop, and test new models, materials, and strategies for restructuring teacher preparation programs for multiple institutions across the state, region, or nation, often to meet recently enacted technology standards for either preservice teachers or for K-12 students; and
- to promote systemic change not only for teacher preparation programs in their consortium but also for institutions across the state or region through both the large-scale dissemination of project findings as well as the creation of an electronic clearinghouse through which other teacher preparation programs can use the model programs developed with PT3 funding.

B. TARGETED POPULATIONS

1. All Grant Types

The grantees who specified a targeted population expected to benefit 156,894 future teachers in Year One (206 grantees, or 92 percent, specified Year-One targets) and 491,030 future teachers during three years (205 grantees, or 91 percent, specified targets for three years; see Table 1). On average, individual grantees expected to reach 762 future teachers in Year One and 2,372 future teachers in three years.

TABLE 1

TARGETED POPULATIONS BY GRANT TYPE

Project Period	Total	Capacity Building	Implementation	Catalyst
	(N=206)	*(N=127)*	*(N=60)*	*(N=19)*
Year One				
Total	156,894	52,204	36,900	67,790
Mean	762	411	615	3,568
Minimum	5	10	5	60
Maximum	33,333	3,300	3,290	33,333
	(N=207)	*(N=127)*	*(N=60)*	*(N=20)*
Three Years				
Total	491,030	52,204*	113,943	324,883
Mean	2,372		1,899	16,244
Minimum	60		60	500
Maximum	100,000		9,400	100,000

*Capacity Building grants are one-year grants.

Note: Eleven Capacity Building grantees, four Implementation grantees, and four Catalyst grantees did not specify Year-One targets; four Implementation grantees and three Catalyst grantees did not specify targets for the three-year period.

2. Capacity Building Grants

During Year One, the 127 Capacity Building grantees who specified a target population (92 percent of the 138 Capacity Building grantees) aimed to reach an average of 411 preservice teachers through their efforts, with a range of 10 to 3,300 future teachers per consortium (see Table 1). The grantees planned to reach a total of 52,204 preservice teachers in Year One.

3. Implementation Grants

By the end of the first year, the 60 Implementation grantees who had included a specific target population (94 percent of the 64 Implementation grantees) expected to assist an average of

615 preservice teachers, with a minimum target population of 5[1] and a maximum of 3,290 (see Table 1). The number of preservice teachers that Implementation grantees planned to assist in Year One totaled 36,900. Over three years, the total number rose to 113,943 future teachers, with an average of 1,899 and range of 60 to 9,400 preservice teachers.

4. Catalyst Grants

Catalyst grantees targeted a total of 67,790 teachers and an average of 3,568 teachers, the largest proportion of preservice teachers in Year One (among the 19 applicants, or 83 percent of the 23 Catalyst grantees, who included a target population; see Table 1). The target population in Year One ranged from 60 to 33,333 preservice teachers. At the end of three years, the total number of preservice teachers that Catalyst grantees planned to assist (based on the 20 applications, or 87 percent, who specified a target) was 324,883, with an average of 16,244 and a range of 500 to 100,000 preservice teachers.

SAMPLE OF GRANTEE APPLICATIONS

The data in the last two sections of this chapter, C. Objectives at the State, Regional, and National Levels and D. Grade and Subject Focus, were extracted from the sample of 91 PT3 grant applications.

[1] This grantee is planning to train five preservice teachers who will then train an undetermined number of preservice teachers. Therefore, the actual number of preservice teachers affected by this particular grantee will exceed five.

C. OBJECTIVES AT THE STATE, REGIONAL, AND NATIONAL LEVELS

For the sample applications reviewed in greater detail, most grantees' objectives applied only to their specific project. Generally, the objectives called for expanding the curriculum of the specific teacher preparation programs in the various consortia or developing field experiences in collaboration with the LEA members of the partnership**.** In other instances, however, grantees proposed broader-ranging objectives that focus on the state, regional, or national level. Of grantees that looked beyond the teacher preparation programs in their consortium, a majority were interested in instituting statewide reform of teacher preparation programs or formulating model practices that could be used by all consortia in the region.

1. All Grant Types

The review of applications examined the extent to which grantees were undertaking activities that reach beyond their consortium members' teacher preparation programs. Overall, the majority of grantees, 62 out of the sample of 91 reviewed or 68 percent had set forth objectives directed solely at the level of their own consortium (see Table 2). While almost one of every six grantees established objectives aimed at the state level (15 percent), less than one of every 10 grantees formulated objectives at either the regional (8 percent) or national (9 percent) level. These proportions reflect the fact that two of the three grant types (Capacity Building and Implementation) are aimed at assisting consortium partners which tend to be local.

TABLE 2

LEVEL OF OBJECTIVE FOCUS BY GRANT TYPE

	Total Sample (*N=91*)		**Capacity Building** (*N=35*)		**Implementation** (*N=33*)		**Catalyst** (*N=23*)	
Focus	N	%	N	%	N	%	N	%
Local	62	68	31	89	29	88	2	9
State	14	15	4	11	3	9	7	30
Regional	7	8	0	0	0	0	7	30
National	8	9	0	0	1	3	7	30

Note: Percentages may not sum to 100 due to rounding.

An examination of the data by grant type reveals similar results for Capacity Building and Implementation grantees while Catalyst grantees provide the most diverse results regarding the focus of project objectives.

2. Capacity Building Grants

Almost nine out of every 10 Capacity Building grant applications reviewed (31 grantees or 89 percent) set forth objectives that applied only to their consortium (see Table 2). While 11 percent of Capacity Building grantees focused on objectives at the state level, none specified objectives at the regional or national level.

3. Implementation Grants

Objectives for 88 percent of Implementation grants were specific to consortium partners (see Table 2). Nine percent of the Implementation grants reviewed (three grants) proposed objectives at the state level, accounting for the smallest proportion among all grant types. None of the Implementation applications specified regional-level objectives, and only one application set forth national objectives. This last consortium, consisting of partners throughout the country, was developing a nationwide Web site.

4. Catalyst Grants

The underlying goal of the Catalyst grant was to support regional or national consortia; therefore, it was not surprising that the Catalyst grants adopted broad-based geographic objectives. Nine percent focused on the consortium, but 90 percent (21 applications) focused on state, regional, or national objectives (see Table 2). The applications were divided evenly among the three categories, with 30 percent (seven grantees) focusing their objectives on each level.

D. GRADE AND SUBJECT FOCUS

1. All Grant Types

Of those applications reviewed, the efforts of a majority of grantees applied broadly to preservice teachers in grades K-12 and to all subject areas. Approximately 91 percent of grantees concentrated on the K-12 grade levels, and 84 percent assumed a "general" subject focus (see Table 3). In cases where an application specified a subject area, grantees most frequently named mathematics and science (nine for mathematics and 10 for science among 15 applications specifying a subject). Table 3 shows that the subject area varies little by grant type.

TABLE 3

GRADE AND SUBJECT AREA FOCUS BY GRANT TYPE

	Total Sample *(N=91)*		**Capacity Building** *(N=35)*		**Implementation** *(N=33)*		**Catalyst** *(N=23)*	
Focus	N	%	N	%	N	%	N	%
Grade								
K-12	83	91	30	86	32	97	21	91
Elementary only	7	8	5	14	1	3	1	4
Secondary only	1	1	0	0	0	0	1	4
Subject								
General	76	84	27	77	32	97	17	74
Specified subject	15	16	8	23	1	3	6	26
Science	10	11	6	17	0	0	4	17
Mathematics	9	10	6	17	0	0	3	13
English	6	7	5	14	0	0	1	4
Other*	5	5	4	11	0	0	1	4
Social studies	3	3	2	6	0	0	1	4
Arts and science	2	2	0	0	1	3	1	4

*Includes art, music, library and media, disabled, and life skills management.

Note: Percentages and details for individual subjects do not total to those reported for "specific subject" because grantees could target more than one subject area.

III. AWARD INFORMATION

Chapter Highlights

Based on the universe of 225 PT3 grant applications:

- Overall, grantees requested a median of $173,177 in federal funds for the entire grant period and offered to match those funds with a median of $238,673 in partner contributions (see Table 4).
- Capacity Building grantees requested a median of $136,199 in federal funds for the single year of their grant period while Implementation grantees requested a median of $1,237,738 for the three-year grant period and Catalyst grantees a median of $1,893,648 for the three-year grant period (see Table 4).

UNIVERSE OF GRANTEE APPLICATIONS

All award information data were extracted from the universe of 225 PT3 grant applications. The reported amounts refer to requested federal funds and do not necessarily reflect the actual amount awarded to grantees. Grantees whose proposed match fell below 100 percent of funds requested were given reduced awards to meet the proposed matching rate.

1. All Grant Types

Overall, grantees requested a median of $171,709 (an average of $260,621) in federal funds for the first year, and consortium partners proposed to match that amount with a median of $208,000 (an average of $365,285), including equipment and in-kind contributions (see Table 4). For the entire three-year grant period (including the one-year Capacity Building grants), grantees requested a median of $173,177 (an average of $605,652) in federal funds and proposed a median match of $238,673 (an average of $912,429) in partner contributions. In addition, a majority (52 percent) of all grantees proposed to spend between $1.00 and $1.24 in partner

matching funds for each dollar of requested federal funds, with a median match of $1.12 (see Table 5).

