Teaching Quality Dimensions as Antecedents of Academic Performance in Financial Accounting: SERVQUAL Perspective

**Abstract:** Accounting teaching quality goes beyond mere content delivery and involves fostering an engaging, well-structured, and practice-oriented learning experience that meets student expectations and enhances learning outcomes. To understand these aspects, accounting teaching quality should be thoroughly broken down into its various components and each component studied as a potential factor influencing student performance. This study investigates the effect of teaching quality dimensions on undergraduate students' academic performance in financial accounting within public universities in Ghana. Using the SERVQUAL model, the present study examines five key dimensions: tangibles, reliability, responsiveness, assurance, and empathy. Data were collected through a survey of 355 students and analysed using structural equation modelling (SEM). The findings reveal that reliability and responsiveness significantly and positively influence students' financial accounting performance. In contrast, assurance, empathy, and tangibles show no significant effects. The study highlights the importance of consistent, accurate instruction and timely support in improving student financial accounting performance. These insights provide a foundation for enhancing teaching practices in financial accounting and aligning instructional strategies with student expectations to improve academic success.

**Keywords:** Accounting teaching quality, financial accounting performance, SERVQUAL model, teaching dimensions, reliability, responsiveness, structural equation modelling (SEM), student expectations, public universities, Ghana, academic success.

**1. Introduction**

Financial accounting is one of the first accounting courses that freshmen take at college or university as they pursue their business degrees. In this course, concepts are introduced to students to prepare them for the responsibility of future accountants and business professionals who will apply their skills and knowledge to manage financial information accurately and responsibly (Papageorgiou & Callaghan, 2020). The course is designed to help students develop the skills of recording, organising, selecting, quantifying, assessing, summarising, and displaying financial information to make informed decisions (Taiwo, 2022). The primary objective of teaching financial accounting is to equip students with these technical and professional abilities necessary for carrying out financial duties in any business organisation; because financial information is a critical component of most company decisions.

The measure of the extent to which students develop financial accounting knowledge and skills is determined by the level of their academic performance. According to Orim et al. (2023), academic performance is the desired results that students achieve: referring to the degree of success learners acquire in their accounting studies. It gauges how successfully a student, teacher, or institution has been in the course of achieving the set learning goals. Generally, it is taken as the expected end result of financial accounting lessons (Owoeye et al., 2022). It is typically assessed through assignments, exercises, and continual evaluation in the classroom, in addition to internal and external examinations (Ile & Nkiruka, 2020). Since performance in financial accounting is a measure of how well students satisfy the academic standards set by lecturers or any tertiary institution, it influences students' current and future lives (AlAbyadh & Azeem, 2022) and demonstrates their fundamental productivity and capability (Hanushek, 2021; Sothan, 2019).

Academic performance in financial accounting has always been a major concern for universities and colleges. It is not an exception to the general poor performance of tertiary students studying accounting as a major or minor course in tertiary schools over the years (Ahinful et al., 2019). In Ghana, the chief examiner at the Institute of Chartered Accountants has voiced a similar concern, stating that students' overall performance in the majority of financial accounting papers was much below average (Institute of Chartered Accountants, Ghana (ICAG) Examiner's Report, 2019, 2022). According to the report, the cause of this lower performance was poor preparation on the part of students that results from poor instructions they receive from lecturers. Therefore, there is the need for lecturers to ensure students are better preferred for whatever accounting task ahead of them.

The teaching of financial accounting is a labour-intensive task that demands substantial energy and time from lecturers. This complexity is further amplified by the rapid evolution of internationally recognized accounting standards and legal regulations, which require instructors to frequently update course content, teaching materials, and delivery strategies (Sangster et al., 2020). These ongoing changes pose a significant challenge: lecturers should not only stay current with evolving standards but also effectively translate this knowledge into clear, relevant, and engaging instruction for students. Given this dynamic environment, ensuring high-quality accounting teaching becomes crucial.

