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The Impact of Educators' Characteristics and Class Size on Students' Academic Performance

Fadi Shehab Shiyyab*

Hashem Abed Allah Alshurafat

Omar Shaher Arabiat

Sawsan Ismael Yousef

Department of Accounting,
Business School,
The Hashemite University,
Zarqa, Jordan.
*Corresponding Author

Abstract

This study investigates how the characteristics of accounting educators and class size affect the academic performance of accounting students. Two measures, namely the class average and the percentage of successful students, are used as proxies for academic performance. The study uses various methods and proxies to measure the independent variables, including educators' characteristics and class size, which increases the reliability and strength of the findings. Regression analysis is applied to examine the relationship between the variables under investigation. The results regarding teaching experience confirm previous research, suggesting that high teaching experience enhances students' academic performance. Moreover, the study finds that larger class sizes have a positive effect on academic performance, possibly owing to increased opportunities for collaboration and peer-to-peer tutoring. The study also examines the effect of gender on class average and finds no significant association. Additionally, the course coordinator variable shows a positive and significant impact on students' average grade, indicating that certain course coordinators contribute to higher academic achievement through effective teaching and student engagement. This research has significant implications for education, accounting, and policy. Educators can improve their teaching approaches, and curriculum developers can align programs with student needs. Policymakers can create evidence-based policies, and institutions can develop targeted support systems for students.

Keywords: Higher education, Business education, Education, Business School, Accounting students, Educators' characteristics, Class size, and Students' performance

1. Introduction

The impact of teachers' characteristics on students' academic performance is a complex and diverse subject (Armstrong, 2015; Hanushek, 1997; Hill, 1998). There are several factors related to teachers

that can influence how well students perform academically (Armstrong, 2015). These characteristics can include qualifications, experience, teaching methods, personality traits, and interpersonal skills. The effects of teachers' characteristics on students' academic performance are multi-faceted and intricate. They play a crucial role in determining how well students perform academically. Qualifications, experience, gender, class size, and course coordination are among the factors that can influence academic performance. This study aims to understand the impact of these factors on the accounting students' performance.

Teachers with more experience often exhibit better classroom management skills and a deeper understanding of various student needs (Podolsky, Kini, & Darling-Hammond, 2019). Experienced educators have likely encountered a diverse range of learners and can adapt their teaching methods accordingly, which can contribute to improved academic performance. Teachers with accumulated knowledge and insights often exhibit superior classroom management skills. They possess a deeper understanding of the diverse needs of their students, enabling them to tailor their teaching methods accordingly. This adaptability contributes significantly to improved academic performance among their students (Alshurafat, Beattie, Jones, & Sands, 2020; Carr, 2006; Gallagher, 2004; Harbison & Hanushek, 1992)..

Educators who excel in managing their classrooms can create a learning environment that is conducive to learning (Filges, Sonne-Schmidt, & Nielsen, 2018). A well-managed classroom minimizes distractions and disruptions, allowing students to focus on their studies. The creation of a conducive learning environment is one of the key benefits of educators who excel in classroom management (Shin & Chung, 2009). By effectively managing their classrooms, teachers minimize distractions and disruptions, allowing students to concentrate fully on their studies. In such an environment, students are more likely to engage actively with the subject matter and exhibit better learning outcomes (Krueger, 2002).

It is important to recognize that while teachers' characteristics can have a positive impact on students' academic performance, they do not exist in isolation. Several other factors also influence academic outcomes, including students' own motivation, the supportive home environment, parental involvement, and socio-economic status (Armstrong, 2015; Hanushek, 1997; Koh, Steers, & Terborg, 1995). The interplay of these factors alongside teachers' characteristics shapes the overall academic achievements of students. Furthermore, the broader education system and available school resources also play a significant role in influencing students' academic success. Adequate funding, access to modern educational tools, and a well-designed curriculum all contribute to enhancing students' learning experiences and overall performance (Hanushek, 1997; Hill, 1998).

Teachers' characteristics have a significant impact on students' academic performance (Darling-Hammond, 2000; Rockoff, 2004). Teachers who possess the right mix of qualifications, experience, teaching methods, and interpersonal skills can foster an environment that nurtures learning, leading to improved educational outcomes for their students (Armstrong, 2015). However, it is essential to recognize that various other factors, both within and beyond the classroom, also impact students' academic achievements. A comprehensive approach that addresses all these aspects is crucial to ensure students' holistic development and success in their educational journey.

This study on the influence of qualifications, experience, gender, class size, and course coordination on accounting students' academic performance can provide valuable insights for educators and policymakers. Educators can improve teaching practices and tailor their approaches based on key influencers. Policymakers can make informed decisions on resource allocation and policy development. Evidence-based recommendations can guide policy and curriculum development reforms, leading to a more nurturing learning environment for accounting students and a competent accounting workforce.

