

# The ABCs of Activity-Based Costing in Community Colleges

American Institutes for Research  
Johnson County Community College

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# **The ABCs of Activity-Based Costing in Community Colleges**

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**Steven Hurlburt  
Rita Kirshstein**  
*American Institutes for Research*

**Patrick Rossol-Allison**  
*Johnson County Community College*



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We also would like to thank the Bill and Melinda Gates Foundation for its support and for allowing us the opportunity to explore this innovative approach to higher education costing and budgeting.





## Section 1. How Do You Prioritize Your Spending for Student Success?

*Like practically every other community college in the United States, XYZ Community College (XYZ) experienced considerable enrollment growth in the years following the 2008 recession. Although enrollments have declined slightly in the past two years, appropriations are nowhere near prerecession levels. In addition, more of its students are entering XYZ unprepared for college-level reading and mathematics, yet the state board has increased its demands to improve student retention and graduation rates.*

The dilemma that XYZ faces is all too common among community colleges. The 2008 recession took a toll on public higher education and, in particular, on two-year schools. Although public four-year colleges and universities have increased or stabilized their operating revenues per full-time equivalent (FTE) student as early as 2011, community colleges continued to see declines in their per-FTE revenues, albeit slower than in previous years (Desrochers & Hurlburt, 2014). At the same time, considerable national attention is being focused on higher education. In his 2012 State of the Union address, President Obama put colleges and universities “on notice” to hold down costs and keep college affordable, yet on another occasion, he called for 5 million more community college graduates by 2020. Likewise, improving college affordability and degree production continue to be focal points of ongoing discussions on the reauthorization of the Higher Education Act.

“Do more with less” has become the mantra for public higher education, and community colleges, in particular, are feeling the squeeze. Even those institutions that have seen some restoration in state funding (although still well below prerecession levels) understand that higher education is still competing for limited state resources. In a 2013 survey of college and university business officers, more than half agreed that that new spending at their institutions would have to come from reallocating dollars rather than new revenue (Lederman, 2013). These same chief financial officers favored better use of data to evaluate programs and identify solutions, but most admitted that their colleges did not have the right data or culture with which to make informed decisions.

So how might a community college like XYZ meet the President’s call to action and its state board mandate of retraining and graduating more students? How can it do this with its declining budget? How can it better understand where its money is going, and how it can budget its resources more effectively?

One approach is ***activity-based costing***.

## What Is Activity-Based Costing?

For external audiences, higher education institutions must report costs by function. The functional categories have a common definition across the industry and include broad categories (e.g., instruction, research, student services). Although accounting systems are set up to broadly categorize costs, institutions rarely assign costs to activities that comprise the function or break down the function into smaller units within the institution to allow internal decision makers to easily see how resources are used. As an example, instructional spending is generally reported in the aggregate, yet instruction encompasses a number of different activities, including course development, individual tutoring, advising, and, of course, teaching. But is it efficient to have faculty do all of these instruction-related activities? Is it possible for advising or tutoring, for example, to be assigned to individuals hired for that specific purpose? This approach might save money and allow faculty to spend more time teaching or even teach an additional section.

In addition to providing a way to allocate resources more efficiently, activity-based costing can help colleges determine the best way to meet their goals by monitoring the use of resources in particular activities. In the case of XYZ, which wants to be responsive to the board's mandate to retain and graduate more students, activity-based costing could offer a mechanism for determining if its spending matches the activities related to this particular goal. XYZ might want to know how it is allocating money across various student support activities that could help it improve student retention and graduation. For example, XYZ needs to know if admissions and recruitment activities are absorbing a much larger share of the budget than counseling and support activities that are tied to student success once students are admitted.

Put simply, activity-based costing looks at how much time is spent on specific predefined activities and the personnel and nonlabor costs of these activities. This approach focuses primarily on the work that is performed; it reflects the work process itself. In many respects, it can remove the "guesswork" from higher education spending. Activity-based costing provides information on time spent in activities and what the labor and nonlabor expenses associated with them cost—not what the activities "should" cost, which is often the basis of higher education budgets.

## Pioneering Activity-Based Costing in Community Colleges

The Bill and Melinda Gates Foundation awarded Postsecondary Success funds to the National Higher Education Benchmarking Institute at Johnson County Community College, along with its partners the Delta Cost Project at American Institutes for Research (AIR) and the National Center for Higher

Activity-based costing analyzes costs at an activity level (what is done) rather than at a unit level (department that does the activity) or a functional level (research, teaching). This approach provides a relatively painless way to disaggregate functions into meaningful activities that drive costs.

Some four-year colleges and universities in the United States that have used some form of activity-based costing include the following:

- University of Washington, School of Continuing Education
- University of Michigan
- Kansas State University
- Wheeling Jesuit University
- Breneau University

Education Management Systems, to design an activity-based costing benchmarking program for community colleges called Maximizing Resources for Student Success. The effort equips community colleges with the necessary tools to realize cost savings and align resources with initiatives that lead to student success.

## MAXIMIZING RESOURCES FOR STUDENT SUCCESS



The activity-based costing pilot, Maximizing Resources for Student Success, was built upon the work of the National Higher Education Benchmarking Institute at Johnson County Community College. The project provided resources for community colleges to implement a simplified version of activity-based costing and an opportunity to benchmark their results against those of other participating institutions.

The pilot effort focused specifically on instructional, student services, and academic support activities at the institutional level. The project has since expanded to include activity-based costing for instructional costs at the division level and nonlabor costs, such as materials and supplies, which are an integral component of higher education budgets. Because activity-based costing was new to community colleges, the activity-based methodology was designed to minimize data collection burden.

The project was piloted in fall 2013 with 26 community colleges. (The appendix includes a list of the participating institutions.)