Accounting teaching quality goes beyond mere content delivery and involves fostering an engaging, well-structured, and practice-oriented learning experience that meets student needs and enhances learning outcomes. To understand these aspects, accounting teaching quality should be thoroughly broken down into its various components and each component studied as a potential factor influencing student performance (Guney, 2009). According to Wygal et al. (2014), the key determinants of teaching quality in accounting, ranked by perceived importance, are: a focus on students, dedication to the teaching profession, thorough preparation and organization, the ability to connect course content to real-world practice, and the skills and attributes of the instructor. Students believe that the quality of accounting instruction depends on aspects of reliability, care, safety, empathy, and tangibility (Borges et al., 2014). Wygal and Stout (2015) identified key characteristics of teaching effectiveness in accounting through evidence gathered from 105 award-winning educators in the United States who were asked to list, in ranked order, the factors they believed contributed to their effectiveness as teachers; the survey revealed that the major characteristics that contributes effective accounting class are: creating a productive class session learning environment, maintaining a strong student focus, thorough preparation and organization, connecting course material to real-world practice, demonstrating passion and commitment to teaching, and designing an effective course learning environment. Given that different studies report different aspects of accounting teaching quality, it is essential to adopt a comprehensive framework for studying these aspects.

Recent studies have applied the SERVQUAL model to study the quality of teaching service provided by universities. For example, research in private universities in Bangladesh demonstrated that factors such as comfortable lecture environments (tangibles), timely service (reliability), and the responsiveness of administrative staff significantly influence student satisfaction (Hoque et al., 2023). Findings in other educational settings highlight gaps between student expectations and perceptions in aspects like responsiveness, empathy, and tangibles, suggesting that improvements in these aspects can enhance overall student satisfaction (Ching et al., 2019). These the versatility of the SERVQUAL model in studying service quality gaps and offer a foundation for exploring how specific dimensions of service quality impact learning outcomes and student satisfaction.

Given the multifaceted nature of accounting teaching quality, the SERVQUAL model could be applicable in investigating the dimensions of accounting teaching quality and the relative importance of each dimension on teaching and students learning outcomes. The SERVQUAL model, originally designed to measure service quality in the business sector, is increasingly being used in educational contexts to assess teaching quality and student satisfaction. It evaluates service quality based on five key dimensions: tangibles, reliability, responsiveness, assurance, and empathy (Parasuraman et al., 1988). In the context of higher education, these dimensions provide a framework for understanding how students perceive and experience teaching services and learning environments.

The SERVQUAL model has proven effective in identifying specific quality dimensions that influence learning outcomes and student satisfaction in accounting. Key factors such as faculty competence (assurance) and personalized attention to student needs (empathy) have been shown to significantly enhance teaching quality (Li et al., 2023). In the context of Ghanaian SeniorHigh students, Debrah and Dwommor (2021) applying the SERVQUAL model in the study of accounting students’ disposition towards accounting lessons reported dissatisfaction with financial accounting lesson delivery. This dissatisfaction frequently arises from inadequacies in both the classroom environment including the quality of facilities and instructional materials and teachers' instructional behaviour. These aspects according to SERVQUAL are equivalent to responsiveness, reliability, competence, and empathy. With these aspects, their deficiencies lead to a pronounced gap between students' expectations and their actual experiences. When these gaps persist, students’ dissatisfaction intensifies, negatively affecting their engagement and academic performance. While the SERVQUAL model has been successfully applied to assess teaching quality in Ghanaian Senior High Schools, it has not yet been applied to investigate which teaching quality dimensions influence students financial accounting performance at the university level.

The role played by the various dimensions of teaching quality according to the SERVQUAL model are not well understood in the context of university undergraduate students in Ghana. There exists a significant gap in research investigating which aspects of teaching quality are predictors of financial accounting performance in Ghanaian universities. The purpose of this study is to fill this knowledge gap by investigating the effects of financial accounting teaching quality dimensions on academic performance among undergraduate financial accounting students in two public universities in Ghana. Applying the SERVQUAL framework which evaluates dimensions such as assurance, reliability, responsiveness, empathy, and tangibles to this context will provide a structured approach to identifying critical aspects of teaching quality that influence student academic outcomes in higher education in Ghana. This study adds to the body of literature in improving financial accounting teaching practices, aligning them with student high expectations, ultimately enhancing student performance.