2. Literature Review and Hypotheses Development

Traditionally, educators are the guide of students learning process. It is claimed that educators directly impact the students' academic performance. Notwithstanding, the relationship between

educator's characteristics and students' academic performance has been controversial (Armstrong, 2015; Koh et al., 1995; Martin & Bolliger, 2018; Podolsky et al., 2019). Among these characteristics, educators' experience has been witnessed mixed evidence from the prior researchers (Armstrong, 2015; Hanushek, 1997). This is due to multiple theoretical interpretations. Those who support the relevancy of teaching experience in improving students' academic performance claim that the increasing experience develops the educator's intellectual and technical teaching capability (Darling-Hammond, 2000; Rockoff, 2004). However, for those who refute this relationship, they argue that the high teaching experience of an educator is not a factor that might enhance the students' academic performance if the educator did not accompany this experience with the relevant development of a new teaching method (Alshurafat et al., 2020; Carr, 2006; Gallagher, 2004; Harbison & Hanushek, 1992).

Podolsky et al. (2019) reviewed 30 studies on the relationship between teaching experience and student achievements in the USA. They conclude that experienced teachers positively impact the students' outcomes beyond students' test scores and reach the ability to benefit their colleagues. Similarly, Kim and Seo (2018) reviewed 16 studies on the relationship between teacher efficacy measures (e.g., length of teaching experience, location of the school, or the students' educational level) and the students' academic achievement. The results indicate a significant impact of teacher efficacy on students' academic achievement, where the length of teaching experience influences students' academic achievement. Contrary to popular belief, Armstrong (2015) claims that experience and teachers' level of subject knowledge are irrelevant factors in students' performance and academic achievement. Teaching experience takes different shapes and could be measured by an educator's number of working experiences. It also could be measured by the existence of other university teaching experience. Therefore, the following hypotheses are formulated.

H1a. Teaching experience impacts class average.
H1b. Teaching experience impacts the rate of success.
H1c. Other university teaching experience impacts class average.
H1d. Other university teaching experience impacts the rate of success.

The empirical evidence on the impact of class size on students' academic performance is mixed (Hill, 1998; Taft, Perkowski, & Martin, 2011). The advocates of small class size claim that frequent and effective student-instructor interaction leads to high student achievement (Bosworth, 2014). The continuous surveillance of students' academic matters allows educators to keep up with their students and help them overcome their academic challenges (Borland, Howsen, & Trawick, 2005; Schanzenbach, 2020; Wright, Bergom, & Bartholomew, 2019). Therefore, having a small-sized class would lead to high academic achievement by students (Filges et al., 2018; Krueger, 2002; Shin & Chung, 2009). Lin, Kwon, and Zhang (2019) found a negative relationship between class size and student achievement in an online education context. This relationship is observed when the class size is more than 45 students. Alivernini, Cavicchiolo, Manganelli, Chirico, and Lucidi (2020) found that students in small sized classrooms show more psychological well-being at school, which is assoicated with high academic performance.

In contrast, some researchers support the idea that large class size is associated with high student achievement. They justify their claims on the bases that the large class size leads to more collaboration and peer to peer tutoring opportunities. Hill (1998) found that accounting students in large classes outperformed students in small classes. In a university context, Ramchander and Naude (2018) reported that increasing the number of enrollments in one class does not impact student academic achievement. This argument is supported by Ake-Little, von der Embse, and Dawson (2020), who claimed that class size does not affect students' performance in the university setting. On these foundations, the following hypotheses are formulated.

H2a. The large class size impacts the class average.
H2b. The large class size impacts the rate of success.

Educator gender could be an influential factor in illustrating student academic achievement. Prior research found that male and female educators vary significantly regarding their ability to teach

(Armstrong, 2015; Clotfelter, Ladd, & Vigdor, 2010). Armstrong (2015) found contradictory evidence on the relationship between educator age and students' academic performance based on the context of the evidence (i.e., country). Sykes (2017) reported that the students of female Algebra I teachers outperform the students of the male teachers. However, the empirical evidence on the impact of class size on students' academic performance is mixed. Therefore, the following hypotheses are formulated.

H3a. Gender impacts the class average.
H3b. Gender impacts the rate of success.

In educational research, there are few studies that examine the bias in teaching; most of them cover bias in relation to demographical variables such as gender, age and race (Bischoff, Ejrnæs, & Rubin, 2021; Boring, 2017; Malouff, 2008; Mengel, Sauermann, & Zölitz, 2019). This study introduces the course convener variable to examine whether students who enrol in the convener class achieve higher grades than the students in other classes. In general, universities open multiple classes for one course. For example, the principle of accounting course might require 10 classes each semester to meet the high enrolments of the students. Therefore, it is normal to have a course convener to facilitate the coordination amongst the different classes' educators. Since the course convener is one of the course educators, it is anticipated that the students who enrol in the convener class could have higher grades. The reason justifies this is that the course convener might emphasize what course content could be inserted in the exam. Therefore, the students who enrol in the convener class might be prepared for the exam more than those in other classes. Therefore, the following hypotheses are formulated.