TABLE 4

FEDERAL FUNDS REQUESTED AND PROPOSED MATCHES BY GRANT TYPE

(IN THOUSANDS)

	Total Universe (*N=225*)		**Capacity Building** (*N=138*)		**Implementation** (*N=64*)		**Catalyst** (*N=23*)	
Distribution	Request	Match*	Request	Match*	Request	Match	Request	Match
Year One								
Total	$58,640	$81,459	$18,454	$23,267	$25,295	$36,383	$14,891	$21,809
Median	$172	$208	$136	$154	$420	$515	$640	$820
Mean	$261	$365	$134	$171	$395	$568	$647	$948
Minimum	$42	$35	$42	$35	$81	$78	$494	$600
Maximum	$756	$3,268	$214	$559	$604	$3,268	$756	$2,828
Three Years								
Total	$136,270	$203,470			$75,208	$122,690	$42,609	$57,517
Median	$173	$239			$1,238	$1,464	$1,894	$2,189
Mean	$606	$912			$1,175	$1,917	$1,853	$2,501
Minimum	$42	$35			$244	$245	$658	$736
Maximum	$2,283	$12,401			$1,704	$12,401	$2,283	$5,698

Note: Averages may not sum to total due to rounding.
* Matching fund data were unavailable for two Capacity Building grantees.

TABLE 5

MATCHING RATES FOR REQUESTED FEDERAL FUNDS BY GRANT TYPE FOR ENTIRE GRANT PERIOD

Rate Requests	**Total Universe** (*N=223*)*		**Capacity Building** (*N=136*)*		**Implementation** (*N=64*)		**Catalyst** (*N=23*)	
Median	$1.12		$1.11		$1.15		$1.19	
Mean	$1.36		$1.24		$1.61		$1.35	
Minimum	$0.36		$0.36		$0.38		$0.97	
Maximum	$10.03		$3.76		$10.03		$3.10	
Distribution	N	%	N	%	N	%	N	%
$2.00 or more	19	8	10	7	7	11	2	9
$1.75 to $1.99	12	5	8	6	3	5	1	4
$1.50 to $1.74	15	7	9	7	4	6	2	9
$1.25 to $1.49	31	14	17	12	9	14	5	22
$1.00 to $1.24	116	52	73	54	32	50	11	48
$0.75 to $0.99	20	9	11	8	7	11	2	9
Less than $0.75	10	4	8	6	2	3	0	0

Note: Percentages may not sum to 100 due to rounding.
* Matching fund data were unavailable for two Capacity Building grantees.

2. Capacity Building Grantees

Capacity Building grantees, eligible for a one-year award, requested a median of $136,199 and an average of $133,725 in federal funds (see Table 4). They listed matches of a median of $154,477 and an average of $171,079 in partner funds. Capacity Building grantees requested a total of $18,454,051, with a proposed match of $23,266,783. Capacity Building grantees planned to spend a median of $1.11 in matching funds for each federal dollar requested (see Table 5). Proposed matches ranged from $0.36 to $3.76 for each dollar of requested federal funds, with a majority of grantees (54 percent) contributing between $1.00 and $1.24 for each dollar of requested federal funds.

3. Implementation Grantees

In the first year of their grant activities, Implementation grantees requested a median of $419,968 (an average of $395,232) in federal funds, which they planned to match with a median of $514,579 (an average of $568,479) in partner contributions (see Table 4). For the entire three-year grant period, Implementation consortia requested a median of $1,237,738 (an average of $1,175,129) in federal funds and proposed contributing a median of $1,464,223 (an average of $1,917,004; see Table 4), or a median match of $1.15 for every dollar of requested federal funds (see Table 5). The highest matching rate was $10.03, and the lowest was $0.38. Half of all consortia (50 percent) planned to contribute between $1.00 and $1.24 for every federal dollar requested (see Table 5).

4. Catalyst Grantees

Catalyst grantees requested a median of $639,506 (an average of $647,422) in federal funds for Year One of the grant period, which they planned to match with a median of $819,716 (an average of $948,223) in partner contributions (see Table 4). For the entire three-year grant period, Catalyst consortia requested a median of $1,893,648 (an average of $1,852,581) in federal funds and proposed to contribute a median of $2,188,994 (an average of $2,500,727; see Table 4), a median match of $1.19 for each requested federal dollar (see Table 5). The highest matching rate was $3.10, and the lowest was $0.97, with the largest percentage of grantees (48 percent) proposing to match each federal dollar with between $1.00 and $1.24 in partner funds (see Table 5).

IV. CONSORTIA

Chapter Highlights

Based on the universe of all 225 PT3 grant applications:

- Institutions of higher education (IHE) were the lead organization in 90 percent of all consortia (see Table 6).
- IHEs were also the most common partner type for all grantees and for each grant type. Every consortium included at least one IHE (see Table 7).

Of the sample of 91 PT3 grant applications reviewed in detail:

- Overall, grantees who partnered with local educational agencies (LEAs) were more likely to indicate that their LEAs serve low-income (56 percent) or rural (47 percent) populations (see Table 11).
- Four out of every 10 grantees (40 percent) joined with LEAs that they described as serving large minority populations. Consortia that specified the race or ethnicity of the targeted populations were most likely to serve Hispanic students (16 percent), followed by African American (10 percent) and Native American students (5 percent; see Tables 11 and 12).
- Capacity Building grantees, according to their applications, proposed to serve the highest percentage of rural (60 percent), low-income (66 percent), and minority (46 percent) populations (see Table 11).
- Based on descriptions in the applications, Implementation grantees targeted the highest percentage of urban (27 percent) populations (see Table 11).
- Catalyst grantees, covering wider geographic areas, were least likely to focus on specific high-need populations.

Grant applicants were required to form a consortium with at least two partners, and ED placed a strong emphasis on sustaining partnerships. All partners were equal members of the consortium, though one partner was required to be identified as the "lead." The lead organization had fiscal responsibilities, as well as responsibilities to report to ED but was not

recognized as a separate entity. With the exception of for-profit firms, any partner could be designated as a lead. The partner types that constituted the consortia included any number of the following: local educational agencies (LEAs), state educational agencies (SEAs), libraries, museums, institutions of higher education (IHEs), for-profit agencies, nonprofit organizations, or "other" organizations.

UNIVERSE OF GRANTEE APPLICATIONS

The data in the two following sections, A. Types of Lead Organizations and B. Types of Partners, were drawn from the universe of 225 PT3 grant applications.

A. TYPES OF LEAD ORGANIZATIONS

In most consortia, the lead organization was an IHE; nine out of 10 lead organizations (90 percent) were an IHE (see Table 6). Three percent of consortia relied on a nonprofit firm as the lead organization, and another 3 percent had an SEA. LEAs and "other" organizations served as lead organizations in 2 percent of consortia. One grantee designated a museum as the lead organization, and no consortia included a library as the lead.

Among the different grant types, more than nine of 10 Capacity Building and Implementation grantees relied on an IHE as the lead organization (92 and 95 percent, respectively). While more than half of the lead organizations among Catalyst grantees were IHEs (61 percent), Catalyst grantees tended to have a higher proportion of SEAs (17 percent) and nonprofits (9 percent).

TABLE 6

CLASSIFICATION OF LEAD ORGANIZATIONS BY GRANT TYPE

	Total Universe (*N=225*)		**Capacity Building** (*N=138*)		**Implementation** (*N=64*)		**Catalyst** (*N=23*)	
Lead	N	%	N	%	N	%	N	%
IHE	202	90	127	92	61	95	14	61
Nonprofit	7	3	3	2	2	3	2	9
SEA	6	3	2	1	0	0	4	17
LEA	5	2	3	2	1	2	1	4
Other	4	2	3	2	0	0	1	4
Museum	1	<1	0	0	0	0	1	4

Note: Percentages do not sum to 100 due to rounding.

B. TYPES OF PARTNERS

In the following section, all consortium members, including the lead organization, are covered in the data on partner types and characteristics.

1. All Grant Types

For all grantees, the average number of partners, including the lead organization, was 7.7. The most frequent number of partners was four, with one grantee counting as many as 60 partners in its consortium and one including as few as two (not shown in table).

As with the results on the lead organizations, the partner type most commonly found in the consortia was an IHE. Every grantee listed an IHE as a partner (see Table 7). The average number of IHEs per consortium was 2.5, with one grantee specifying as many as 31 IHEs in its consortium (not shown in table). Most frequently (50 percent of grantees), the number of IHEs per consortium was one (derived from Figure 1).

TABLE 7

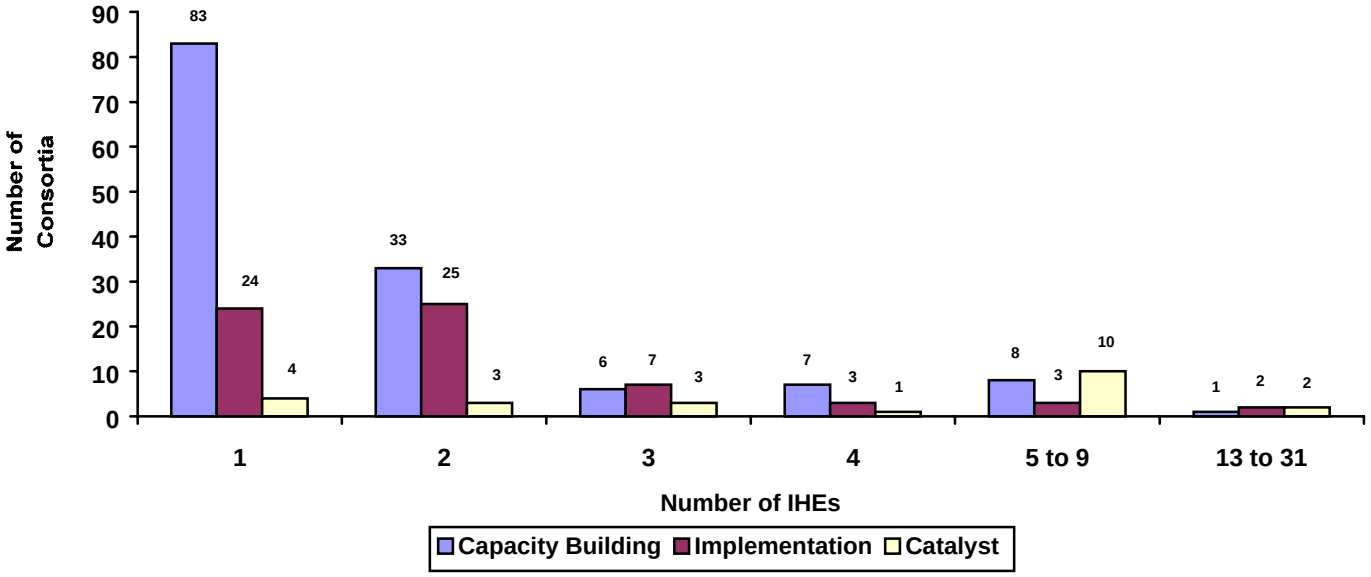
CLASSIFICATION OF CONSORTIUM PARTNERS BY GRANT TYPE

	Total Universe (*N=225*)		Capacity Building (*N=138*)		Implementation (*N=64*)		Catalyst (*N=23*)	
Type	N	%	N	%	N	%	N	%
IHE	225	100	138	100	64	100	23	100
LEA	170	76	110	80	52	81	8	35
Nonprofit	86	38	42	30	29	45	15	65
For-profit	71	32	37	27	22	34	12	52
Other	66	29	40	29	15	23	11	48
SEA	47	21	21	15	16	25	10	43
Museum	8	4	3	2	4	6	1	4
Library	3	1	2	1	1	2	0	0

Note: Percentages do not sum to 100 because consortia may include more than one partner type.