### A Guide to Activity-Based Costing in Community Colleges

This guide is designed to provide information that would be helpful in adopting activity-based costing. Although our examples focus on community colleges, the process of implementing activity-based costing would essentially be the same for four-year colleges and universities. The remainder of the guide includes the following sections:

- Section 2 explores the general advantages and challenges of implementing activity-based costing
- Section 3 explains how to implement activity-based costing
- Section 4 looks at possible uses of activity-based costing
- Section 5 summarizes lessons learned from the pilot



## Section 2. Why Activity-Based Costing?

Changing the way a college analyzes costs requires effort. It has been said that colleges use whatever approach they use because they have always done it that way—that is, it is more familiar and easier than trying a different, unknown approach. It also is the case that colleges have never had to analyze their costs because they routinely received increasing revenues, whether from state appropriations, tuition, or, for a select group, endowment income. Indeed, some have even dubbed the standard approach to institutional budgeting “Xerox-based budgeting,” implying that colleges copy the previous year’s budget and add on an across-the-board percentage. Adjusting to any new system requires work and uncertainty. This section lays out some general advantages of activity-based costing as well as the specific advantages of the Maximizing Resources for Student Success focus on expenses that concentrate on the instructional mission of community colleges.

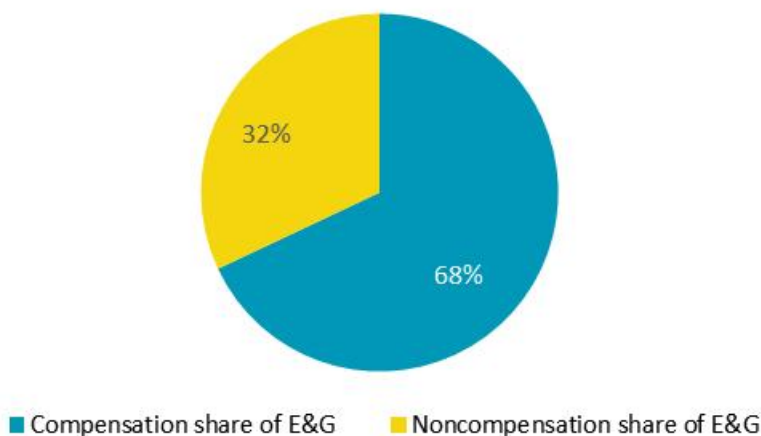
### General Advantages of Activity-Based Costing

Activity-based costing offers highly detailed data that higher education administrators can use to allocate resources more effectively and share with policymakers to help them better understand what colleges do. Foremost, this approach provides information that could result in better planning, whether for a multiyear strategic plan or the targeting of specific initiatives in a shorter time period.

### FOCUSES ON THE MAJOR HIGHER EDUCATION RESOURCE—STAFF!

Many have commented that higher education is a “labor-intensive” industry. In community colleges, more than two thirds of all education and general spending<sup>1</sup> goes toward faculty and staff salaries and benefits (see Exhibit 1).

**Exhibit 1. Compensation Share of Education and General (E&G) Spending in Community Colleges, AY 2009**



Source: Delta Cost Project Integrated Postsecondary Education Data System Database, 1987–2009, 11-year matched set.

<sup>1</sup> Education and general spending includes all operating expenses except auxiliary enterprises and hospitals.

Because of the support many community college students need to succeed, the activities of different types of staff could become more apparent with an activity-based costing approach. Activity-based costing focuses on the key resources in higher education—its faculty and staff—and provides a way to help administrators understand what is really going on in their institutions, which, in turn, can help administrators clarify to policymakers how more than two thirds of their budgets are spent.

## **PROVIDES MORE GRANULAR INFORMATION NEEDED IN CURRENT FISCAL ENVIRONMENT**

Community college budgets are tight, requiring institutions to do more with fewer resources. Activity-based costing provides institutions with information for better projections and forecasting. For instance, consider a community college facing across-the-board cuts. By knowing the cost of different activities, administrators could protect high-impact activities or reduce spending in high-cost areas with low impact.

Activity-based costing also facilitates a more targeted distribution of limited resources to meet specific goals or to focus on certain initiatives. As an example, if a community college is asked to increase the number of students who either get two-year degrees or transfer to four-year colleges, it will want to know how much time is spent on activities that are known to improve retention, graduation, and transfer. In activity-based costing, time translates into money and, if needed, the college could shift some of its resources to activities that support this goal. Activity-based costing can help colleges better identify where resources are needed.

## **ALLOWS FOR EASY AND MEANINGFUL BENCHMARKING**

Benchmarking is an important endeavor that allows institutions to put their outcomes in a meaningful context. What does it mean, for example, that 32 percent of a community college’s student services budget is spent on advising? Is this high or low? Good or bad? How does this spending relate to the college’s goals and mission? How does it compare with what other colleges are spending on advising?

In the case of activity-based costing, costs at some unit or level can be compared with costs at other units or levels. Comparisons can be made over time (e.g., from year to year), with other units within the institution or with other similar institutions. The activity-focused detail that results from activity-based costing provides more meaningful comparison units for higher education benchmarking. (See Section 4 for examples of how results from activity-based costing can be used to benchmark.)

## **Advantages of Highlighting Education-Related Spending in Community Colleges**

Maximizing Resources for Student Success is centered specifically on education-related expenses (e.g., instruction, student services, and academic support). This particular focus demonstrates a number of specific advantages for community colleges that are delineated here.

## **INSTRUCTION IS A KEY MISSION OF COMMUNITY COLLEGES**

Like all postsecondary institutions in the United States, community colleges have multiple missions (e.g., community service, workforce development, noncredit adult education); however, instruction is at the core of what community colleges do. Very little research occurs in community colleges. Community colleges are there to teach students, yet the instructional mission is a complex one. Community college students come with a wide range of educational, social, and financial needs that must be addressed if

the overall educational mission is to be a success. Dissecting instructional activities, through activity-based costing, provides numerous opportunities to better understand the complexity of the instructional mission and, with some further analyses, to relate specific activities to outcomes.