**2. Literature Review and Hypotheses Development**

**2.1 Service Quality and Students Satisfaction in Higher Education**

Universities worldwide are increasingly prioritizing the quality of their teaching and learning services due to the critical role these aspects play in creating a competitive edge, attracting prospective students, and retaining current ones. Students are regarded as the primary customers of universities, therefore, their expectations should be acknowledged and acted upon. Their perceptions of service quality are shaped by the educational experience they receive (Jancey & Burns, 2013). As a result, maintaining high-quality service standards in teaching and learning is essential to meet student expectations and ensure overall satisfaction.

To ensure the satisfaction of customers (students) within the university system, it is crucial to understand their specific expectations. The service quality of universities is commonly evaluated based on how students perceive their educational experiences (Mbise & Tuninga, 2013). Most research on student satisfaction relies on perception-expectation (P-E) models, which emphasize that satisfaction arises when service delivery meets or exceeds student expectations. From this viewpoint, delivering high-quality service requires careful design and planning of all service-related activities to achieve excellence (Lupo, 2013). Most important of these activities are related to teaching and learning.

**2.2 SERVQUAL and Students Satisfaction with University Teaching and Learning Services**

Traditionally, customer (students) expectations in universities have been classified into key categories: content, attitude, competence, delivery, and reliability (Sahney et al., 2004). From a different perspective, the SERVQUAL model provides a structured approach to identifying the gap between students’ expectations and their perceptions of these services. This model highlights specific quality components that align with students’ expectations and satisfaction (Parasuraman et al., 1988). In this perspective, SERVQUAL defines five interrelated dimensions of service quality: tangibles which refers to physical facilities, equipment, and the appearance of staff; reliability which is the ability to deliver accurate and dependable services; responsiveness which stands for the willingness to help students and offer prompt support; assurance which comprise staff knowledge, politeness, and the ability to inspire trust; and empathy which concerns individualized attention and care for students' needs (Parasuraman et al., 1988). When these dimensions are effectively implemented, they contribute significantly to enhancing student satisfaction and bridging the gap between expectations and actual experiences. This complements the broader goal of universities to build competitive advantages in teaching and learning and meet the expectations of their students.

Empirical studies consistently demonstrate that the SERVQUAL model is an effective tool for assessing student satisfaction with teaching and learning services provided by higher education institutions (HEIs). Research by Sohil and Hassan (2019) indicates that four of the five dimensions of service quality: tangibility, reliability, responsiveness, and assurance have a significant role in student satisfaction. This finding is corroborated by a study in Tanzania by Magasi et al. (2022), which highlighted the importance of tangibles, reliability, responsiveness, empathy, assurance, and compliance in predicting student satisfaction with university services. Alvis and Raposo (2006) found that student perceptions of service quality are strongly influenced by professor competence, responsiveness, and the learning environment. Further supporting evidence comes from research by Ching et al. (2022), which revealed that gaps in responsiveness, empathy, and tangibles negatively affect overall satisfaction. Similarly, Borges et al. (2014) identified that trustworthiness, empathy, and assurance play significant roles in enhancing student satisfaction with accounting courses. These findings emphasize the need for universities to deliver reliable, prompt, and personalized teaching-learning services that meet or exceed student expectations.

**2.3 SERVQUAL and Financial Accounting Teaching Quality**

Based on the supporting literature provided above, we argue that the dimensions of service quality in financial accounting teaching and its effect on academic performance in the university context can be understood in the SERVQUAL perspective, even though this dynamic has not been adequately established, except in a study of senior high school students’ satisfaction of the quality of accounting lessons (Debrah & Dwommor, 2021). Therefore, we propose that the SERVQUAL dimensions:*tangibility, reliability, responsiveness, assurance, and empathy* are important aspects for evaluating the quality of financial accounting teaching and that these have profound effects on academic performance. The following paragraphs proposes and provide further justifications for the hypotheses (H1-H5). Fig. 1 illustrates the hypothesized model.