FIGURE 1

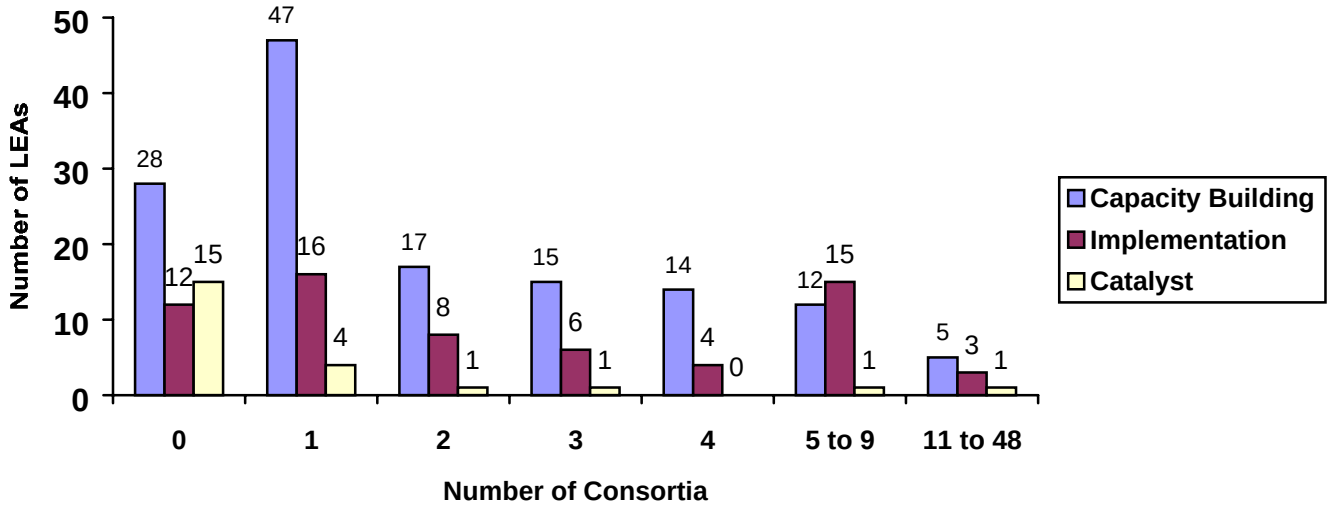
NUMBER OF IHEs PER CONSORTIUM



LEAs were the only other type of partner identified in more than half of the consortia. More than three out of every four grantees (76 percent; see Table 7) named an LEA as a partner. The average number of LEAs per consortium was 2.9, with the number ranging from zero to 48 (see Figure 2). Thirty percent of all grantees listed only one LEA, which was also the most frequent number of LEAs per consortium (derived from Figure 2).

FIGURE 2

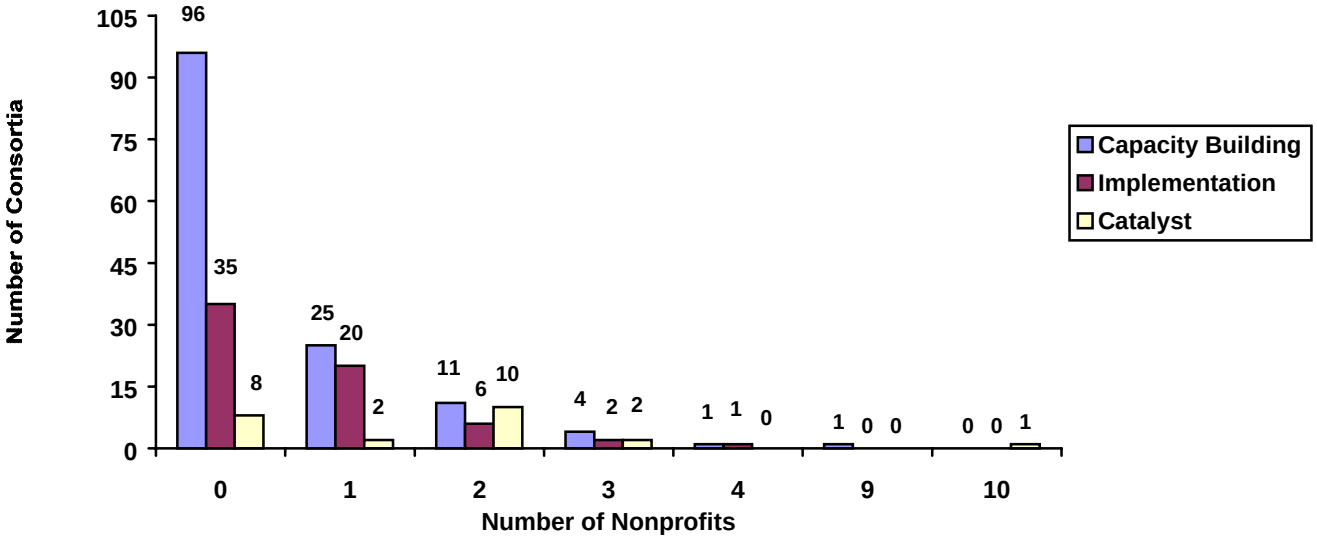
NUMBER OF LEAs PER CONSORTIUM



More than one-third of grantees (38 percent) included a nonprofit as a partner (see Table 7). The average number of nonprofits per consortium was 0.68 (not shown in table). No consortium included more than 10 nonprofits, although 21 percent included only one nonprofit (derived from Figure 3).

FIGURE 3

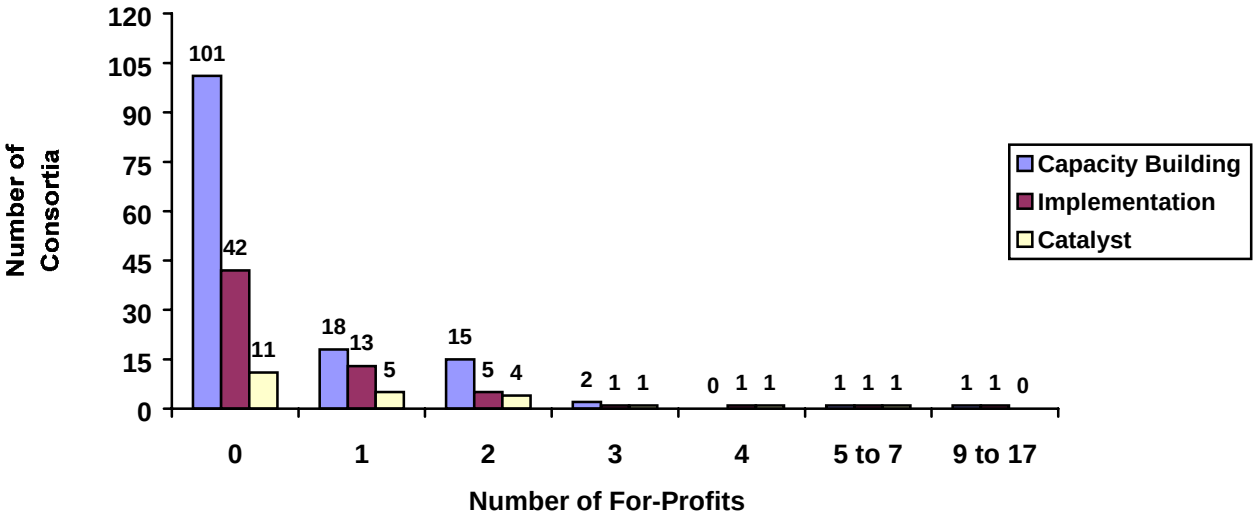
NUMBER OF NONPROFITS PER CONSORTIUM



For-profit firms were the next most frequent partner type, with 32 percent of grantees including a for-profit agency in their consortium (see Table 7). The largest number of for-profits included in one consortium was 17; the average number was 0.66 (not shown in table). Of the 71 grantees who partnered with for-profits, most included one or two for-profits within their consortia (see Figure 4).