## **STUDENT SERVICES CAN IMPROVE OUTCOMES, BUT LITTLE IS KNOWN ABOUT THEIR COSTS**

A variety of services to support student success and address their many competing needs have become relatively common on community college campuses. These services can include academic advising and tutoring, financial aid counseling, and personal and social counseling, among others. Research has indicated that providing these services can play an important role in promoting successful student outcomes, particularly for academically at-risk students. Briefly, this research indicates that these services can do the following:

- Promote social connections (Cooper, 2010; Karp, 2011)
- Help students articulate their postsecondary goals (Karp, 2011)
- Provide students with an understanding of the college environment (Karp, 2011)
- Address the conflicting demands of work, family, and school (Cooper, 2010; Karp, 2011)
- Increase the odds of transferring from community college to a four-year institution (Gross & Goldhaber, 2009)
- Improve student persistence and graduation rates (Cooper, 2010; Karp, 2011; Webber & Ehrenberg, 2009)

Understanding which services succeed in improving desired outcomes is important, and equally as important is knowing what these services cost so that resources can be better aligned.

## **PROVIDES POLICYMAKERS AND ADMINISTRATORS WITH A SENSE OF WHAT IS REQUIRED TO EDUCATE COMMUNITY COLLEGE STUDENTS**

Educating students is a complex matter, and knowing more about the process would provide both higher education administrators and policymakers with better information on which to base decisions. Community colleges receive less per FTE student from state appropriations than any other type of public college or university, charge less in tuition, and spend less per FTE student to educate them (Desrochers & Kirshstein, 2013). Yet community college students often have the greatest academic and social needs. Making clear what is spent on instruction and on different student services *and* relating the spending to desired student outcomes would provide information for allocating resources more efficiently. And if state legislators knew the actual cost of providing the needed services, their decisions also might benefit the college.

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Activity-based costing is not without its challenges. Indeed, it is different from convention resource allocation (budget) models and requires a paradigm shift. Yet the benefits of adopting activity-based costing can outweigh the disadvantages, particularly if colleges are looking for a relatively simple way to dissect costs and understand how to better allocate limited resources.





## Section 3. How Do You Do Activity-Based Costing?

Implementing activity-based costing involves a five-step approach:

1. Identify the mission and goals
2. Identify the major activities
3. Estimate staff time allocations to activities
4. Attributing costs to activities
5. Determine spending per cost drivers

This section describes the steps involved in undertaking an activity-based costing system as adapted by Maximizing Resources for Student Success, which focuses on benchmarking costs with other community colleges. Although activity-based costing can be implemented without benchmarking against other institutions, doing so comes without the benefits benchmarking affords—namely, the ability to compare against and learn from other institutions. Moreover, benchmarking activity costs helps institutions identify local cost drivers, inform goal setting and decision making, and demonstrate how spending matches institutional priorities.

Maximizing Resources also presents a more simplified approach to activity-based costing, focused on labor and nonlabor (e.g., supplies, materials, software, and professional development expenses) costs for instructional, student service, and academic support activities at the institutional level (with instructional costs reported by academic unit to facilitate internal benchmarking).<sup>2</sup> This method helps minimize the burden on institutions while providing sufficiently detailed information to guide decision making. There are, however, several ways in which this model can naturally be expanded, as discussed further in the following steps, such as examining expenses at more granular levels (e.g., course level), increasing the set of activities examined (e.g., institutional support, public service), or measuring other indirect costs to identify institutional expenses more completely.



### IDENTIFY THE MISSION STATEMENT AND GOALS

Establishing a clear and well-defined mission statement and goals is necessary for activity-based costing to be successful (Cox, Downey, & Smith, 1999). Ideally, the goals and mission of the institution (or of the division if applying activity-based costing to the division level) should drive how staff members allocate their time. An activity-based costing approach can help assess the extent to which staff are contributing to overall performance of the institution and the need to adjust resources to better align with the mission.

**Mission:** XYZ inspires learning to transform lives and strengthen communities.

**Goal 1.** Increase student success by improving student satisfaction, retention, persistence, and graduation and transfer rates.

**Goal 2.** Demonstrate increased agility in responding to stakeholder needs.

**Goal 3.** Commit to efficient use of resources to strengthen quality offerings.

<sup>2</sup> Maximizing Resources for Student Success was originally designed to concentrate exclusively on labor costs for instructional, student service, and academic support activities at the institutional level. Based on feedback from pilot institutions, the project amended the benchmarking system to (1) include nonlabor costs and (2) collect *instructional* costs by academic unit (e.g., department or division) and aggregate these costs to the institutional level by weighting unit-level costs in proportion to student credit hours.

## 2

## IDENTIFY THE MAJOR ACTIVITIES

The next step in implementing an activity-based costing system is to identify the major activities performed. Because the education of students is a key mission of community colleges, Maximizing Resources for Student Success focuses on instruction and other education-related areas, namely student services and academic support. Within each area, activities are then defined. Traditionally, this step may involve interviewing staff or supervisors to describe the main tasks in which they were personally involved or charged with overseeing. From these descriptions, key activities can be identified, which may be as extensive and granular as the institution wants, but, generally, the more granular the activities, the higher the data collection costs. For Maximizing Resources, activities were identified with the assistance of an expert panel of community college representatives, including chief financial officers, budget administrators, and institutional researchers. A list of participants and the community colleges they represent are presented in the appendix. Exhibit 2 provides the list of data elements and definitions.

Naturally, for benchmarking purposes, Maximizing Resources promotes a standardized list of major activities, although activity-based costing can certainly be used to examine areas and activities beyond the focus of the project (e.g., clinical research in a nursing program). The important point is that these activities be reflective of the needs and objectives of the institution (or divisions).