H4a. Class coordination impacts the class average.
H4b. Class coordination impacts the rate of success.

3. Methods

3.1 Study sample

The data utilised in this study was carefully obtained from secondary sources within the Admission and Registration department of the University. We conducted an extensive data collection process that encompassed various offices within the specified sector in order to obtain a diverse and inclusive dataset.

The primary stage of data collection was centred around acquiring the names of the faculty members. The subsequent phases encompassed the collection of comprehensive records pertaining to the academic semesters and years in which they were employed, along with the specific subjects they taught during these timeframes. Additionally, we have compiled relevant data regarding the variables under investigation, which will be further expounded upon in subsequent sections of this report. It is important to note that the data covers the period from 2015 to 2020.

3.2 Study models and variable measurements

The main aim of this study is to examine the association between student academic achievement and different characteristics of instructors and classroom environments. Our primary objective is to analyse the influence of various factors, including Teaching Experience, External Experience, Class Size, Gender, and the involvement of a Course Coordinator, on student outcomes. In the assessment of performance metrics, we employ two key indicators: the class average and the success rate. In order to ensure a comprehensive and rigorous analysis, we utilise two interconnected analytical models to thoroughly examine the data, as described in the following sections.

Model 1 is specifically designed to explore the relationship between student performance, denoted by the class average, and various attributes of instructors and classroom environments. Through this model, we seek to rigorously evaluate the following hypotheses: H1a, H1c, H2a, H3a, and

H4a.

Model 1:

$$Class\ average_{it} = \alpha + \beta_1 Teaching\ Experience_{it} + \beta_3 Outside\ Experience_{it} + \beta_4 Class\ size_{it} + \beta_5 Gender_{it} + \beta_6 Coordinator_{it} + \sum_{it} Control\ variables + \epsilon$$

Model 2 is specifically designed to explore the relationship between student performance, denoted by the rate of success, and various attributes of instructors and classroom environments. Through this model, we seek to rigorously evaluate the following hypotheses: H1b, H1d, H2b, H3b, and H4b.

Model 2:

$$Rate\ of\ Success_{it} = \alpha + \beta_1 Teaching\ Experience_{it} + \beta_3 Outside\ Experience_{it} + \beta_4 Class\ size_{it} + \beta_5 Gender_{it} + \beta_6 Coordinator_{it} + \sum_{it} Control\ variables + \epsilon$$

Where: the operationalization of the Class Average refers to the calculation of the mean score achieved by all students enrolled in a certain course throughout each academic year. The calculation involves the aggregation of individual exam results for all students, which are subsequently divided by the total number of pupils in the class. This metric functions as a representative measure of overall academic achievement and facilitates the ability to make comparisons among various courses and teachers.

The Rate of Success refers to the proportion of students enrolled in a certain course who attain or surpass a predefined standard of competency within each academic year. The rate is determined by the division of the count of students who reach the specified benchmark by the overall count of students in the class, followed by the multiplication of the quotient by 100. The purpose of this variable is to measure the efficacy of instructional methods in facilitating students' achievement of predetermined academic objectives.

Teaching experience refers to the duration, measured in years, during which an instructor has been engaged in instructional activities at the institution, specifically during the academic year being examined. This variable functions as a substitute for the instructor's knowledge and understanding of educational methodologies and the cultural norms inside the institution. The calculation is performed on a yearly basis for every teacher in order to account for temporal fluctuations. Although tenure in a post may suggest an extended period of expertise, it is important to acknowledge that experience does not always align with teaching effectiveness.

The variable Outside Experience is a binary categorical variable that is assigned a value of '1' if an instructor has professional or academic experience outside of their present university, and a value of '0' if they do not possess such experience. The assessment is conducted on a yearly basis for each teacher. The variable seeks to measure the extent of an instructor's experience in various educational or professional environments, which has the potential to enhance their teaching methodologies.

Class Size is the number of pupils in a course, documented annually by each instructor. This variable indicates the educational setting and may affect teaching tactics and academic achievements. Class size gives a picture of the learning environment, but it may not completely convey its complexity. Gender is a binary variable, '1' for male teachers and '0' otherwise. To assess gender-related disparities in instructional efficacy or student outcomes. The variable labelled as Coordinator is a binary indicator that is assigned a value of '1' if a certain course has been assigned a designated coordinator for the academic year, and '0' if it does not have a designated coordinator. The purpose of this variable is to measure the level of structural support that instructors have access to, which has the potential to impact the quality of course delivery.

