

# Using the ACCA-x to Improve Student Performance in Introductory Accounting Courses: Experimental Evidence

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**Abstract.** Accounting educators continue to seek innovative ways to improve student performance in introductory accounting courses. The literature demonstrates the need for extensive research into the use of blended learning technologies to meet this necessity. We respond to this call by examining the association between the use of ACCA-x, a learning program designed by the Association of Chartered Certified Accountants, and students' performance on final examinations. We conduct our study with data from a university setting in a developing country. We find that the use of ACCA-x is associated with better scores on final examinations. We also find that a higher score on ACCA-x is associated with a higher score on the final examination. Our results also show that the likelihood of using ACCA-x differs across courses and is influenced by both the demographic and personality factors of students. Overall, our results indicate that ACCA-x has the potential to positively impact student performance in introductory accounting courses. We discuss the ramifications of our findings for accounting educators and technology developers.

**JEL Classifications:** A20, A22, I23, M41, M49, O14, O55

**Keywords:** ACCA-x, technology, MOOCs, accounting education, blended learning, online resources, introductory accounting courses, final examination performance, developing countries, Sub-Saharan Africa.

## 1. Introduction

Accounting educators continue to examine ways in which technology could be used to enhance student performance (Chan, Song, Rivera, & Trongmateerut 2016). In addition, the techniques and technologies adopted drive the successes in teaching and learning (Premuroso, Tong, & Beed 2011). Many studies have examined the effect and importance of different emerging technologies on students' academic performance. Likewise, many studies have focused on introductory accounting courses (see Sargent, Borthick, & Lederberg 2011, p.

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657). But studies on how blended learning techniques affect student performance in introductory accounting courses are lacking (Bryant & Rajendran 2016, Lento 2018). Therefore, there is a need for extensive research on this type of learning (Bryant & Rajendran 2016). This is partly because as Lento (2018) finds, these courses tend to have high student-faculty ratios, basic content of a technical nature, high failure rates, and low completion rates. Furthermore, many universities require all business majors to take at least two introductory courses in accounting (Premuroso *et al.* 2011). This requirement makes the issue of performance in these courses even more critical.

The Association of Chartered Certified Accountants (ACCA) claims that students who use the ACCA-x, perform better. In this paper, we examine whether this assertion is true. We seek answers to two research questions to test this assertion: (1) do students who use the ACCA-x have better performance on their final examination than those who do not; (2) are students with higher scores in ACCA-x courses more likely to have higher scores on their final examination.

The ACCA-x is a massive open online course (MOOC) designed to support accounting students (Cheryl *et al.* 2018). The ACCA developed the ACCA-x, and the edX.org<sup>1</sup> platform has hosted it since 2015. The introductory accounting courses on the ACCA-x are currently free and available on demand. Epigeum<sup>2</sup> created the course content in the ACCA-x and supports it with online tutors. To our knowledge, ACCA-x is the only MOOC developed by a professional provider of training in accounting; it is also used in corporate training (see Bogdan, Holotescu, Andone, & Grosseck 2017, p. 257) and in other areas of study that require basic accounting knowledge (Sawant 2017).

The ACCA asserts that the ACCA-x provides high-quality online instruction in accountancy, although there is no empirical evidence to support this claim that we can find. The ACCA further indicates that, “learners using ACCA-x are consistently achieving examination results above the global average.”<sup>3</sup> Even though they make these assertions and have received appreciable industry recognition for the ACCA-x so far, the research has not examined its use in university academic programs.

Achievement of superior examination results is undoubtedly an important objective of every instructor. Therefore, Hawk and Lyons (2008) call devising effective strategies to improve student performance an “ethic of care” and claim it is a crucial business ethics issue. Consequently, instructors must continually view themselves as learners who strive to improve the delivery of instruction because they have the responsibility to help students learn effectively (Hawk

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1. The edX.org platform was developed by Harvard University and the Massachusetts Institute of Technology.
  2. Epigeum is a spin-out company from the Imperial College of London which is now part of Oxford University Press.
  3. From “ACCA-x: The story so far” available from <http://www.acca-x.com/global/en/blog/story-so-far.html> by Cheryl *et al.* (2018).