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## Exhibit 2. Maximizing Resources Activities and Definitions

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### Instruction

- **Program development.** Creating and planning curriculum at the program level
- **Course development.** Creating and planning content and learning activities at the course level
- **Teaching.** Delivering course content, managing, and monitoring student assignments and classroom (physical or virtual) activities
- **Faculty tutoring.** Formally providing supplemental academic assistance in support of regular coursework
- **Faculty advising.** Assisting students with activities related to their educational experience, including scheduling, academic support, planning, and selecting curricular pathways and career development
- **Academic service.** Serving on committees or task forces to support teaching and learning
- **Assessment and grading.** Assessing prior and current learning, developing and selecting assessment methodologies, evaluating student assignments and performance to award course credit, and contributing to broader assessment of student learning outcomes
- **Professional development.** Participating in institutional activities and events, continuing education, community service, professional development activities, reading subject matter literature, writing scholarly papers, traveling, professional association participation, and other similar activities

### Student Services

- **Admissions.** Guiding potential students through the collection, verification, and evaluation of credentials in the application process
- **Recruitment.** Building awareness among current and potential students through direct interaction about activities leading up to admission to the institution or to a particular program
- **Advising.** Assisting students with activities related to their educational experience, including scheduling, academic support, planning and selecting curricular pathways, and career development
- **Counseling.** Assisting students through personal support, including coaching, mentoring, and counseling focused on nonacademic issues
- **Career services.** Assisting students with career planning, resume development, interviewing skills, job searches, and partnering with potential employers
- **Financial aid.** Assisting students with loan counseling, financial literacy, and obtaining monetary support for the cost of attending college from sources other than the students and their families including scholarships, grants, loans and work-study programs
- **Registrar/Student records.** Assisting students with requests related to their academic records including transcripts, grades, appeals and verification of enrollment and progress toward receipt of degrees or certificates
- **Tutoring.** Formally providing supplemental academic assistance to support student academic achievement
- **Testing services.** Administering or proctoring of placement, proficiency, out-of-classroom, make-up, certification, and standardized tests
- **Co-curricular activities.** Supporting activities that engage students and promote social interaction, leadership, healthy recreation, self-discipline, and self-confidence (e.g., student government, clubs, and intermural sports)
- **Disability services.** Assisting students with disabilities by providing academic accommodations and support services
- **Veterans services.** Providing veterans, service members, and eligible family members the resources, support, and advocacy needed to be successful in college and use their benefits to support college expenses

### Academic support

- **Instructional technology support.** Providing instructional technology infrastructure and services to faculty and students (e.g., in-class technical assistance, training for using learning management systems and other classroom technologies)
  - **Library services.** Providing support and access to information resources in printed and electronic formats to support academic activities
  - **Experiential education.** Supporting activities around service learning, clinical experiences, and internships
-

# 3

## ESTIMATE STAFF TIME ALLOCATIONS TO ACTIVITIES

Once the major activities have been identified, the next step is to determine the proportion of time staff members devote to each activity so that salary and benefit costs can be allocated accordingly. There are several ways to accomplish this task, including, most notably, managerial assessment and faculty and staff surveys. Ultimately, whatever method is used, “it must provide a fair and reasonable approximation of activity costs” (Ellis-Newman, 2003, p. 339).

- *Managerial assessment.* This method designates a person or persons (e.g., dean, division head, department head) to estimate the percentage of time staff spend on each identified activity. Such a centralized approach provides a relatively efficient and cost-effective process, although managerial assessment may not offer the exactness that other methods (i.e., faculty and staff surveys) may afford. This, however, is not the goal of activity-based costing. As Kaplan and Anderson (2003) explain, “Precision is not critical; rough accuracy is sufficient” (p. 7).
- *Faculty and staff surveys.* In contrast to managerial assessment, this approach asks those individuals who directly perform the activities to provide information on the amount of time they spend in these designated areas. Surveys tend to work better in a limited setting with few employees, but time and resource challenges result when surveys are implemented on a larger scale for use on an ongoing basis; these challenges could act as a barrier to adopting an activity-based costing approach. Annual surveys may impose too great a burden on staff. As a result, the surveys potentially could yield lower quality data and foster negative attitudes toward activity-based costing, thus jeopardizing staff buy-in. Moreover, institutions may need to employ dedicated staff just to manage survey data collection, processing, and reporting (Kaplan & Anderson, 2003).

Given the trade-offs between accuracy and burden, Maximizing Resources for Student Success encouraged pilot participants to use managerial assessment to estimate staff time allocations<sup>3</sup> because of its ease of implementation paired with its ability to provide reasonably accurate information. Pilot participants, for their part, tended to agree. As one participant suggested, “In a perfect world, [we] would get feedback directly from the instructors,” but, given the intrinsic challenges presented by such an approach (i.e., high cost), “practically, there’s no alternative to” using a managerial assessment. Likewise, another participant acknowledged that he or she had considered alternative approaches, such as administering a faculty survey, but opted for managerial assessment as the most straightforward, resource-effective approach.

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<sup>3</sup> Maximizing Resources requires time estimations for instructional activities only. Because activities related to student services and academic support are more discrete, the project asks for total salaries and benefits for activities in these areas.

### Implementing a Managerial Assessment for Estimating Time Allocations for Instructional Activities

As part of its activity-based costing approach, XYZ Community College—a single-campus institution serving 10,000 students across six divisions (business/social sciences, mathematics and science, humanities, fine arts, applied technology, and health sciences)—conducted a managerial assessment to allocate faculty time to instructional activities. The business officer recruited the academic deans from each division—individuals she felt were familiar with the work of the faculty and who would provide relevant and credible information. Each dean was then asked to create percentage-of-time estimates for full-time and part-time faculty in his or her own division. Based on these division-level assessments, Maximizing Resources aggregated these estimates to create an institutional time profile for instructional activities.

It is important to recognize that genuine differences may exist across divisions (for internal benchmarking purposes, Maximizing Resources will provide participating institutions cost estimates for individual divisions); however, in creating the aggregate time profile, the purpose of managerial assessments is not to provide exact allocations, but rather to capture the essence of the institution as a whole.

## 4

### ATTRIBUTE COSTS TO ACTIVITIES

This step involves identifying and assigning costs to the relevant activities. Under the Maximizing Resources approach, salary and benefit expenses are collected by academic unit and are allocated to activities for each academic unit by multiplying these costs by the estimated proportion of time staff spent on each activity. Labor costs are then aggregated to the institution level by summing these costs across academic units.<sup>4</sup> Nonlabor costs, conversely, are collected at the institution level and are distributed among the academic units, weighted in proportion to the number of student credit hours produced by the academic unit. These costs are then allocated to activities using the staff time estimates and aggregated back to the institution level by summing across academic units. To promote greater ease of implementation, the Maximizing Resources for Student Success approach elected to exclude indirect costs, such as electricity and use of buildings and equipment, because of the project's focus on student success and the desire to minimize data collection burden. In a more expansive approach to activity-based costing, however, these items could be assigned to activities to provide a more complete measure of activity costs. Activity-based costing also may be used to distribute indirect costs (e.g., registration, technology, library services) to specific academic units (divisions or courses) based on usage, thereby decreasing general overhead and providing a more accurate representation of divisional or course-related costs (for more information, see Szatmary, 2011).