The control variables include Overseas graduate is a binary variable, and it is assigned a value of one if the student, for a given instructor in a specific year, graduated from an overseas institution. Otherwise, the value is zero. The purpose of this variable is to consider potential fluctuations in student background that may impact academic achievement or levels of involvement. Number of qualifications is a categorical variable, and it is coded as 2 if the student, under a specific instructor in a particular year, possesses both a bachelor's and master's degree. It is coded as 3 if the student holds a Bachelor's, Master's, and a PhD. The purpose of this variable is to measure the educational history

of the student, which has the potential to impact their academic achievement or level of involvement in the course. Age is the age of the instructor in each year. It quantifies the duration of time from the instructor's birthdate to the current academic year.

4. Empirical Results

4.1 Descriptive analysis

Table 1 shows the descriptive results. The data in *Panel A* provides insight into the interconnected aspects of the educational setting, encompassing both the achievements of students and the attributes of the instructors who influence them. The class average, characterised by a mean value of 0.526 and a relatively modest standard deviation of 0.103, implies a consistent pattern of student performance. This suggests that the instructional approaches utilised in the class generally meet the needs of the majority of students. The aforementioned consistency is further underscored by the average success rate of 0.779.

Nevertheless, the fluctuation in this rate of achievement serves as a subtle indication that although a significant number of individuals achieve exceptional results, there exist specific groups of students who may require more personalised assistance or additional resources. Upon delving into the characteristics of the educators, it is evident that the average teaching experience is a commendable 10.823 years. This indicates a harmonious blend of newly minted academic individuals and experienced professionals. The equilibrium observed in the age distribution of instructors is characterised by an average age of 45.718 years, which signifies a harmonious blend of youthful vigour and accumulated wisdom. The average class size of 65.974 students indicates that educational institutions tend to prefer moderately sized classes, possibly in order to achieve a balance between personalised instruction and the advantages of collaborative learning.

Table 1: Descriptive results

Panel A: Continuous variables

Variables	Mean	SD	Min	Max	Median	skewness	kurtosis	N
Class Average	0.526	0.103	0.198	0.880	0.530	-0.156	3.289	666
Rate of Success	0.779	0.138	0.029	1.516	0.794	-0.542	5.435	666
Teaching Experience	10.823	5.176	1.000	25.000	10.000	0.592	3.313	666
Class size	65.974	27.977	6.000	154.000	66.000	0.150	2.326	666
Age	45.718	8.628	30.000	72.000	45.000	0.494	2.964	666

Panel B: Binary variables

Outside Experience	
Instructress with outside experience	303 (% 45.50)
Instructress with no outside experience	363 (% 54.50)
Gender	
Male	476 (% 71.47)
Female	190 (% 28.53)
Coordination	
The Instructress coordinated the course	220 (% 33.03)
The Instructress doesn't coordinate the course	446 (% 66.97)
Overseas Graduate	
Teacher is an overseas graduate	420 (% 63.06)
Teacher is not an overseas graduate	246 (%36.94)
Number of Qualification	
Teacher has bachelor's and master's degrees	231 (% 34.68)
Teacher has Bachelor, Master, and PhD degrees	435 (% 65.32)

The data in *Panel B* provides a concise overview of the demographic and professional characteristics of instructors and the academic interests of their students. Inspecting the profiles of instructresses reveals that 45.50 percent have outside academic experience, thereby bringing a variety of skills to the classroom. With 71.47 percent male instructors, the academic landscape appears to be male dominated. Only one-third of respondents have had course coordination responsibilities, indicating a clear separation between instructional and coordination duties. Turning to students, a notable proportion of 63.06% possess a foreign educational background, indicating the presence of a diversified and global student body. The qualifications demonstrate a strong emphasis on intellectual rigour, as seen by the fact that 65.32% of students have a comprehensive range of academic credentials, including Bachelor's, Master's, and PhD degrees. The combination of diverse teaching backgrounds and a highly accomplished student body indicates a climate conducive to engaging intellectual discussions and diverse learning opportunities. According to Blanca, Arnau, López-Montiel, Bono, and Bendayan (2013), it is suggested that skewness values falling within the range of -2.49 to 2.33, and kurtosis values ranging from -1.92 to 7.41, are approximately indicative of a normal distribution, and based on that, the result in the table indicates that the data is normally distributed.

