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Methodology

Method goes far to prevent trouble in business: for it makes the task easy, hinders confusion, saves abundance of time, and instructs those that have business depending, both what to do and what to hope.

—William Penn

This ECAR study used a multifaceted research methodology to gather quantitative and qualitative data about IT funding from over 700 institutions in the United States and Canada. The study provides a snapshot of the state of IT funding as of the 2003–2004 fiscal year. It explores the views on technology funding of both senior IT leaders and senior finance leaders in higher education.

Research Approach

We undertook five major research steps: a literature review, a quantitative Web-based survey of IT leaders, a quantitative Web-based survey of chief business officers, qualitative telephone interviews, and three in-depth cases studies involving five institutions.

The literature review focused on prior research in four areas of IT management: value, funding, portfolio management, and organizational agility. The literature review helped to establish and define the major study objectives and hypotheses.

The research team designed the two quantitative Web-based surveys. EDUCAUSE distributed the IT leader survey to 1,473 member institutions. The Web-based survey of chief business officers was distributed by the National Association of College and University Business Officers (NACUBO). We

received 482 responses to the IT leader survey and 386 responses to the CBO survey. We received paired responses (both the CIO and CBO responded) from 62 institutions. The two surveys appear on the ECAR Web site.

We conducted follow-up telephone interviews with 13 people from 11 institutions. Interviewees included a mix of IT leaders, chief business officers, and IT organization finance managers. The qualitative interviews provided deeper insight into key findings from the quantitative analysis. The interviews explored how institutions create financial flexibility in their IT budgets, the importance of aligning IT spending with institutional priorities, and the institution's experience with various cost containment strategies. Where possible, the interviews also explored the critical elements of an effective CIO–CBO relationship.

The case studies provide an in-depth look at one or more topics that emerged from the research as particularly interesting. The cases each explore a different aspect of the IT funding issue set:

- ◆ We examine the IT priority-setting process introduced at Texas Tech University.
- ◆ We discuss the results of a yearlong analysis Cornell University conducted of its IT costs. This study evaluated and quantified both the institution's central and decentralized IT costs

and now serves as the basis for an institution-wide dialogue on IT cost management.

- ◆ We investigate three institutions' experiences with collaborative efforts aimed at raising revenue or lowering IT costs. The institutions involved include Drexel University, which has become an application service provider to other small colleges; the University of Cincinnati, which hosts course management systems for the local K-12 district; and a multi-entity collaboration to deliver regional network capacity in the northeastern United States.

Overview of Respondents

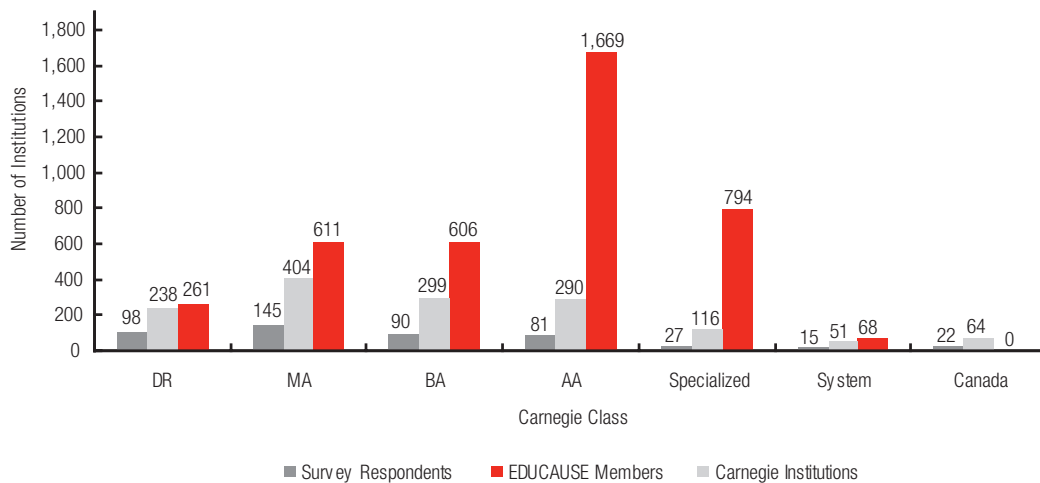
The survey of IT leaders was distributed to the EDUCAUSE institutional representative at each member institution. In most cases, this was the CIO. Of the 482 respondents, 460 (95.4 percent) were from the United States and 22 (4.6 percent) were from Canada. Because there were so few respondents from Canada, we did not break this group of respondents out separately from U.S. respondents in the analysis.