## 5

### DETERMINE COST PER COST DRIVERS

Having determined a total cost for each activity, the final step is to calculate the activity cost per cost driver—that is, the factor influencing or contributing to the expense of a particular activity. This cost is calculated by dividing the total expenditures for each activity by the driver volume. For the purposes of Maximizing Resources, costs are assigned on both a per-FTE student enrollment basis and per-student credit hour, which assumes that costs increase in the defined activities according to the

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<sup>4</sup> This step may be omitted for activities for which total salary and benefit outlays are reported. The Maximizing Resources project assumes that these data are available for activities related to student services and academic support.

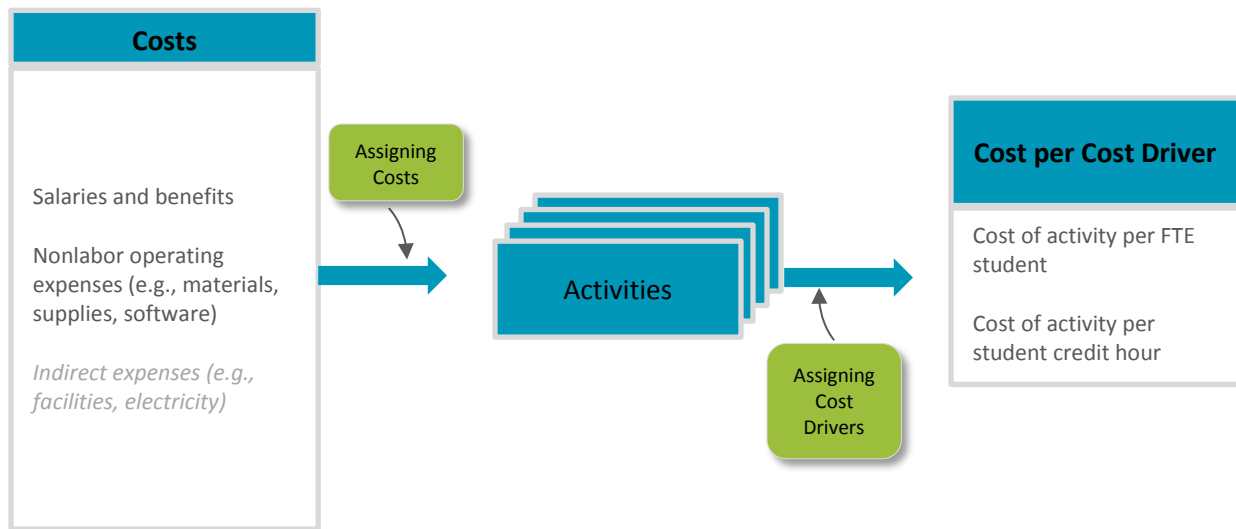
number of students served or the time spent in the classroom. Activity costs can be based upon different types of drivers so long as they are “transparent, relatively simple to derive, and easily understood by the campus” (Szatmary, 2011, p. 76).

## Summary

Through activity-based costing, community colleges have the ability to observe how the allocation of resources (e.g., salaries, nonlabor costs) translate into the costs of the institutions’ core activities and ultimately into costs per activity driver (e.g., per FTE student, per student credit hour). Exhibit 3 presents a simplified picture of this cost assignment process.

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### Exhibit 3. Maximizing Resources Activity-Based Costing Framework



Note: Cost categories in italics are not included as part of Maximizing Resources but are included here to illustrate the full breadth of costs that may be captured through activity-based costing.

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## Section 4. How Do You Use Activity-Based Costing?

Activity-based costing can be used by community college leaders for a variety of purposes as highlighted by Tatikonda and Tatikonda (2001). Activity-based costing can do the following:

- Provide a more accurate picture of costs by college, department, program, or even course
- Highlight resource needs (or surpluses)
- Enable thoughtful allocations of scarce resources
- Allow for a more sustainable course and program mix
- Facilitate cost control
- Allow for more convincing public relations efforts

### Common Metrics Used in Activity-Based Costing

Activity-based costing has two straightforward uses: to determine the share of expenditures devoted to each activity and to determine total spending per cost driver (e.g., student, credit hour, or faculty and staff) for each activity.

The **activity share method** assigns the spending in an expense category to the various activities that comprise it. For example, total spending within the expense category of instruction can be assigned to the activities of teaching, assessment, course development, tutoring, advising, academic service, and program development, among others.

**Activity spending per student** takes the total spending on an activity and calculates the per-student spending (total headcount or FTE students) or per-student credit-hour spending.

These measures, whether derived for the whole institution or disaggregated into division- or department-level measures, are useful to ensure that a college's limited resources are spent in the manner most consistent with its mission. Combined with the advantages afforded by benchmarking, activity-based costing also can provide a very powerful tool in establishing baselines, defining best practices, and identifying areas in need of improvement.

