

**sam**<sup>1</sup>

Business Students  
Rate SAM “Useful” for  
Building Excel<sup>®</sup> Skills

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Case Study:



## Business Students Rate SAM “Useful” for Building Excel® Skills



### About SAM

SAM (Skills Assessment Manager) is an online tool that teaches, trains, and tests essential Microsoft Office and computer concepts skills. SAM engages students as they watch, listen, and practice in a hands-on environment and then apply their skills to real world applications. With efficient course setup, auto-graded assignments, and flexible reporting tools, SAM saves instructors valuable time and energy so they can focus on instruction.

At Baruch College in New York City, Professor of Economics Ted Joyce directs the Zicklin Online Learning and Evaluation (ZOLE) program, which promotes and supports the use of technology at the institution. “We interpret technology broadly, from courses delivered purely online to the use of Excel® in a traditional classroom format,” says Professor Joyce. “The unifying theme is the application of new technologies to engage students, build skills, save resources, and advance learning.” One of those technologies is SAM (Skills Assessment Manager), an online environment for Microsoft Office®.

### About the Study

Professor Joyce managed a semester-long study of SAM’s online Excel® module, which had been used at Baruch for three terms. Participants were students in four business courses: Financial Accounting, Managerial Accounting, Service Operations Management, and Principles of Finance. Enrollment in SAM was 3,795 students out of 4,444 students registered for the four classes, an 85.3% participation rate.

SAM was chosen to help achieve a straightforward goal: ensure that all students in core business courses developed functional capability with Excel. Participants completed 14 SAM assignments on building Excel spreadsheets, and practiced skills such as essential formatting, using formulas, graphing, pivot tables, and basic macros.

### Survey Questions and Response Rates

Students were surveyed at the end of the semester about their experience with SAM. “Survey response rates ranged from 33 to 62 percent,” says Professor Joyce. “However, the responses didn’t change meaningfully as more students responded. In other words, the results from the first 20% of completed surveys were very close to the results from the closing response rate. Thus, we consider the results to be broadly representative.”

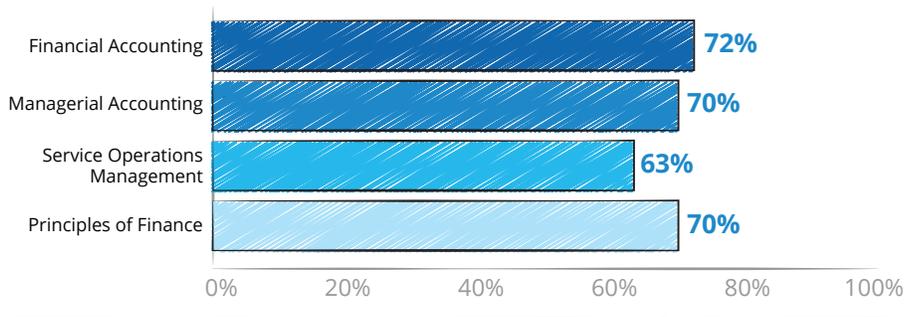
The survey asked students to indicate whether they strongly agreed, agreed, disagreed, or strongly disagreed with statements about SAM, including:

- Overall I found SAM to be a useful learning experience
- I had not used Excel much before using SAM
- SAM helped me become comfortable using Excel
- SAM was easy to use
- SAM’s feedback of my spreadsheets helped me to improve my score in subsequent attempts

### Results — Favorable Ratings for SAM

“The most encouraging result is that between 63 and 72 percent of students agreed or strongly agreed that the SAM module was a useful learning experience (Figure 1). We find

**Figure 1: Percentage of students in each of four business courses who agreed or strongly agreed with the statement: “Overall I found SAM to be a useful learning experience.”**



this support remarkable, especially given that we assigned work outside the supervision of the course instructor,” says Professor Joyce. Financial Accounting students gave the most favorable ratings: 72% agreed or strongly agreed that SAM was a useful learning experience. The agree/strongly disagree percentages were similar in the other courses: 70% in Managerial Accounting, 63% in Service Operations Management, and 70% in Principles of Finance.

A significant proportion of responding students had little or no experience with Excel prior to using SAM (50% in Financial Accounting, 43% in Managerial Accounting, 38% in Service Operations Management, and 46% in Principles of Finance). Large majorities in all courses said that SAM helped them become more comfortable using Excel, indicating that experienced users and novices benefited. In Financial Accounting, 68% agreed or strongly agreed with the statement, as did 63% in Managerial Accounting, 53% in Service Operations Management, and 59% in Principles of Finance.

Even higher percentages of respondents said that SAM was easy to use: Three-quarters of the accounting students (72% in Financial Accounting and 67% in Managerial Accounting) agreed or strongly agreed. Lower but significant percentages of students in the other courses agreed or strongly agreed (61% in Service Operations Management and 59% in Principles of Finance).

About three-quarters of the students in each course — from 65% to 70% — liked the feedback that helped them improve their score in subsequent attempts on a project.

More than half of the responding students in each course (ranging from 51% to 60%) noted they would like to see other classes include Excel projects as part of the course grade. “For students, SAM is a one-time purchase that costs \$40, and they can use it in all of their classes at Baruch,” says Professor Joyce. “Students also have access to all the projects in SAM, not just the 14 that are assigned.”

When asked how much time they spent with SAM, the largest proportion of students in each course — 51% in Financial Accounting, 41% in Managerial Accounting, 42% in Service Operations Management, and 44% in Principles of Finance — spent one to two hours on each project. The proportion of students spending two to three hours on each project ranged from 19% to 27%; the range for students spending up to an hour per project was 17% to 25%.

Professor Joyce and his colleagues put a lot of effort into evaluating the technology solutions used in Baruch courses. “We want to know what works, and what doesn’t,” he explains. Based on the recent results, it appears that SAM fits in the “works” category.



*The most encouraging result is that between 63 and 72 percent of students agreed or strongly agreed that the SAM module was a worthwhile learning experience. We find this support remarkable.*

**Ted Joyce**  
Baruch College



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