4.2 Correlation analysis

The correlation table (i.e., Panel A) highlights noteworthy associations between the variable of Class Average and many other academic factors. A significant inverse relationship exists between the average performance of a class and the level of teaching experience possessed by the educators (-0.254, p<0.01). This finding suggests that when teachers gain more experience, there is a likelihood of seeing lower class averages, which might potentially indicate a greater emphasis on academic rigour or the presence of more demanding course content. In contrast, there exists a positive correlation between Class Size and Class Average (r = 0.311, p < 0.01), suggesting that bigger classrooms may exhibit better average scores, maybe attributable to a more diverse range of student skills. In the present study, a modest but statistically significant connection (r = 0.138, p < 0.01) was seen between the variable of Class Average and the function of Coordinator. This finding implies that courses in which a coordinator is involved may potentially have a favourable influence on student performance. The correlation coefficient of -0.090, with a significance level of p<0.1, hints at a nuanced difference in performance metrics between domestic and internationally educated students. When observed collectively, these correlations suggest a multi-faceted relationship between student performance, as indicated by Class Average, and various academic and demographic variables.

Moving to Panel B, the results offer a comprehensive analysis of the relationships between the Rate of Success and several academic factors. There is a noticeable inverse relationship seen between the Rate of Success and Teaching Experience (-0.197, p<0.01), indicating that educators with more experience may establish higher standards or present more demanding material, perhaps resulting in differing rates of student success. On the other hand, there is a significant positive correlation between Class Size and Rate of Success (r = 0.283, p < 0.01), suggesting that bigger class sizes may be associated with better rates of success, perhaps owing to the presence of a wider range of student abilities.

Table 2: Correlation Analysis

Panel A: Class average

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(1) Class Average	1.000								
(2) Teaching Experience	-0.254***	1.000							
(3) Outside Experience	0.004	0.457***	1.000						
(4) Class size	0.311***	-0.117***	0.016	1.000					
(5) Gender	0.006	-0.203***	-0.250***	-0.007	1.000				
(6) Coordinator	0.138***	-0.125***	-0.001	0.136***	0.101***	1.000			

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(7) Overseas Graduate	-0.090*	0.114***	0.231***	-0.019	-0.323***	0.048	1.000		
(8) Number of Qualifications	-0.032	0.092**	0.330***	0.001	-0.245***	0.116***	0.743***	1.000	
(9) Age	-0.174***	0.755***	0.546***	-0.077**	-0.339***	-0.067*	0.375***	0.327***	1.000
*** p<0.01, ** p<0.05, * p<0.1									

Panel B: Rate of success

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(1) Rate of Success	1.000								
(2) Teaching Experience	-0.197***	1.000							
(3) Outside Experience	0.015	0.457***	1.000						
(4) class Size	0.283***	-0.117***	0.016	1.000					
(5) Gender	0.004	-0.203***	-0.250***	-0.007	1.000				
(6) Coordinator	0.107***	-0.125***	-0.001	0.136***	0.101***	1.000			
(7) Overseas Graduate	-0.045	0.114***	0.231***	-0.019	-0.323***	0.048	1.000		
(8) Number of Qualifications	-0.004	0.092**	0.330***	0.001	-0.245***	0.116***	0.743***	1.000	
(9) Age	-0.155***	0.755***	0.546***	-0.077**	-0.339***	-0.067*	0.375***	0.327***	1.000
*** p<0.01, ** p<0.05, * p<0.1									

Furthermore, there exists a noteworthy positive connection (0.107, p<0.01) between the Coordinator position and the Rate of Success. This suggests that the involvement of instructors in coordination duties potentially has a beneficial impact on students' success indicators. The observed correlation coefficient of -0.155 (p<0.01) suggests a modest inverse association between Age and the variable under consideration. This finding may indicate potential disparities in teaching approaches or professional expectations amongst educators of various age groups. According to Gujarati (2010), when the Variance Inflation Factor (VIF) value exceeds 10, it indicates the existence of significant multicollinearity among the predictor variables. The mean variance inflation factor (VIF) for each variable was computed to be less than 10, indicating no significant multicollinearity issues. Additionally, the average VIF value was found to be 1.96 for the model. This discovery indicates that our model is not encountering this issue. In conclusion, the data suggests that the achievement levels of students are impacted by a combination of variables, such as the instructor's level of expertise, the size of the class, the extent of coordinating duties, and the age of the students. The correlations revealed in this study offer preliminary insights into the associations between the Rate of Success and certain academic characteristics. Subsequent sections will do a more comprehensive investigation to provide greater clarification on these relationships.

4.3 Regression analysis

The use of a panel design poses challenges despite the yearly collection of data for each teacher, due to the granularity of the data. The conventional panel format is not suitable for the data structure due to the fact that an academic year consists of three semesters and an instructor may teach the same course numerous times within that duration. Therefore, we will use Ordinary Least Squares (OLS) regression for our analysis. To ensure the reliability, we conducted an OLS analysis with year fixed effects. This approach allows us to control for any time-specific fluctuations or trends that might potentially influence the variables under investigation. Following that, an OLS model is used, including individual fixed effects to account for any unobservable, time-invariant individual attributes of the educators that may have an impact on the results. In order to comprehensively adjust for possible confounders, an OLS model with two-way fixed effects is used. This approach effectively addresses both time-specific and individual-specific heterogeneities (Freeman & Weidner, 2021).