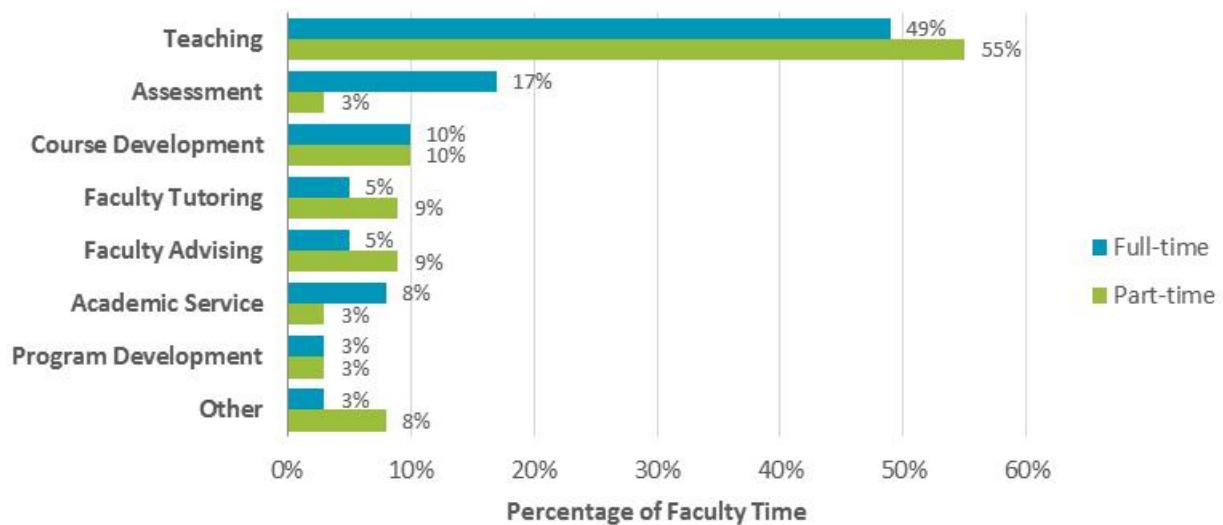
### Illustrating the Use of Activity-Based Costing

This section provides examples of some of the analyses that are possible through Maximizing Resources based on data collected in the pilot.

**Scenario 1: Administrators at XYZ are interested in learning about how faculty members spend their time.**

Maximizing Resources can provide useful information to decision makers about what is really going on in their institutions. Specifically, time allocations constructed through managerial assessment offer better transparency about how faculty spend their time. Exhibit 4 shows the distribution of full-time and part-time faculty time, by instructional activity. XYZ administrators were able to diagnose that full-time faculty were devoting too much time on assessment and grading to the detriment of other activities (17 percent), such as faculty tutoring and faculty advising (5 percent each). As a result, XYZ will introduce initiatives to reign in student assessments and promote tutoring and advising.

**Exhibit 4. Distribution of Full-Time and Part-Time Faculty Time at XYZ, by Instructional Activity**

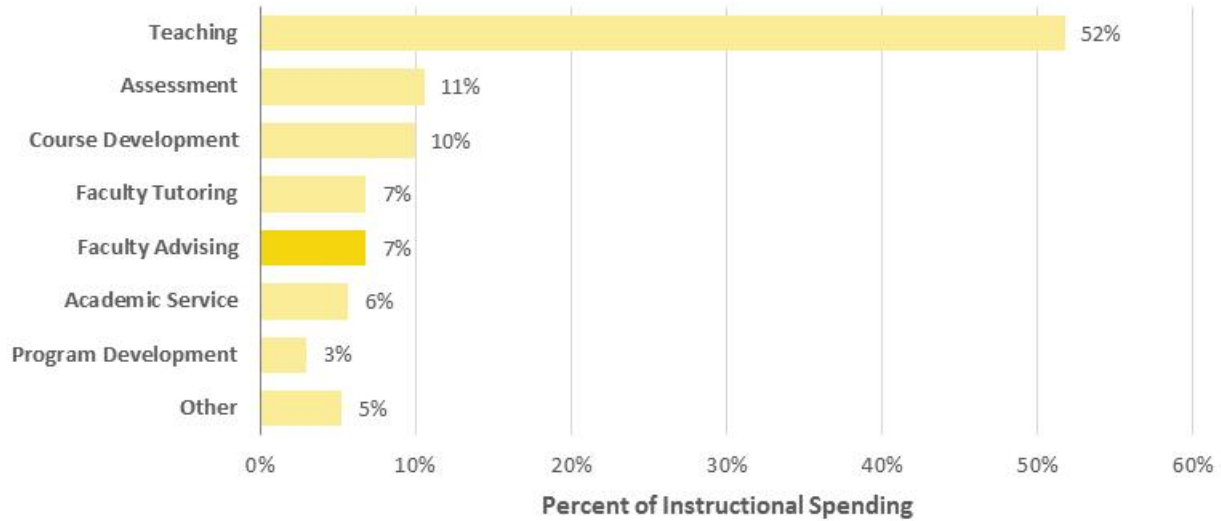


*Scenario 2: XYZ determined that many of its first-generation college students lack adequate understanding of concepts like course prerequisites and graduation requirements. Because this dearth of knowledge could put these students at a greater risk of not finishing their education or taking longer than necessary to do so, XYZ launches an effort to bolster advising on campus by encouraging faculty members to devote more time to advising.*

Activity-based costing can help determine if this initiative has resulted in increased advising activity on the ground. Suppose that Exhibit 5 represents XYZ prior to starting its new advising initiative, when faculty advising accounted for 7 percent of total instructional spending. If the next year, advising accounted for 15 percent of instructional spending, it would be clear that the initiative succeeded in encouraging faculty to devote more time to advising. If, however, advising accounted for a smaller share of instructional spending (say, 4 percent), it would suggest that the initiative was not successful and that other methods of bolstering advising may be necessary.