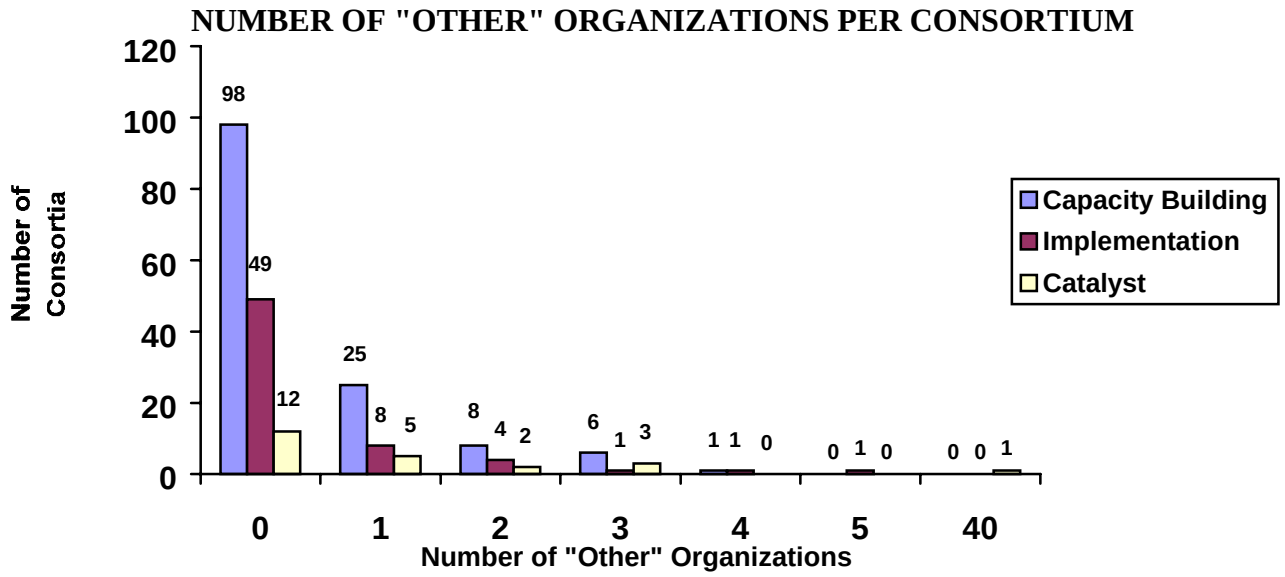
FIGURE 4

NUMBER OF FOR-PROFITS PER CONSORTIUM



Following for-profits in terms of prominence were “other” partner types (29 percent; see Table 7) and SEAs (21 percent; see Table 7). Thirty-eight of the 66 grantees included one “other” type of organization (derived from Figure 5). “Other” types of organizations ranged from private schools to a regional educational laboratory.

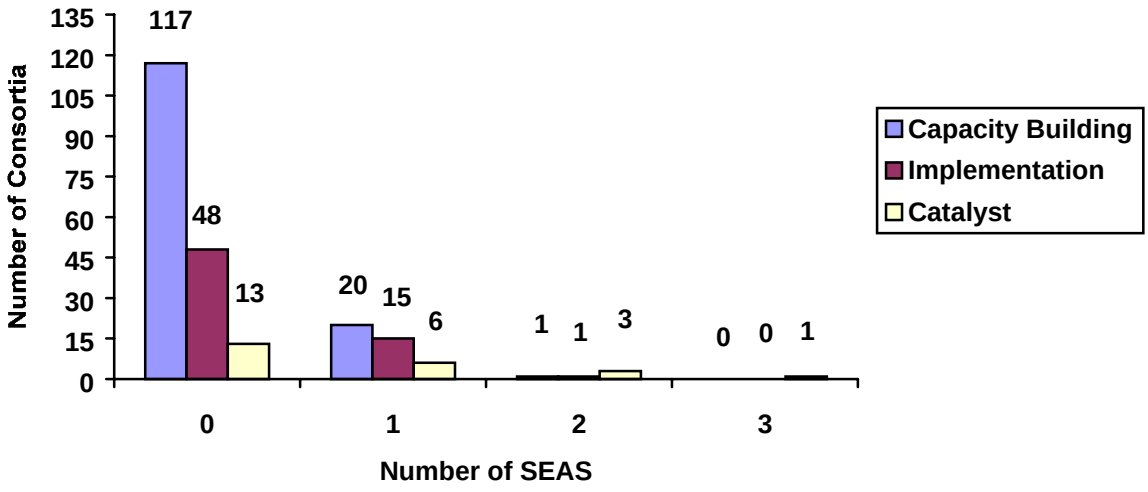
FIGURE 5



Overall, 18 percent of grantees included exactly one state educational agency (SEA) in their consortium. The most frequent number of SEAs per consortium (among those who partnered with SEAs) was one (derived from Figure 6).

FIGURE 6

NUMBER OF SEAs PER CONSORTIUM



Grantees were least likely to include museums (4 percent) or libraries (1 percent) as members of their consortia (see Table 7).

A look `at the results by grant type discloses similar patterns of partner selection among Capacity Building and Implementation grantees. Catalyst grantees, however, differed somewhat in the types of members in their consortia.

2. Capacity Building Grants

The average number of partners among Capacity Building grantees was 6.4, with grantees including as many as 57 and as few as two partners in their consortium (see Table 8). The most frequently occurring number of partners among Capacity Building grantees was two. The typical consortium consisted of one IHE and one LEA. Twelve percent of the Capacity Building consortia were IHE-LEA partnerships while 20 percent consisted of *at least* one IHE and *at least* one LEA and no other partner types (not shown in table).

As with all grantees, the most frequently named partner among Capacity Building grantees was an IHE. All Capacity Building grantees listed at least one IHE as a partner (see Table 7). The average number of IHEs per consortium among Capacity Building grantees was 1.9, with no consortium including more than 13 IHEs (see Table 8) and a majority (60 percent) including exactly one IHE (derived from Figure 1).

Eighty percent of Capacity Building grantees partnered with LEAs, 30 percent with nonprofits, 29 percent with "other" organizations, and 27 percent with for-profit agencies (see Table 7). Thirty-four percent listed one LEA in their consortium and a majority (88 percent) counted fewer than five LEAs as consortium members (derived from Figure 2). Most Capacity Building grantees who partnered with a nonprofit or "other" organization included only one in their consortium (60 and 63 percent, respectively; derived from Figure 3 and Figure 5). Eleven percent of Capacity Building grantees listed two for-profits as consortium members (derived from Figure 4). One was the most frequent number listed among those who partnered with for-profits.

The next most frequent partner type for Capacity Building grantees was an SEA. Fifteen percent of Capacity Building grantees named an SEA as a partner (see Table 7), and 14 percent included exactly one SEA (derived from Figure 6). Few Capacity Building grantees partnered with museums (3 percent) or libraries (2 percent; see Table 7).

TABLE 8

CAPACITY BUILDING CONSORTIA PARTNERS: SUMMARY STATISTICS

Partner Type	Mean	Mode	Minimum	Maximum
Total Partners	6.4	2	2	57
LEA	2.9	1	0	48
IHE	1.9	1	1	13
Nonprofit	0.5	0	0	9
For-profit	0.5	0	0	9
SEA	0.2	0	0	2
Other Organization	0.5	0	0	4
Library	<0.1	0	0	1
Museum	<0.1	0	0	1

3. Implementation Grants

On average, Implementation consortia consisted of 8.4 partners, with a minimum of two and a maximum of 33 (see Table 9). The most frequently occurring number of partners in a consortium was four. The most common partner arrangement among Implementation consortia was a combination of one LEA and two IHEs, with various other partner types (there were 11 consortia of this type; not shown in table).

As with Capacity Building grantees, institutions of higher education were the most common partner type; all Implementation consortia counted at least one IHE (see Table 7). More than one in three Implementation grantees included only one IHE (38 percent), and five consortia included more than five IHEs (derived from Figure 1).

More than eight of every 10 consortia (81 percent) included at least one LEA (see Table 7). Typically, Implementation grantees included only one LEA, although three consortia included more than 10 LEAs (see Figure 2). The average number of LEAs specified per consortium was 3.5 (see Table 9).

Forty-five percent of Implementation consortia included a nonprofit partner (see Table 7). Thirty-one percent included one nonprofit, with one grantee claiming as many as four (derived from Figure 3). About one-third of Implementation grantees (34 percent) listed a for-profit organization in their consortium (see Table 7); more than half of those noted only one for-profit (59 percent; derived from Figure 4). Twenty-five percent included an SEA (see Table 7), although all but one of these consortia included just one SEA (see Figure 6). Four Implementation consortia partnered with a museum and only one with a library (see Table 7).

TABLE 9

IMPLEMENTATION CONSORTIA PARTNERS: SUMMARY STATISTICS

Partner Type	Mean	Mode	Minimum	Maximum
Total partners	8.4	4	2	33
LEA	3.5	1	0	28
IHE	2.7	2	1	31
For-profit	0.8	0	0	17
Nonprofit	0.7	0	0	4
Other Organization	0.4	0	0	5
SEA	0.3	0	0	2
Museum	<0.1	0	0	1
Library	<0.1	0	0	1

4. Catalyst Grants

On average, Catalyst consortia consisted of 13.9 partners, with no consortium consisting of fewer than five or more than 60 partners (see Table 10). The most frequently occurring number of partners in a consortium was seven. Catalyst consortia were extremely diverse in both partner type and number, with no typical or common consortium structure (not shown in table).

Every Catalyst grant included an institution of higher education (see Table 7). Seventeen percent specified that they had one IHE, and 57 percent (13 grantees) included at least four IHEs (derived from Figure 1). Catalyst consortia included an average 5.9 IHEs (see Table 10). In addition, more than half of the consortia listed at least one nonprofit organization (65 percent) or at least one for-profit organization (52 percent; see Table 7). Among those that partnered with nonprofit or for-profit organizations, all but one of the Catalyst grant consortia counted one to three nonprofit organizations (see Figure 3), and all but one included fewer than five for-profit organizations (see Figure 4).