The results in Table 3 Panel A shows the coefficient linked to *Teaching Experience* is -0.0057, which is statistically significant at the 1% level. This intriguing finding suggests that while

experienced educators undoubtedly possess extensive pedagogical knowledge, there may be aspects of their teaching methods that may be improved with modernised updates. This statement underscores the potential value of implementing repeated training sessions specifically designed for tenured professors. Thus, **H1a** which states that *Teaching experience impacts class average* is accepted. The variable "*Outside Experience*" has a statistically significant positive coefficient of 0.0270, with a significance level of 1%. This suggests that the act of being exposed to external factors, regardless of their specific nature, may measurably improve the effectiveness of education. Educational institutions may contemplate the strategic benefits associated with the recruitment of instructors possessing different backgrounds, or alternatively, fostering opportunities for existing faculty to partake in sabbaticals in order to acquire a range of experiences. Hence, **H1c** which states that *Other university teaching experience impacts class average* is accepted. In addition, the variable representing Class Size has a coefficient of 0.0010, indicating statistical significance at the 1% level. In practical application, this may suggest possible benefits associated with bigger class dynamics. Nevertheless, it is crucial for educational institutions to maintain a delicate equilibrium by providing the necessary infrastructure and teaching tools to preserve the integrity of the educational experience. Therefore, **H2a** which states that *The large class size impacts the class average* is accepted.

Table 3: Regression analysis

Panel A: Class average is the dependent variable.

Variables	Main model	Robustness checks		
	OLS regression	OLS with year fixed effect	OLS with instructors fixed effect	OLS with two-way fixed effect
Teaching Experience	-0.0057***	-0.0053***	-0.0354***	-0.0335**
	(0.0010)	(0.0010)	(0.0119)	(0.0133)
Outside Experience	0.0270***	0.0246**	-0.1673***	-0.1562***
	(0.0098)	(0.0097)	(0.0395)	(0.0422)
Class size	0.0010***	0.0009***	0.0006***	0.0005***
	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Gender	-0.0126	-0.0124	0.3012	0.2947
	(0.0086)	(0.0087)	(0.2621)	(0.2922)
Coordinator	0.0170**	0.0199**	0.0278***	0.0292***
	(0.0080)	(0.0080)	(0.0096)	(0.0096)
Overseas graduated	-0.0257**	-0.0242**	0.0165	-0.0136
	(0.0115)	(0.0114)	(0.0636)	(0.0708)
Number of qualifications	0.0023	-0.0013	0.2345**	0.2177**
	(0.0117)	(0.0117)	(0.0982)	(0.1083)
Age	0.0002	0.0003	-0.0014	0.0018
	(0.0007)	(0.0007)	(0.0015)	(0.0015)
Constant	0.5205***	0.5193***	0.1051	-0.0164
	(0.0402)	(0.0412)	(0.4494)	(0.4969)
R-Squared	0.1731	0.2003	0.3293	0.3457
Years	Not included	Included	Not included	Included
instructors	Not included	Not included	Included	Included
N	666	666	666	666

Note: Models are estimated by using robust standard error. Standard errors are presented in parentheses. *, **, *** indicate statistical significance at $p < 0.1$, $p < 0.05$ and $p < 0.01$, respectively.

The results also show that *Gender* has no significant impact on the class average. Therefore, **H3a** which states that *Gender impacts the class average* is rejected. It is worth mentioning that teachers who assume *Coordinator* duties seem to possess a favourable advantage, as shown by a statistically significant coefficient of 0.0170 at a 5% level of significance. This phenomenon certainly indicates the enhanced comprehension that these coordinators get with regards to comprehensive curriculum development and implementation. Accordingly, **H4a** which states that *Class coordination impacts the class average* is accepted. As for the control variables, the variable representing those who graduated

from overseas has a coefficient of -0.0257, which is statistically significant at the 5% level. The dichotomous nature of this conclusion highlights the intricacies involved in the integration of academic experiences abroad. The experience of being exposed to foreign contexts may serve as a catalyst for the development of a wide range of educational ideas. However, it also raises concerns over the ability of instructors to effectively adapt to and conform with local teaching paradigms. Both *Number of qualifications* and *Age* provide no significant evidence for the relationship with the class average.

In regard to the robustness tests, it is notable that the coefficients for Teaching Experience and Outside Experience exhibit consistent significance and variation across the various models. This observation underscores the complex interplay between these factors and the result. The change from positive to negative coefficients for Outside Experience, especially when examining instructor-specific effects, is noteworthy. This observation highlights the need for more investigation into the unique nature of external experiences that have the greatest impact on pedagogical results. The enduring relevance of the Coordinator function in all models highlights its broad educational value. Furthermore, the complex interaction of the Number of qualifications in the instructor-specific model illustrates the delicate equilibrium between official qualifications and innate teaching qualities. Upon analysing these facts, it becomes apparent that the effective combination of identifiable patterns and comprehensive teaching approaches is crucial for maximising educational results.