We received the majority of responses (59.3 percent) from public institutions. The highest percentage of respondents came from master's institutions (32.9 percent), the lowest from specialized institutions (6.1 percent). Figure 3-1 compares the composition of survey responses by Carnegie classification with the overall EDUCAUSE membership.

Also, the study relied on EDUCAUSE participant volunteers rather than a random sample to complete the survey, and this limits the possible statistical conclusions. A statistical analysis of the data's representativeness proved inconclusive: the findings don't support the conclusion that the respondents surveyed represent the population as a whole, nor do they support the opposite conclusion, that the respondents fail to represent the population as a whole. Neither conclusion is statistically significant.

The Web-based CBO survey, distributed to all NACUBO member institutions, garnered 386 responses. As with the CIO survey, most respondents were from public institutions (52.6 percent). The largest percentage of responses came from associate's institutions (28.5 per-

Figure 3-1. Survey Respondents by EDUCAUSE Membership and Carnegie Class*



* Figures from the Carnegie Foundation for the Advancement of Teaching, <<http://www.carnegiefoundation.org/Classification/CIHE2000/defNotes/Definitions.htm>>

cent), with bachelor's institutions close behind (28.2 percent). Table 3-1 summarizes the distribution of CBO survey respondents by their institution's Carnegie class.

Institution Size

Survey respondents' institutions had a wide range of central IT operating budgets. Of the 482 CIO respondents, the largest percentage (31.5 percent) had central IT budgets between \$1 million and \$3 million. The remainder ranged from under \$1 million at the low end to over \$30 million at the high end. Among the respondents,

- ◆ 20.9 percent had IT budgets under \$1 million,
- ◆ 12.1 percent had IT budgets in excess of \$17 million, and
- ◆ 4.4 percent had IT budgets in excess of \$30 million.

Institution size turned out to be an even more important distinction in the analysis than either Carnegie class or IT budget size. In fact, institution size (measured by FTE enrollment) and institutional control (public versus private) turned out to be the most meaningful categorizations of respondents. Table 3-2 summarizes the distribution of CIO respondents by their institution's enrollment.

Interestingly, some other methods of segmenting the responses seem to have less of an impact on the funding issues we examined. For example, we hypothesized that an institution's ERP experience, including how much and how recently they implemented, would have a significant impact on how they viewed questions of IT value and funding. Our analysis reveals no apparent relationship. Similarly, we thought the CIO's presence on the cabinet would play a larger role in an organization's

Table 3-1. CBO Respondents, by Carnegie Class (N = 386)

Carnegie Class	Number	Percentage
AA	110	28.5
BA	109	28.2
MA	74	19.2
DR	59	15.3
Specialized	13	3.4
Missing	21	5.4

Table 3-2. Distribution of CIO Responses, by Enrollment (N = 482)

Student FTE	Number	Percentage
1 to 2,000	116	24.8
2,001 to 4,000	108	23.1
4,001 to 8,000	96	20.5
8,001 to 15,000	75	16.0
15,001 to 25,000	50	10.7
More than 25,000	23	4.9

IT funding fate, but we didn't find significant funding differences on the basis of the CIO's reporting relationship. We did find, however, that alignment of technology investment decisions with institutional strategy affected how technology value was perceived.

The next several chapters present our findings and analysis. We conclude with some thoughts about the future of IT funding and how it must evolve to meet future institutional requirements.