Forty-three percent of the consortia partnered with at least one SEA, representing a larger proportion than either Capacity Building or Implementation grantees (see Table 7). In contrast, Catalyst consortia were much less likely than either grant type to include an LEA. Thirty-five percent of Catalyst consortia included an LEA (see Table 7), although 17 percent included only one (derived from Figure 2). Finally, only one Catalyst consortium included a museum (and it had three museums; see Table 10), and no consortium partnered with a library (see Table 7).

TABLE 10

CATALYST CONSORTIA PARTNERS: SUMMARY STATISTICS

Partner Type	Mean	Mode	Minimum	Maximum
Total Partners	13.9	7	5	60
IHE	5.9	1	1	25
Other organization	2.5	0	0	40
LEA	1.9	0	0	30
Nonprofit	1.7	2	0	10
For-profit	1.2	0	0	7
SEA	0.7	0	0	3
Museum	0.1	0	0	3
Library	0.0	0	0	0

SAMPLE OF GRANTEE APPLICATIONS

The data in Section C. Consortia and Targeted Student Characteristics were extracted from the sample of 91 PT3 grant applications. It is important to note that all data are self-reported and, as such, grantees' descriptions of a "large" percentage of rural, urban, low-income, and minority populations are subject to grantee interpretation and may vary across grantees. Few grantees provided descriptive statistics documenting the relative size of the relevant population.

C. CONSORTIA AND TARGETED STUDENT CHARACTERISTICS

The PT3 program advocates addressing the issue of equity and working toward closing the "digital divide." Accordingly, grantees were encouraged to focus their efforts on communities that command fewer resources, particularly "high-need" populations in rural or urban areas or other areas with a high percentage of low-income students or minority student populations. Several grantees, for example, mentioned using technology such as videoconferencing to reach

out to students in rural areas. Many grantees stated that they intended to deliver a specific course for preservice teachers to address the technological resource challenges faced by many low-income and minority youths.

1. All Grant Types

Almost 47 percent of grantees collaborated with rural-area LEAs, and 24 percent partnered with urban-area LEAs (see Table 11). Slightly more than half of all grantees (56 percent) partnered with LEAs that they described as having a high percentage of low-income students. Of the 51 consortia that reported partnering with LEAs with a large low-income population, 40 (78 percent) made reference to specific sources or measures for defining low-income students: low median income (two grantees), low per-capita income (three grantees), low socioeconomic status (six grantees), a high number of Title I students (two grantees), and the number of students in the free- and reduced-price lunch program (27 grantees).[1]

TABLE 11

DEMOGRAPHIC CHARACTERISTICS OF PARTNER LEA BY GRANT TYPE

	Total Sample *(N=91)*		**Capacity Building** *(N=35)*		**Implementation** *(N=33)*		**Catalyst** *(N=23)*	
Characteristic	N	%	N	%	N	%	N	%
Low income	51	56	23	66	20	61	8	35
Rural	43	47	21	60	16	48	6	26
Minority	36	40	16	46	15	45	5	22
Urban	22	24	8	23	9	27	5	22

Note: Percentages for demographic characteristics do not sum to 100 because grantees could target multiple categories.

Four out of every 10 grantees (40 percent) joined with LEAs that they characterized as having large minority populations (see Table 11). Of the 36 consortia that stated they were

[1] Of the 40 grantees who specified low-income categories, 27 provided supporting statistics for the percent of students fitting each category. Percents ranged from 25 to 100 percent.

partnered with LEAs with a large minority population, 24 (67 percent) specified the race or ethnicity of the targeted populations (not shown in table). Grantees were most likely to serve Hispanic students[2] (16 percent), followed by African American[3] (10 percent) and Native American students[4] (5 percent; see Table 12). Four percent of grantees partnered with IHEs classified as Historically Black Colleges and Universities (HBCUs), and 2 percent joined with Hispanic Serving Institutions (HSIs)[5] (not shown in table).

TABLE 12

LEA MINORITY POPULATION SERVED BY GRANT TYPE

	Total Sample *(N=91)*		**Capacity Building** *(N=35)*		**Implementation** *(N=33)*		**Catalyst** *(N=23)*	
Minority Group	N	%	N	%	N	%	N	%
Hispanic	15	16	5	14	8	24	2	9
African American	9	10	5	14	2	6	2	9
Native American	5	5	1	3	4	12	0	0
Unspecified Race	7	8	4	11	2	6	1	4

Note: Percentages for demographic characteristics do not sum to 100 because grantees could target multiple categories.

Almost two of every 10 grantees (19 percent) attributed a single high-need characteristic to their targeted K-12 student population (see Table 13). More typically, however, grantees focused on serving LEAs with populations that included some combination of rural, urban, minority, and low-income students. More than three of every 10 grantees (31 percent) attributed two high-need characteristics to their targeted K-12 students. Rural and low-income and minority and low-income characteristics were the two most commonly cited pairs (each noted by 12 percent of grantees). Nearly two of every 10 grantees (19 percent) commented that their

[2] Two of 15 grantees who cited a large Hispanic population also specified the proportion of Hispanics in their targeted population. Proportions ranged from 36 to 45 percent.

[3] Three of nine grantees who cited a large African American population also specified the proportion of African Americans in their targeted population. Proportions ranged from 60 to 90 percent.

[4] Two of five grantees who cited a large Native American population also specified the proportion of Native Americans in their targeted population. Proportions ranged from 86 to 90 percent.

[5] The data include only applications reporting that a member of their consortium was an HBCU or an HSI.

targeted elementary and secondary students reflected three high-need characteristics, with the most frequent combination being rural, low-income, and minority characteristics (12 percent of grantees). Eight percent attributed all four high-need characteristics, including urban, to their K-12 students in various schools, and 24 percent did not label the students in their partner LEAs with any of the above high-need characteristics.

TABLE 13

COMBINED DEMOGRAPHIC CHARACTERISTICS OF PARTNER LEAS BY GRANT TYPE

Demographic Characteristics	Total Sample *(N=91)*		Capacity Building *(N=35)*		Implementation *(N=33)*		Catalyst *(N=23)*	
	N	%	N	%	N	%	N	%
No high-need characteristics	**22**	**24**	**4**	**11**	**6**	**18**	**12**	**52**
One high-need characteristic	**17**	**19**	**6**	**17**	**8**	**24**	**3**	**13**
Rural only	7	8	3	9	2	6	2	9
Urban only	5	6	0	0	4	12	1	4
Low-income only	4	4	2	6	2	6	0	0
Minority only	1	1	1	3	0	0	0	0
Two high-need characteristics	**28**	**31**	**15**	**43**	**8**	**24**	**5**	**22**
Low-income/minority	11	12	4	11	4	12	3	13
Rural/low-income	11	12	7	20	3	9	1	4
Urban/rural	3	3	3	9	0	0	0	0
Rural/minority	2	2	1	3	1	3	0	0
Urban/low-income	1	1	0	0	0	0	1	4
Urban/minority	0	0	0	0	0	0	0	0
Three high-need characteristics	**17**	**19**	**8**	**23**	**8**	**24**	**1**	**4**
Rural/low-income/minority	11	12	5	14	6	18	0	0
Urban/low-income/minority	4	4	3	9	1	3	0	0
Urban/rural/low-income	2	2	0	0	1	3	1	4
Urban/rural/minority	0	0	0	0	0	0	0	0
Four high-need characteristics	**7**	**8**	**2**	**6**	**3**	**9**	**2**	**9**
Urban/rural/low-income/ Minority	7	8	2	6	3	9	2	9

Note: Percentages do not sum to 100 due to rounding, and details may not sum to totals.

A look at consortia characteristics by grant type reveals that all three types tended to partner with LEAs that serve high-need populations.

2. Capacity Building Grants

Of the sampled Capacity Building grantees, 66 percent focused on low-income populations and 46 percent on minority populations (see Table 11). Among the populations served, Hispanic and African American students were equally likely to be the focus of Capacity Building grantees (14 percent each) while Native American students received the attention of only one Capacity Building grantee (see Table 12). Even though Capacity Building grantees served both urban and rural populations, the majority of grantees centered their efforts on more rural populations (60 percent supported rural populations. Twenty-three percent worked with urban populations; see Table 11). Compared with Implementation and Catalyst grantees in the sample, Capacity Building grantees served the highest percentage of both rural and low-income populations.

3. Implementation Grants

Implementation grants served both urban and rural areas of the country. Sampled grant applications showed a higher percentage of Implementation grantees (27 percent) working in urban areas than the other two grant types (see Table 11). In addition, almost half of the grantees (48 percent) served rural areas. Sixty-one percent of grantees were working with LEAs that include low-income students, and 45 percent were partnered with districts characterized by a large percentage of minority students. The most commonly targeted racial or ethnic group was Hispanic (24 percent), followed by Native American (12 percent) and African American (6 percent; see Table 12). Two consortia included HSIs and one included an HBCU (not shown in table).

4. Catalyst Grants

Catalyst grantees as a whole were less likely than the other two grant types to focus solely on high-need populations. The reason is that Catalyst grants were developed to fund systemic improvements for the preparation of preservice teachers to use technology at the regional or national level. Slightly more than one-fifth of applications (22 percent) discussed service to urban populations, and just more than one-fourth (26 percent) noted working with rural populations (see Table 11). Thirty-five percent were focusing on low-income K-12 students, and 22 percent stated that they were concentrating on minority students.

V. ACTIVITIES

Chapter Highlights

Based on the sample of 91 PT3 grant applications reviewed in detail:

- Professional development for current faculty was the most frequent activity performed by all grantees (88 percent) as well as by Capacity Building grantees (89 percent) and Implementation grantees (88 percent; see Table 14).
- Curriculum redesign was the most frequent activity performed by Catalyst grantees (91 percent).
- Capacity Building grantees were more likely than either Implementation or Catalyst grantees to assess technological skills and needs (69 percent), improve technology (57 percent), create steering committees (49 percent), and obtain necessary technology equipment (43 percent).
- Implementation grantees were more likely than other grantees to expand field experience for preservice teachers (76 percent).
- Catalyst grantees were more likely than Capacity Building or Implementation grantees to disseminate materials (78 percent) and develop an "electronic community" among consortium members (70 percent).