Panel B: Rate of success is the dependent variable.

Variables	Main Model	Robustness checks		
	OLS regression	OLS with year fixed Effect	OLS with instructors Fixed Effect	OLS with two-way fixed effect
Teaching Experience	-0.0044***	-0.0036**	-0.0408**	-0.0379
	(0.0015)	(0.0014)	(0.0194)	(0.0233)
Outside Experience	0.0341***	0.0258**	-0.0982***	-0.0704
	(0.0123)	(0.0116)	(0.0373)	(0.0455)
Class size	0.0012***	0.0010***	0.0007***	0.0006***
	(0.0002)	(0.0002)	(0.0002)	(0.0002)
Gender	-0.0118	-0.0061	0.6691	0.6649
	(0.0137)	(0.0134)	(0.4228)	(0.5050)
Coordinator	0.0152	0.0248**	0.0343**	0.0433***
	(0.0120)	(0.0112)	(0.0144)	(0.0131)
Overseas Graduate	-0.0134	-0.0130	0.1578*	0.0594
	(0.0162)	(0.0155)	(0.0954)	(0.1147)
Number of qualifications	0.0040	-0.0036	0.2753*	0.2469
	(0.0161)	(0.0155)	(0.1593)	(0.1887)
Age	-0.0012	-0.0005	-0.0049**	0.0038*
	(0.0010)	(0.0010)	(0.0019)	(0.0021)
Constant	0.7930***	0.7518***	-0.0299	-0.3920
	(0.0613)	(0.0599)	(0.7173)	(0.8491)
R-Squared	0.1234	0.2408	0.2643	0.3518
Years	Not Included	Included	Not Included	Included
instructors	Not Included	Not Included	Included	Included
N	666	666	666	666

Note: Models are estimated by using robust standard error. Standard errors are presented in parentheses. *, **, *** indicate statistical significance at $p < 0.1$, $p < 0.05$ and $p < 0.01$, respectively.

The results of Panel B, where the dependent variable is the rate of success show that *Teaching Experience* has statistical significance at the 1% level, as shown by its coefficient of -0.0044. This finding suggests that there is a little decline in the rate of success as teachers accumulate more teaching experience. One plausible interpretation could posit that experienced educators may be adhering to conventional pedagogical approaches that may not resonate as effectively with contemporary cohorts of students. Alternatively, it may indicate that more seasoned instructors are assigned to more demanding courses or students, thereby influencing their rate of success. Thus, **H1b**

is which states that *Teaching experience impacts the rate of success is* accepted. The variable *Outside Experience* has a statistically significant positive coefficient of 0.0341 at the 1% significance level. This implies that educators who possess varied experiences outside the conventional classroom setting may provide distinctive perspectives and approaches that might augment the level of achievement. One potential interpretation is that these external experiences provide educators a wider framework or practical applications that connect more effectively with pupils, so making courses more relevant and influential. Therefore, **H1d** which states that *Other university teaching experience impacts* the rate of success is accepted. The coefficient of the *Class Size* variable is 0.0012, and it is statistically significant at the 1% level. This suggests a potential association between higher class sizes and the success rate. However, it is important to note that this also functions as a prompt to guarantee the preservation of instructional excellence, especially when dealing with bigger groups of students. Thus, **H2b** which states that *the large class size impacts the rate of success* is accepted. Both *Gender* and *Coordinator* shows no significant evidence with the rate of success. Therefore, both **H3b** and **H4b** are rejected. As for the control variables which includes *number of qualifications* and *Age* provide no significant evidence as well.

Moving to the robustness check results, the negative connection of the *Teaching Experience* variable is consistent across all models. However, the coefficient becomes more pronounced in the models that include instructor-specific effects. This amplification may suggest the presence of intrinsic individual variables that contribute to the outcome, in addition to instructional experience. The phenomenon of *Outside Experience* undergoes a fascinating transformation. Although the first effects are favourable, the teacher fixed effect models ultimately provide unfavourable outcomes. The potential impact of external encounters may vary based on the specific characteristics of teachers. The increasing prominence of the *Coordinator* role across many models highlights its inherent value. The observed increasing positive association indicates a possible advantage of coordinating roles in determining the rate of success. The variable representing *Age*, which was previously shown to have no significant impact, becomes noteworthy when included in the teacher fixed effect model. This observation suggests that after the influence of individual traits is accounted for, age begins to emerge as a discernible factor in shaping success rates. The relevance of *Overseas Graduate* and *Number of Qualifications* exhibits irregular patterns, underscoring the intricate interplay between educational backgrounds and their impact on rates of success. The intermittent importance of these traits implies that their influence may be contingent on the context, subject to variation depending on external causes or interactions with other variables.