*H1: The ability of financial accounting teachers to consistently deliver lessons in a reliable and accurate manner (reliability) positively influences students' academic performance.*

Reliability, defined as the ability of teachers to deliver consistent, accurate, and well-prepared lessons, fosters a stable learning environment that enhances student confidence and performance. Research by Alvesson (2013) and Belsito (2016) indicates that students who perceive their teachers as trustworthy tend to perform better academically, as they benefit from clear, predictable instruction and consistent feedback. When students trust that their teachers are reliable, their engagement and performance improve (Darling-Hammond, 2017). In the context of financial accounting, where precision and clarity are critical, reliable teaching ensures students grasp complex concepts and are better prepared for assessments. A study by Sohil and Hassan (2019) found that the reliability of instructors positively influenced student satisfaction, which in turn led to improved academic outcomes. This reinforces the idea that reliable teaching is a positive factor in enhancing students' academic performance in financial accounting.

*H2: Teachers' willingness to respond promptly to students’ needs and questions (responsiveness) positively affects financial accounting students' academic performance.*

Responsiveness includes timely feedback, adapting instruction to students' learning styles, and recognizing individual progress. Studies have shown that when teachers are responsive to students' needs, whether academic, emotional, or behavioral, it fosters a supportive learning environment that positively affects their engagement and achievement (Hattie, 2009; Pianta et al., 2008). Research highlights that responsive teaching not only improves students' understanding of the material but also boosts their motivation, self-efficacy, and overall academic success (Reeve, 2006). Furthermore, teachers' ability to respond to challenges, such as misunderstandings or socio-emotional difficulties, is linked to higher student satisfaction and a stronger sense of classroom community, which collectively contribute to improved performance (Hamre & Pianta, 2001). Responsiveness has been identified as a critical factor in enhancing student satisfaction (Stodnick & Rogers, 2008). When teachers are responsive, students are more likely to engage actively in learning, which boosts their performance (Debrah & Dwommor, 2021).

*H3: Teachers' competence, knowledge, and ability to inspire confidence (assurance) positively affect financial accounting students' academic performance.*

Assurance, which involves teacher knowledge, expertise, and ability to build trust, has a strong positive correlation with student satisfaction (Li et al., 2023; Darling-Hammond, 2017). Competent teachers foster analytical skills and academic achievement (Ingersoll & Strong, 2011). Students' perceptions of their teachers' expertise and subject knowledge directly influence their learning outcomes, as knowledgeable instructors provide clear, accurate explanations that facilitate better understanding (Hill & Chin, 2017). Moreover, teachers who demonstrate competence in both the subject matter and pedagogical techniques foster a positive learning environment that enhances students' engagement and motivation (Tschannen-Moran et al., 1998). Teachers' ability to inspire confidence and assurance in their students also plays a crucial role in academic performance, as students who feel confident in their teachers' abilities are more likely to actively participate and apply themselves to learning (Feldman, 1988). Studies show that when students trust their instructors' competence, they experience less anxiety and are more likely to perform better, particularly in subjects like financial accounting, which require both conceptual understanding and practical application (Frisby et al., 2014).

*H4: Teachers' ability to provide individualized attention and show empathy positively influences the academic performance of financial accounting students.*

Empathy, defined as understanding and addressing individual student needs, significantly enhances student satisfaction and learning outcomes (Sohil & Hassan, 2019; Magasi et al., 2022). Personalized attention and care improve engagement and retention rates (Belsito, 2016). Research has demonstrated that when teachers are able to attend to students' individual learning needs, students benefit from personalized support that enhances their understanding of complex topics, such as those found in financial accounting (Darling-Hammond, 2000). Teachers who show empathy, by acknowledging students' challenges and providing emotional support, contribute to a positive learning environment that fosters student motivation, reduces anxiety, and encourages persistence (Poulou, 2017). Studies have also shown that students who feel personally supported by their teachers are more likely to engage in the learning process, participate in class discussions, and seek help when needed, which in turn improves academic performance (Wentzel, 2010). The combination of individualized attention and empathy helps students develop a deeper sense of trust in their teachers, promoting a more effective learning experience and better academic outcomes in subjects like financial accounting, which often require a high degree of conceptual understanding and practical application (Schneider & Preckel, 2017).