SAMPLE OF GRANTEE APPLICATIONS

The data on activities were drawn exclusively from the sample of 91 PT3 grant applications.

Grantees proposed various types of program activities directed at integrating technology into instruction and improving preservice teacher education. Depending on the type of grant, teacher preparation programs focused on activities that prepared programs for change, such as acquisition of new learning resources; activities that helped implement change, including faculty development and training; or activities that encouraged large-scale improvement, such as addressing graduation requirements. The review of activities among the sample of 91 grantees

revealed that grantees proposed activities in line with the goals of each grant type as outlined by the U.S. Department of Education.

1. All Grant Types

Faculty professional development was the most frequently proposed activity among the sample of grantees reviewed. Eighty-eight percent of grantees chose to train faculty, including both university and K-12 faculty (see Table 14). Development activities often included workshops, in which an instructor modeled the integration of technology into instruction for faculty and discussed how to select the appropriate technological tools for students' grade and subject level. Instructors also demonstrated how to use technological tools in creating lesson plans and classroom activities for students. Additional professional development activities included tutoring sessions and technology classes for faculty development.

Redesigning the curriculum followed faculty professional development, with 85 percent of grantees electing this activity. The redesign typically involved increasing the use of technology by faculty in teaching, increasing the use of technology by preservice teachers in course work, increasing the number of technology courses, or increasing the use of technology in non-SCDE courses, such as those in the college of arts and science.

The next most frequent activity was expanding field experiences (60 percent). Of those grantees expanding field experiences, some offered opportunities for preservice teachers to be mentored by college faculty and technology-proficient K-12 teachers; others offered more opportunities to work with technology in K-12 classrooms.

Almost half (49 percent) of all grantees planned to undertake one or more of the following four activities: develop and/or field-test techniques and models for preservice training;

disseminate materials on a state, regional, or nationwide level; develop an "electronic community"; and assess the technological skills of both students and faculty. Dissemination of materials occurred through conferences, Web pages, and newsletters. "Electronic communities" were formed to afford both consortium members and those outside the consortium an opportunity to discuss–via the World Wide Web–project activities and exchange ideas and information concerning educational technology. Finally, to determine the needs of faculty and students, grantees used surveys and other instruments to assess technological skills.

Forty-six percent of grantees proposed improving technology while 38 percent proposed identifying model programs that train preservice teachers to integrate technology into instruction. The next most frequent activities were developing online learning environments such as online courses and information resource banks (35 percent), obtaining hardware and software (33 percent), and creating steering committees that would organize and direct project activities (23 percent).

Fewer grantees proposed wide-scale change, such as addressing graduation requirements (18 percent) or state standards (10 percent). Those grantees will focus on modifying requirements and standards to include a technology component for both preservice students and inservice teachers. The organization of consortia, which frequently referred to naming additional partners, was the least frequent activity proposed by grantees (8 percent).[6]

[6] Every grantee was required to develop a consortium, but these grantees specifically listed organizing their consortium as an activity for their grant. Capacity Building grantees were most likely to include this activity.

Of the sample of 91 grant applications reviewed in detail, the average number of activities planned per consortium was 6.4, and the most frequent number of different activities proposed was seven. The number of different activities per consortium ranged from three to nine (not shown in table).

TABLE 14

PROJECT ACTIVITIES BY GRANT TYPE

Activity	Total Sample (*N=91*)		Capacity Building (*N=35*)		Implementation (*N=33*)		Catalyst (*N=23*)	
	N	**%**	**N**	**%**	**N**	**%**	**N**	**%**
Engage in faculty professional development	80	88	31	89	29	88	20	87
Redesign curriculum	77	85	30	86	26	79	21	91
Expand field experiences	55	60	19	54	25	76	11	48
Develop and/or field-test techniques or materials	45	49	11	31	20	61	14	61
Disseminate materials	45	49	6	17	21	64	18	78
Develop "electronic community"	45	49	16	46	13	39	16	70
Assess technological skills	45	49	24	69	9	27	12	52
Improve technology	42	46	20	57	13	39	9	39
Identify model programs	35	38	18	51	6	18	11	48
Develop online learning environments	32	35	5	14	18	55	9	39
Obtain hardware and software	30	33	15	43	11	33	4	17
Create steering committee	21	23	17	49	2	6	2	9
Address graduation requirements	16	18	7	20	7	21	2	9
Address state standards	9	10	2	6	2	6	5	22
Organize consortia	7	8	5	14	0	0	2	9

Note: Percentages do not sum to 100, and details do not sum to sample totals because grantees could specify multiple activities.

2. Capacity Building Grants

Of the 35 sampled Capacity Building grants, the most frequently proposed activities were generally similar to those proposed by all grantees. Nearly nine of every 10 Capacity Building grantees reviewed (89 percent) planned an activity to provide professional development for their faculty members while almost as many (86 percent) proposed curriculum redesign (see Table 14).

Assessing technological skills ranked third in activities most frequently proposed by Capacity Building grantees. For the other two grant types, by contrast, skill assessment received much less emphasis. Sixty-nine percent of Capacity Building grantees elected to assess the technological skills and needs of university faculty, K-12 faculty, preservice students, or the SCDE.

More than half of the Capacity Building grantees reviewed (57 percent) said they would work to improve technology by increasing the number of classrooms with access to technology or increasing technological support for faculty and students. Again, of the three grant types sampled, Capacity Building grantees were most likely to focus on improving technology. They were also most likely to obtain needed hardware, software, or other technological equipment (43 percent) and to create steering committees to oversee project activities (49 percent). The relatively higher proportion of grantees participating in each of these activities reflects the underlying purpose of Capacity Building grants: focusing on preparing SCDEs for program change. As with the overall results, expanding field experiences for preservice teachers was a frequent activity, with 54 percent of Capacity Building grantees involved in this effort.

On average, Capacity Building consortia proposed 6.5 activities, ranging from four to nine. The most frequent number of proposed activities was eight (not shown in table).

3. Implementation Grants

Implementation grants were developed in part to help foster extensive faculty development and to improve the ability of faculty members to teach with technology. As a result, 88 percent of Implementation grantees included professional development in their applications, the most common activity among Implementation grantees (see Table 14). One of the more common approaches followed by Implementation grantees was to partner K-12 teachers and college faculty to improve faculty knowledge.

Almost as frequently, grantees stated that they would redesign their curriculum (79 percent) and expand field experience opportunities (76 percent). Again, because creating partnerships among faculty, K-12 teachers, and preservice teachers was a designated activity for Implementation grantees, the sampled Implementation grantees focused on expanding field experiences more than the other grant types. Other frequent activities included disseminating materials and findings (64 percent) and developing and/or field-testing strategies, techniques, or materials (61 percent). The Implementation grantees reviewed in detail were much less likely than the other grant types to use funds to identify model programs and best practices (18 percent) or to assess the technological skills and resources at their institutions (27 percent).

Implementation grantees engaged in an average of 6.1 activities. In addition, no consortium performed fewer than three or more than nine activities with a mode of six (not shown in table).

4. Catalyst Grants

As with both the Capacity Building and Implementation grantees, the two most frequent activities among Catalyst grantees were redesigning the curriculum (91 percent) and professional development for current faculty (87 percent; see Table 14). The next most common activities were disseminating materials (78 percent) and developing an “electronic community” among

consortia members (70 percent). More typically, Catalyst grantees rather than the other two-grantee types proposed the last two activities, a finding that confirms a major impetus behind the Catalyst grants was to help stimulate large-scale improvements. Critical to fostering those improvements is the dissemination of new ideas to both consortium members and others at the regional and national levels.

Another activity engaged in more often by Catalyst grantees than by the other grant types was the consideration of state standards (22 percent). Again, this activity reflected Catalyst grantees' goal to spur large-scale change.

Conversely, Catalyst grantees were much less likely than the other grant types to focus on obtaining hardware, software, or other technological equipment (17 percent) or examining opportunities to expand field experiences (48 percent). Fewer Catalyst grantees proposed the use of funds to improve technology at their institutions.

Catalyst grantees planned an average of 6.8 activities per consortium. The number ranged from four to nine among Catalyst consortia, with a mode of seven (not shown in table).

VI. EVALUATION

Chapter Highlights

Based on the sample of 91 PT3 grant applications reviewed in detail:

- Overall, just more than half of the grantees (56 percent) planned to use an external evaluator (see Table 16).
- A qualitative assessment of the applications showed, as a whole, that grantees' evaluation plans set forth clearly stated project goals and objectives (91 percent), demonstrated internal consistency (90 percent), encompassed all or most project activities (86 percent), and used a variety of evaluation methods (84 percent).
- Seventy percent of the evaluation plans specified benchmarks for all or some project outcomes.
- A written or Web-based survey was the most frequent evaluation activity proposed by all grant types (91 percent), by Catalyst grantees (100 percent), and by Capacity Building grantees (89 percent).
- Document review was the most frequent evaluation activity planned by Implementation grantees (91 percent).
- Capacity Building grantees were least likely to use an external evaluator (37 percent; see Table 17).

The quality of the evaluation design was one of the four selection criteria used by the U.S. Department of Education in the review and assessment of the grant applications. In analyzing the evaluation plans, this report considered the following factors:

- plans to use an internal or external evaluator;
- explicitly stated research questions or evaluation goals and objectives;
- assessments planned to evaluate most project activities;
- plans to use a variety of different evaluation methods;
- standards or benchmarks specified for project outcomes; and

- development of an internally consistent evaluation plan that would produce results that address whether the evaluation goals and objectives were being met.