5. Discussion and Conclusion

In this study, we examined the impact of multiple accounting educators' characteristics on accounting students' academic performance. The dependent variable – students' academic performance- has been measured using two proxies, which are the class average and percentage of successful students from the class. On contrary, multiple proxies have been used to measure the study independent variable which are the educators' characteristics and class size. Using different formats and proxies to measure the study variables lends this study's results an appropriate level of credibility and enhance its robustness.

Among other variables, the instructor teaching experience variables has been examined in relation to its impact on accounting students' academic performance. The teaching experience variable has been examined in this study using different formats and proxies, these examined different variables formats are, first, the number of experience years in teaching, and second, other university teaching experience as dummy variable. In this study first four hypotheses are linked with the experience characteristics, two hypotheses state that accounting educators with many years of experience will positively impact on their accounting students' academic performance and the class success percentage. The other two hypotheses state that having a teaching experience in other university will also positively impact on their accounting students' academic performance and the

class success percentage. Based on the statistical analysis, the tested 4 hypotheses have shown asymmetrical results as the relationship between instructor teaching experience is statistically significant and negative influence on students' performance, while the relation between the other university teaching experience variable is statistically significant and positive influence on students' academic performance.

This study results in term of relation between the years of teaching experience variable on students' academic performance is consistent with prior studies that support the argument of high teaching experience of an educator is not a factor that might enhance the students' academic performance if the educator did not accompany this experience with the relevant development of a new teaching method (Alshurafat et al., 2020; Carr, 2006; Gallagher, 2004; Harbison & Hanushek, 1992). However, this study results in term of relation between the other university teaching experience variable on students' academic performance is consistent with prior studies that support the argument of increasing experience develops the educator's intellectual and technical teaching capability (Darling-Hammond, 2000; Rockoff, 2004).

In relation to the classes size, this study found that the large class size variable is statistically significant and positive influence on students' performance. Furthermore, the findings of this study support the argument put forward by earlier research that large class sizes can lead to more collaboration and peer-to-peer tutoring opportunities. These opportunities, in turn, can positively impact student achievement (Ake-Little et al., 2020; Hill, 1998; Mansour, Alzyoud, Abuzaid, & Alshurafat, 2023; Ramchander & Naude, 2018; Wright et al., 2019). Based on the above results, it is recommended to design classroom in way that accommodates larg number of students and allows for more collaborative communication amongest the students.

We investigated if gender had an impact on the class average and found no significant relationship. Our research design and data analysis were robust, and we controlled for potential confounding variables. Our findings refute previous studies and contribute valuable insights to education (Armstrong, 2015; Clotfelter et al., 2010). Finally

Based on statistical analysis, the course coordinator variable has a positive and significant impact on students' performance, specifically their average grade. This implies that students who were under certain course coordinators tended to achieve higher average grades than others. The course coordinator's teaching style, ability to engage students, and effectiveness in conveying course material may contribute to this positive influence. However, it's important to note that the lack of statistical significance between the course coordinator variable and the rate of success doesn't necessarily mean that there's no influence. Instead, it suggests that the course coordinator might not directly affect the proportion of students who pass or fail the course.

This research has significant implications for education, accounting, and policy. Educators can improve their teaching approaches, curriculum developers can align programs with student needs, and institutions can invest in teacher training. Policymakers can create evidence-based policies, and institutions can develop targeted support systems for students. Gender equity can be promoted, and quality assurance can be improved. Future research can build on these findings to enhance accounting education and the profession.

Future research on accounting education could involve conducting longitudinal studies, comparative studies, and mixed-methods research. Investigating the impact of innovative teaching methods and exploring student motivation and engagement can also provide valuable insights. However, limitations such as generalizability and causation vs. correlation should be considered. Additionally, the sample size and data availability may impact the research's validity. Despite these limitations, future research can build on the current study's foundation to enhance our understanding of the factors that influence academic performance in accounting education.

The study's implications call for educators to refine teaching practices, institutions to invest in teacher training, and policymakers to promote and improve quality assurance. Future research directions include investigating innovative teaching methods and student motivation and engagement. The study provides some insights into the reasons behind the results. Teaching

experience may be a negative influence due to educators becoming complacent with their teaching methods, or a positive influence due to exposure to more teaching methods. Larger class sizes positively impact student performance due to increased opportunities for collaboration and peer-to-peer learning. Gender did not play a major role in students' academic performance. Effective course coordinators may contribute to higher average grades through clear presentation and innovative teaching methods. The study suggests areas for future research, such as investigating innovative teaching methods and exploring student motivation and engagement. Factors affecting academic performance are often complex and multifaceted, involving interactions between educators, students, teaching methods, curriculum, and institutional policies.

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