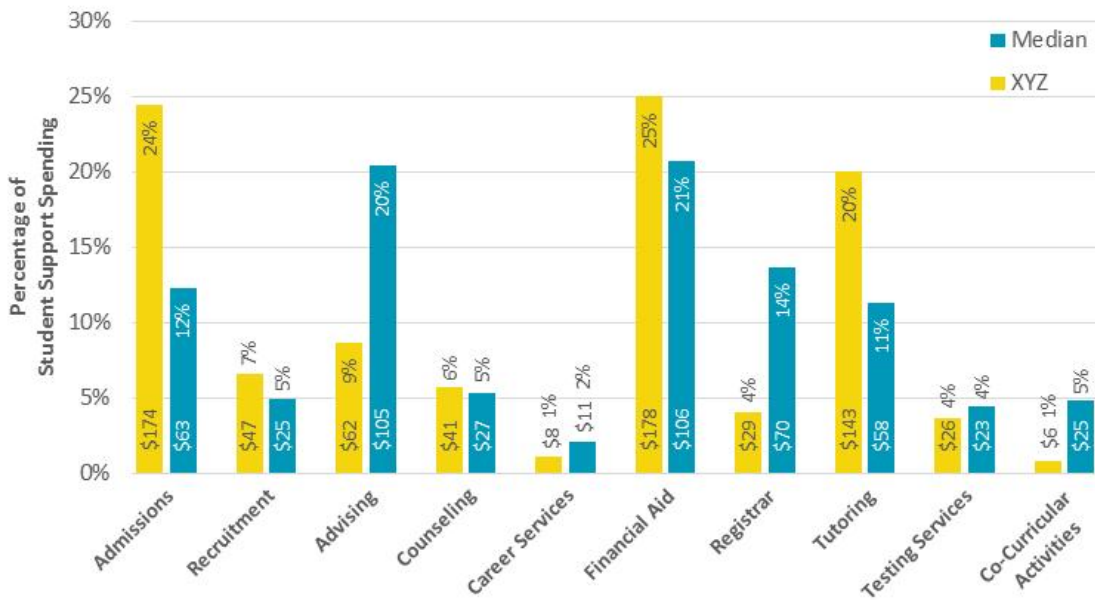
**Exhibit 5. Distribution of Instructional Spending for XYZ, by Activity**



**Scenario 3: As an institutional priority, XYZ is interested in increasing the percentage of students finding employment in their fields of study.**

By using activity-based costing, XYZ discovered that it was not supporting this goal financially (see Exhibit 6). Compared with other student services activities, XYZ spends less on career services (\$8 per FTE student, or 1 percent of total student service expenditures) than on all but co-curricular activities, and when benchmarked against other community colleges, XYZ spends less than the median. XYZ plans to use the study results to reallocate funds to better match its institutional priorities.

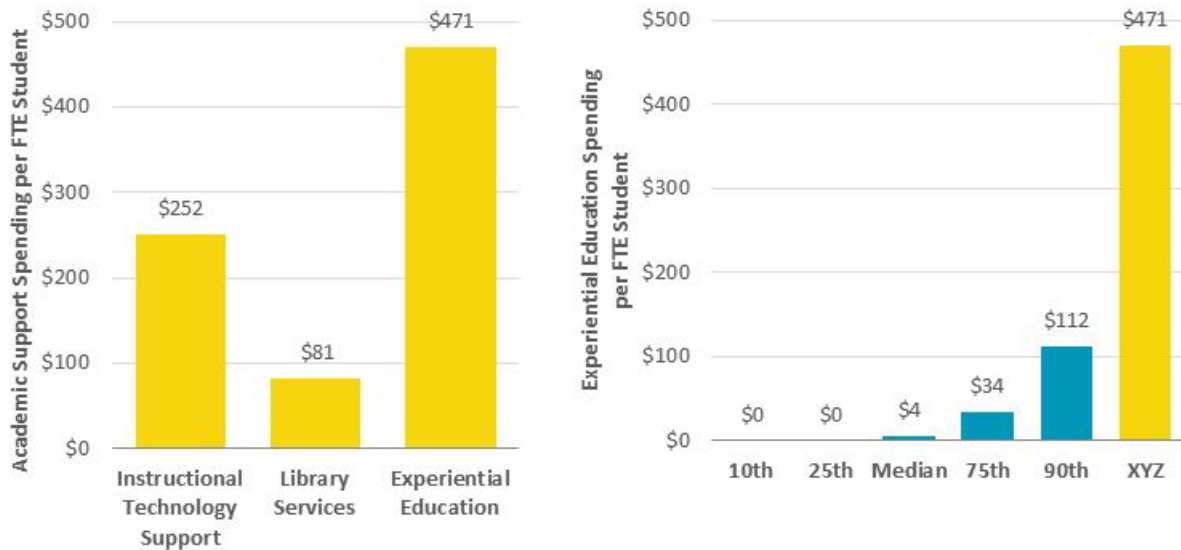
**Exhibit 6. Distribution of Student Services Spending for XYZ and Pilot Institutions, by Activity**



**Scenario 4: Creating opportunities for students to engage and apply academic understanding through hands-on experience has long been a hallmark of XYZ’s mission. However, local employers have recently expressed concern about the technical skills of XYZ’s graduates. In response, XYZ is considering investing even more into its experiential education programs.**

Activity-based costing data show that XYZ spends a significant amount of money on experiential education already (see Exhibit 7). Indeed, compared with other academic support activities, XYZ spends nearly twice as much on experiential education (\$471 per FTE student) as it does on instructional technology support (\$252 per FTE student) and more than five times what it spends on library services (\$81 per FTE student). XYZ also clearly spends much more on experiential education programs than other community colleges. Across pilot institutions, the median expenditures on experiential education were \$4 per FTE student, but XYZ’s expenditures were \$470 per FTE student, more than any other pilot college. Although there is nothing intrinsically wrong with being an outlier, the fact that XYZ’s high spending on experiential education programs has not netted positive results suggests that, rather than devote more resources to these activities, XYZ should evaluate ways in which it can improve its existing programs or reduce its investments in this area.

**Exhibit 7. Academic Support Spending per FTE Student for XYZ, by Activity, and Experiential Education Spending per FTE Student for Pilot Institutions**