In addition to assessing the quality of evaluation plans based on the criteria listed above, this report analyzed different types of evaluation activities, including the following:

- *Surveys*–These included questionnaires for both preservice students and SCDE faculty. Survey questions frequently addressed attitudes toward and competency with educational technology. Often, grantees planned to administer the surveys before and after the grant activities to gauge changes in these factors over time and to assess the effectiveness of grant activities.

- *Document review*–Document review included the examination of a wealth of different materials, from reviews of student portfolios and assignments to analyses of newly designed course syllabi and Web pages.

- *Observations and Site visits*–Observations and site visits included taking observational notes of newly designed lessons or courses or reviewing first-hand newly implemented teacher training workshops and technology-related field experiences.

- *Interviews*–These included individual discussions with preservice students as well as with SCDE faculty. Interviews were to focus on the student and faculty assessment of the various grants activities and the effects of these activities on improving student and faculty technological proficiency.

- *Focus Groups*–These included dialogues among groups of preservice faculty or students about issues such as new teaching methods and redesigned curricula.

- *Test assessments*–Tests were to be given to both preservice students and SCDE faculty to assess their level of technological proficiency. Both pre- and post-assessments were planned to determine student or faculty progress as a result of a grant activity.

UNIVERSE OF GRANTEE APPLICATIONS

The data in Section A. Funding of Evaluation Activities were extracted from the universe of 225 PT3 grant applications and refer *only to Year One* of the grant period.

A. FUNDING OF EVALUTION ACTIVITES

U.S. Department of Education guidelines encouraged grantees to designate up to 10 percent of their budget for evaluation. The median amount of funds requested to complete the evaluation activities in the first year (among the 80 percent of applicants that specified funds for evaluation) was $14,750, with an average of $21,557 and a range of $500 to $120,000 (see Table 15). The funds designated for evaluation represented an average of 8 percent of the requested federal funds. The 46 grantees who did not provide a separate line item for evaluation generally included funds for evaluation in another line item, such as personnel.

TABLE 15

FIRST-YEAR FEDERAL FUNDS REQUESTED FOR EVALUATION ACTIVITIES BY GRANT TYPE: GRANTEES WHO REQUESTED FUNDS

	Total *(N=225)*		**Capacity Building** *(N=138)*		**Implementation** *(N=64)*		**Catalyst** *(N=23)*	
Funds Requested	N	%	N	%	N	%	N	%
Grantees requesting funds	179	80	103	75	55	86	21	91
Funds Requested*	$	%	$	%	$	%	$	%
Median	14,750	8	10,000	8	31,960	8	54,500	8
Mean	21,557	8	10,546	8	30,072	8	53,262	8
Minimum	500	<1	500	<1	1,000	<1	15,000	3
Maximum	120,000	32	33,600	32	63,765	17	120,000	19

Note: Only grantees requesting funds are included in this table.

Three out of every four Capacity Building grantees (75 percent) included a line item for evaluation. The median budget for evaluation among these grantees was $10,000, with an average of $10,546, a minimum of $500, and a maximum of $33,600. On average, 8 percent of the requested federal funds were planned for evaluation activities.

Fifty-five of 64 Implementation grantees (86 percent) included an evaluation line item in their budgets. The median for planned evaluation expenditures among these grantees for the first year of grant activities was $31,960, with a mean of $30,072 and range of $1,000 to $63,765. The budgeted funds represented an average 8 percent of the federal funds requested for the first year.

Twenty-one of 23 Catalyst grantees (91 percent) included a specific line item for evaluation. The median level of planned spending among those Catalyst grantees for evaluation in Year One was $54,500 (8 percent of federal funds requested for Year One), with an average of $53,262 and a range of $15,000 to $120,000.

SAMPLE OF GRANTEE APPLICATIONS

The data in Section B. Evaluation Criteria and Activities were taken from the sample of 91 PT3 grant applications.

B. EVALUATION CRITERIA AND ACTIVITIES

1. All Grant Types

Just more than half of all grantees reviewed (56 percent) chose to use an external evaluator (see Table 16).

TABLE 16

EVALUATION CRITERIA BY GRANT TYPE

Evaluation Criteria	Total Sample *(N=91)*		Capacity Building *(N=35)*		Implementation *(N=33)*		Catalyst *(N=23)*	
	N	%	N	%	N	%	N	%
Evaluator type								
Internal only	38	42	22	63	8	24	8	35
External	51	56	13	37	23	70	15	65
Not specified	2	2	0	0	2	6	0	0
Goals and objectives stated								
Yes	83	91	32	91	29	88	22	96
Some	8	9	3	9	4	12	1	4
None	0	0	0	0	0	0	0	0
Assessments planned for each activity								
All or most	78	86	27	77	30	91	21	91
Some	13	14	8	23	3	9	2	9
None	0	0	0	0	0	0	0	0
Benchmarks identified								
Many	35	38	16	46	8	24	11	48
Some	29	32	16	46	5	15	8	35
None	27	30	3	9	20	61	4	17
Multiple evaluation methods								
Many	76	84	26	74	28	85	22	96
Some	12	13	7	20	4	12	1	4
Few	3	3	2	6	1	3	0	0
Internally consistent								
Yes	82	90	29	83	30	91	23	100
No	9	10	6	17	3	9	0	0

Note: Percentages may not sum to 100 due to rounding.

More than nine out of every 10 grantees (91 percent) fully stated their goals and objectives while the remaining 9 percent specified at least some goals and objectives. Almost as many grantees planned assessments to evaluate all or most project activities (86 percent), with the remainder planning assessments that would evaluate at least some activities. Eighty-four percent of grantees planned to employ a wide variety of evaluation methods and 13 percent a somewhat narrower range of methods. This report views nine out of every 10 grantees (90 percent) as demonstrating internally consistent evaluation plans.

A smaller proportion of grantees identified benchmarks and standards for measuring project outcomes. About four out of every 10 grantees (38 percent) specified standards for most or all outcomes while slightly more than three out of every 10 (32 percent) specified standards for some outcomes.

Grantees proposed a variety of evaluation activities. The most common activities were paper- or Web-based surveys (as planned by 91 percent of all grantees reviewed; see Table 17). More than half of grantees planned to conduct document reviews (78 percent), observations or site visits (58 percent), and interviews (54 percent). Forty percent planned focus groups, and 34 percent indicated they would use test assessments to measure technology facilities of both preservice faculty and current students.

TABLE 17

EVALUATION ACTIVITIES BY GRANT TYPE

Activity	Total (N=91)		Capacity Building (N=35)		Implementation (N=33)		Catalyst (N=23)	
	N	%	N	%	N	%	N	%
Written or Web-based survey	83	91	31	89	29	88	23	100
Document review	71	78	22	63	30	91	19	83
Observation or site visit	53	58	17	49	22	67	14	61
Interviews	49	54	12	34	22	67	15	65
Focus groups	36	40	16	46	12	36	8	35
Test assessment	31	34	15	43	8	24	8	35

Note: Percentages do not sum to 100 because grantees could propose multiple assessments.

Of those grants reviewed, the average number of proposed evaluation activities was 3.9, with a range of one to seven. The most common number of activities among all grant types was four (not shown in table).

2. Capacity Building Grants

Unlike either Implementation or Catalyst grantees, Capacity Building grantees were more likely to use an internal rather than external evaluator. Of the 35 Capacity Building grantees reviewed in detail, 63 percent planned to rely on an internal evaluator compared with 37 percent relying on an external evaluator (see Table 16).

The vast majority of Capacity Building grantees (91 percent) set forth research questions or goals and objectives. Similarly, most such grantees (77 percent) had planned evaluation activities that would assess all or most project activities, and most (74 percent) proposed several evaluation methods such as surveys, interviews, assessment tests, and document reviews.

As with the overall results, a small proportion of Capacity Building evaluation plans identified benchmarks or standards for project outcomes. Equal numbers of the grants reviewed

identified many or some benchmarks (46 percent each). The remainder of the Capacity Building grantees (9 percent) did not identify benchmarks or standards for any project outcomes.

Overall, the majority of Capacity Building grantees (83 percent) appeared to have internally consistent evaluation plans. Of the three types of applications reviewed, however, Capacity Building grantees were least likely to have an internally consistent plan.

The most frequent evaluation activity conducted by Capacity Building grantees (89 percent of the Capacity Building grantees whose applications were reviewed in detail) was a written or Web-based survey (see Table 17). Frequently, the grantees proposed pre- and post-surveys to assess the effectiveness of a project activity.

Sixty-three percent of the Capacity Building grantees planned to perform some type of document review to evaluate activities. Many grantees proposed to examine syllabi and portfolios to determine how well technology was integrated into course work. Almost half of Capacity Building grantees stated that they would conduct observations or site visits (49 percent), focus groups (46 percent), or test assessments (43 percent). Sampled Capacity Building grantees were less likely than either Implementation or Catalyst grantees to propose document reviews, site visits, or interviews. Instead, they were more likely to use focus groups and test assessments.

On average, Capacity Building grantees proposed 3.6 evaluation activities. The number of planned evaluation activities ranged from one to six, with a mode of four (not shown in table).

3. Implementation Grants

Implementation grants contained most of the features of evaluation plans assessed in this report. More than nine of 10 (91 percent) grantees proposed evaluation activities that would

examine every or nearly every planned project activity and developed plans that were internally consistent (see Table 16). Compared with either Capacity-Building or Catalyst grantees, a larger percent of sampled Implementation grantees (70 percent) relied on external evaluators. Yet, Implementation grantees were least likely to identify benchmarks against which to measure project outcomes. Sixty-one percent of applications included no benchmarks at all.

The most common measurement activities for Implementation grantees were document reviews (91 percent) and written or Web-based surveys (88 percent; see Table 17). In addition, compared with Capacity Building or Catalyst grantees, a larger percent of Implementation grantees reviewed in detail included document reviews in their evaluation plans. Implementation grantees, however, were less likely than other grantees to rely on test assessments (24 percent) as an evaluation method.