## Summary

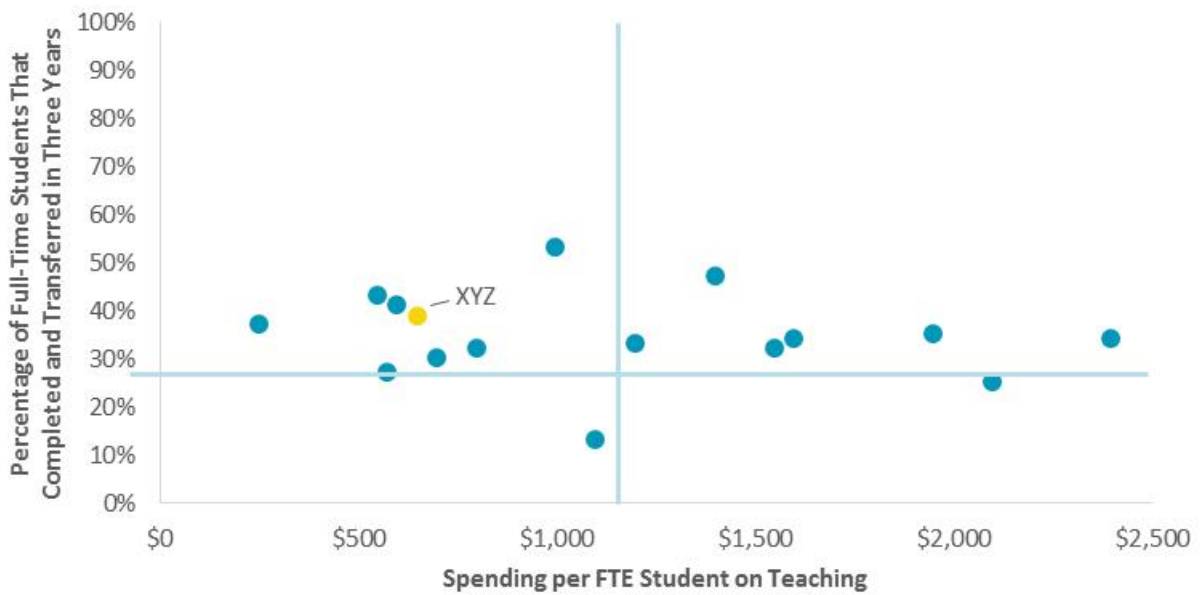
The examples in this section compare a single community college to all the other community colleges that participated in the pilot; however, data collected through Maximizing Resources for Student Success allow for additional comparisons as well, such as the following:

- Comparisons against a set of peer institutions
- Comparisons between individual branches or campuses for multicampus community colleges
- Comparisons over time
- Comparisons of instructional costs between academic units (internal benchmarking only)

### Spending Metrics Related to Outcomes

Measuring costs relative to student outcomes may help institutional leaders think about retention and attainment goals; specifically, how can spending be managed to improve student success without sacrificing quality? Potential metrics of this variety would seek to examine the relationship of specific activities with student outcome metrics, such as certificate and degree completion rates, college-level course retention and success rates, and semester-to-semester persistence rates (see Exhibit 8 for illustration).

**Exhibit 8. Spending per FTE Student on Teaching Compared With Three-Year Transfer Rates for XYZ and Pilot Institutions**



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As this guide indicates, activity-based costing provides a different way to think about higher education finance. And although activity-based costing is different and may take getting used to, its focus on activities provides an effective way for administrators to determine whether what is spent aligns with the institution’s priorities. As one pilot participant attested:

*The activity-based costing model provided by Maximizing Resources for Student Success helped us provide feasible time estimates for student services tasks and assign a specific cost to each activity. Once we looked at the results in terms of discrete tasks, we realized that the amount of money spent on Career Services was substantially lower than that spent on other student services activities. We take pride in preparing our career technical students for future success in their fields, so this information was of tremendous value institutionally. We hope to make our results an integral part of our budget and planning process in the future.*

In an era of limited resources, the ability to recognize disconnects between resources and institutional goals, and adjust resource allocations to maximize their effect, is paramount not only for community college but also for all of higher education.



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## Appendix

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### Exhibit A.1.

#### Community Colleges Participating in Pilot Activity-Based Costing Project

Chandler-Gilbert Community College	Arizona
Crafton Hills College	California
Eastern New Mexico University, Roswell Campus	New Mexico
Edison State Community College	Ohio
Elgin Community College	Illinois
Front Range Community College	Colorado
Gateway Community and Technical College	Kentucky
Grand Rapids Community College	Michigan
Independence Community College	Kansas
Inver Hills Community College	Minnesota
Jefferson Community and Technical College	Kentucky
Johnson College	Pennsylvania
Johnson County Community College	Kansas
Leeward Community College	Hawaii
Lurleen B. Wallace Community College	Alabama
Metropolitan Community College	Missouri
Montcalm Community College	Michigan
Neosho County Community College	Kansas
Normandale Community College	Minnesota
Northwest Arkansas Community College	Arkansas
Northwest-Shoals Community College	Alabama
Polk State College	Florida
San Bernardino Valley College	California
Spartanburg Community College	South Carolina
State Fair Community College	Missouri
Three Rivers Community College	Missouri

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**Exhibit A.2.****Advisory Group Members for the Pilot Activity-Based Costing Project**

Jacalyn A. Askin	Chandler-Gilbert Community College
Michael Berndt	Normandale Community College
Kristy A. Bishop	Metropolitan Community College
John A. Clayton	Ozarks Technical Community College
Jennifer Engle	Institute for Higher Education Policy
Steven Hurlburt	American Institutes for Research
Dennis Jones	National Center for Higher Education Management Systems
Rita Kirshstein	American Institutes for Research
James Lantz	Montcalm Community College
Ron Pennington	St. Charles Community College
Susan Rider	Johnson County Community College
Richard Romano	Broome Community College
Jeff Seybert	Consultant
Bob Shea	National Association of College and University Business Officers
Teresa Smith	Tallahassee Community College
Rick Staisloff	rpk Group
David Szatmary	University of Washington
Mike Unebasami	University of Hawaii Community Colleges
Rick Voorhees	Voorhees Group LLC

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**Exhibit A.3.****Advisory Group Members for the Activity-Based Costing Guide**

Jacalyn Askin	Chandler-Gilbert Community College, Arizona
Patricia Charlton	College of Southern Nevada, Nevada
Jonathan Durfield	Lone Star College System, Texas
Jennifer Engle	Institute for Higher Education Policy
Jonathan Gueverra	Florida Keys Community College, Florida
Shayne Kavanagh	Government Finance Officers Association
James Lantz	Montcalm Community College, Michigan
Susan Menditto	National Association of College and University Business Officers
Christopher Mullin	State University System of Florida Board of Governors
Don Perkins	Johnson County Community College, Kansas
Patrick Perry	California Community Colleges, California
Richard Romano	Broome Community College, New York
Bob Shea	National Association of College and University Business Officers
Rick Staisloff	rpk Group

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