Implementation grantees planned to engage in 4.2 evaluation activities and proposed the widest range of assessments, from one to seven activities. Four evaluation activities was the most common number planned among Implementation grantees (not shown in table).

4. Catalyst Grants

Overall, Catalyst grantees' evaluation plans were most likely to include the features assessed in this analysis. Every Catalyst application was internally consistent. All but one (96 percent) planned several different types of assessments to evaluate projects; the one remaining grantee planned some different types of assessments (see Table 16). In addition, more than nine out of every 10 Catalyst grantees (91 percent) planned to evaluate all or nearly all of their project activities, and the other 9 percent (two grantees) planned to assess at least some of their project activities. As with Capacity Building and Implementation grantees, a smaller proportion of

Catalyst grantees provided benchmarks for outcome measures. Forty-eight percent of applications specified many benchmarks, 35 percent offered some benchmarks, and 17 percent did not identify any benchmarks. Finally, 65 percent of grantees stated they planned to use an external evaluator.

As with both Capacity Building and Implementation grantees, Catalyst grantees were most likely to include written surveys (100 percent) and document reviews (83 percent) in their evaluation plans versus other types of evaluation activities (see Table 17). Catalyst grantees were also more likely to use interviews (65 percent) and observations (61 percent) than either focus groups (35 percent) or test assessments (35 percent). Catalyst grantees proposed to rely on an average of 4.1 evaluation activities, with a range of two to six activities and a mode of four activities (not shown in table).

VII. TECHNOLOGY

Chapter Highlights

Based on the sample of 91 PT3 grant applications reviewed in detail:

- Laptops were the most frequent technology sought by all grantees (30 percent) and Capacity Building grantees (40 percent; see Table 20).
- A computer workstation was the most frequent technology request among Implementation (36 percent) and Catalyst (22 percent) grantees (see Table 20).

To create a teacher preparation program that produces technology-proficient teachers, grantees must first obtain the necessary technology. Though PT3 grant funds were not intended to support large purchases of equipment, grantees were allowed to use funds to purchase limited amounts of equipment. Grantees were also encouraged to form partnerships with technology-rich LEAs in order to obtain access to needed equipment. Many grantees followed this suggestion and collaborated with organizations that could provide them with the necessary technology. Other grantees were already well equipped and did not need to request grant funds to purchase technological equipment, or they acquired funds through other sources (such as a for-profit partner). If a grantee did not budget grant funds to acquire equipment, its requests are not reported here. A majority of grantees, however, did request funds for technology, with the requests summarized below.

UNIVERSE OF GRANTEE APPLICATIONS

The data in Section A. Funding for Technology were extracted from the universe of 225 PT3 grant applications and refer *only to Year One* of the grant period.

A. FUNDING FOR TECHNOLOGY

1. All Grant Types

The median level of requested technology spending for the first year of the grant for all 225 grantees (including those that did not request federal funds for technology) was $12,000, with an average of $23,159 and a range of zero to $150,000 (see Table 18). Grantees planned to spend an average of just more than 10 percent of Year-One requested federal funds to purchase technology.

TABLE 18

FIRST-YEAR FEDERAL FUNDS REQUESTED FOR TECHNOLOGY ACQUISITIONS BY GRANT TYPE: ALL GRANTEES

	Total *(N=225)*		**Capacity Building** *(N=138)*		**Implementation** *(N=64)*		**Catalyst** *(N=23)*	
Funds Requested	$	%	$	%	$	%	$	%
Median	12,000	7	10,827	8	32,500	9	10,000	2
Mean	23,159	10	14,963	11	42,027	11	19,834	3
Minimum	0	0	0	0	0	0	0	0
Maximum	150,000	61	81,086	61	150,000	37	95,000	15

Sixty-three percent or 141 of 225 grantees included a line item for technology in their budget requests. Of these, the median level of requested funds was $24,750, with an average of $36,956. The requests ranged from $2,000 to $150,000 (see Table 19).

TABLE 19

FIRST-YEAR FEDERAL FUNDS REQUESTED FOR TECHNOLOGY ACQUISITIONS BY GRANT TYPE: GRANTEES WHO REQUESTED FUNDS

	Total *(N=225)*		**Capacity Building** *(N=138)*		**Implementation** *(N=64)*		**Catalyst** *(N=23)*	
Funds Requested	N	%	N	%	N	%	N	%
Grantees requesting funds	141	63	86	62	43	67	12	52
Funds Requested*	$	%	$	%	$	%	$	%
Median	24,750	14	19,148	16	58,500	14	31,779	5
Mean	36,956	16	24,011	18	62,553	16	38,015	6
Minimum	2,000	<1	2,000	2	3,500	<1	10,000	2
Maximum	150,000	61	81,068	61	150,000	37	95,000	15

* Only grantees requesting funds are included in this table.

2. Capacity Building Grants

Overall, the 138 Capacity Building grantees requested a median of $14,963 in federal funds for technology for Year One of the grant period (see Table 18). On average, 11.3 percent of the first year's requested funds (including grantees who did not request federal funds for technology) were planned for technology purchases. The median technology amount requested among the 86 grantees (62 percent) requesting funds was $19,148, with an average of $24,011 and a range of $2,000 to $81,068 (see Table 19).

3. Implementation Grants

The 64 Implementation grantees as a whole requested a median of $32,500 (with an average of $42,027) for technology in Year One of the grant, representing an average 10.5 percent of the total federal funds requested (see Table 18). Among the 43 Implementation grantees (67 percent) who specifically requested funds (67 percent), the median request for the initial year was $58,500 and the average was $62,553, with a range of $3,500 to $150,000 (see Table 19).

4. Catalyst Grants

Among the 23 Catalyst grantees, the median request for technology for Year One was $10,000 and the average request was $19,834, accounting for an average of 3.2 percent of federal funds requested in Year One to be spent on technology (see Table 18). Including only the 12 grantees or 52 percent whose budget contained a technology line item, the median request was $31,779, with an average of $38,015 and a range of $10,000 to $95,000 (see Table 19).

SAMPLE OF GRANTEE APPLICATIONS

The data in Section B. Technology Purchases were taken from the sample of 91 PT3 grant applications.

B. TECHNOLOGY PURCHASES

1. All Grant Types

The most frequent request made by the sampled grantees was a laptop (30 percent), closely followed by a computer (27 percent; see Table 20). Approximately one-fifth of the sampled grantees budgeted funds for printers or digital cameras (both at 21 percent). The next most frequent requests were for scanners (16 percent), projection systems (15 percent), software (15 percent), and servers (13 percent). Less than one out of every 10 grantees budgeted funds to purchase camcorders (7 percent), Internet connections (5 percent), or multimedia kits (5 percent).

TABLE 20

TECHNOLOGY EQUIPMENT REQUESTS BY GRANT TYPE

Equipment	Total Sample *(N=91)*		Capacity Building *(N=35)*		Implementation *(N=33)*		Catalyst *(N=23)*	
	N	%	N	%	N	%	N	%
Any Equipment	**54**	**59**	**24**	**69**	**20**	**61**	**13**	**57**
Laptops	27	30	14	40	11	33	2	9
Computers	25	27	8	23	12	36	5	22
Printers	19	21	9	26	6	18	4	17
Digital cameras	19	21	10	29	7	21	2	9
Scanners	15	16	10	29	3	9	2	9
Projection systems	14	15	8	23	4	12	2	9
Software	14	15	6	17	5	15	3	13
Servers	12	13	2	6	6	18	4	17
Camcorders	6	7	3	9	3	9	0	0
Multimedia kits	5	5	2	6	2	6	1	4
Internet connections	5	5	3	9	1	3	1	4

Note: Percentages do not sum to 100 and details do not sum to totals because grantees could purchase more than one technology item.

Of all applications reviewed (including those that did not request funds to purchase technology), grantees budgeted federal funds to purchase between zero and eight different categories of technology, with an average of 1.8 categories (not shown in table). Based only on those reviewed that requested grant funds to purchase technology (54 grants or 59 percent of the sample), the average and mode for the number of requested technology categories is three (not shown in table).

2. Capacity Building Grants

Among the 24 Capacity Building grantees (69 percent) who requested equipment, the grantees requested an average of 3.1 different technology categories. The mode for the different types of technology requested in the applications was two, with a range from one to eight (not shown in table).

Forty percent of Capacity Building grantees budgeted grant funds to purchase laptops (the most frequent request) while 29 percent requested scanners and digital cameras. The next most frequent purchase requests were for printers (26 percent), projection systems (23 percent), computers (23 percent), and software (17 percent; see Table 20). Of the applications reviewed in detail, Capacity Building grantees were most likely to seek laptops, scanners, printers, Internet connections, digital cameras, projection systems, and software. These results reflect the purpose of the Capacity Building grants: to help prepare teacher preparation programs for change, programs must first be equipped to implement the necessary changes.

3. Implementation Grants

Sixty-one percent or 20 of the 33 Implementation grantees budgeted federal funds to purchase technology (see Table 20). The average number of different technology categories requested was three, with a mode of three and a range of one to seven (not shown in table). The most frequent technologies sought for Implementation grantees were computer workstations (36 percent), laptop computers (33 percent), and digital cameras (21 percent).

4. Catalyst Grants

On average, for the grantees reviewed, Catalyst grantees budgeted funds to purchase 2.6 different categories of technology. The number of technology categories sought by the 23 Catalyst grantees ranged from one to seven (not shown in table). Fewer Catalyst grantees requested any technological equipment with their grant funds (57 percent versus 69 percent for Capacity Building grantees and 61 percent for Implementation grantees) than did other grantee types. In almost every equipment category, a smaller proportion of Catalyst grantees made

requests. The most frequent requests were for computer workstations (22 percent), printers, and servers (both at 17 percent; see Table 20).