*H5: The quality of classroom environment, facilities, and instructional materials (tangibility) positively influences the academic performance of financial accounting students.*

Empirical studies have shown that tangibles such as physical facilities and learning resources significantly affect students' perceptions of service quality (Magasi et al., 2022). Inadequate facilities can lead to dissatisfaction and hinder learning outcomes (Debrah & Dwommor, 2021). A well-maintained classroom with appropriate lighting, comfortable seating, and access to technology fosters better engagement and concentration, leading to improved learning outcomes (Malik & Rizvi, 2018). The availability of high-quality facilities and resources such as textbooks, software, and multimedia materials enhance students' understanding and application of complex concepts (Shami & Hussain, 2005). A study by Kausar et al. (2017) also found that instructional materials significantly improve student interest and engagement in the subject matter. Furthermore, the integration of technology, especially in financial accounting education, helps students develop practical skills that improve academic performance (Lupo, 2013).

Reliability

Responsiveness

Assurance

Empathy

Tangibles

Financial Accounting performance

H1

H2

H3

H4

H5

Fig. 1: Hypothesized Model

**3. Methodology**

**3.1 Participants and Procedures**

The study employed cross-sectional survey. Cross-sectional survey is used to collect data for a study at one particular point from a sample of a population. For the purpose of this study the target population are defined as full-time third (level 300) and final year (level 400) undergraduate financial accounting students enrolled at the Business Schools/Faculties of five traditional public universities in Ghana. Out of this number, a sample size (n = 355) was computed using the Miller and Brewer (2003) formula at 95% and 5% error margin. We then picked the random sample of 355, because per the calculation we believed that it is more representative of the population. The significance level of 0.05 was selected in order to control the possibility of introducing Type I error (α).

**3.2 Measures**

The questionnaires that were used to collect data is divided into two sections. The respondents' demographic information, name of school, age, gender, academic programme, and year of study (level), was gathered in Section A. Section B measured the constructs of the dimensions of accounting teaching quality. As a result, there were five independent variables: tangibles (TAN), assurance (ASS), responsiveness (RES), empathy (EMP), and reliability (REL). A Likert scale with a weight of 1 (strongly disagree) to 5 (strongly agree) was used to measure each of these five constructs. The SERVQUAL model was used to generate the five dimensions of accounting teaching quality, and as a result, the 22 measurement items developed by Parasuraman et al. (1988) were adapted in the questionnaires. According to the SERVQUAL paradigm, responsiveness, assurance, and tangibles each had four assessment elements, but empathy and dependability each had five. Eight questions about the financial accounting performance of the students made up Section E. The eight items used to measure students' financial accounting performance were derived from Al-Mutawah and Fateel (2018).

A group of lecturers who taught in the field of accounting pre-tested the questionnaires. The recommendations they suggested, mostly about structure and presentation, were followed to improve the questionnaire. To verify face validity and comprehension of item statements, the questionnaire was then pilot tested among 30 undergraduate financial accounting students from two private universities, Garden City University College and Christian Service University College both in Kumasi. The results were positive.

Although 375 questionnaires were administered, 355 questionnaires were correctly filled out following 5 weeks of data gathering. This gave a response rate of 94.66% [(355/375) \*100], which was deemed representative enough for the study.

**3.3 Data Analysis**

We examined the proposed relationships among the variables as shown in Fig. 1 (the hypothesized model) through structural equation modelling (SEM). We employed maximum likelihood estimation in AMOS (version 23) and following the steps outlined by Gerbing and Anderson (1988) in two-phase SEM analysis, we started with the evaluation of the measurement model to ensure that observed indicators corresponded to their underlying constructs. The subsequent phase involved examining the structural model to investigate the relationships between exogenous and endogenous variables. The interpretation of results from both models was based on fit criteria and indices suggested by Hu and Bentler (1999).

**4. RESULTS**

**4.1 Descriptive Statistics and Preliminary Analysis**

*Demographic Information*

Table 1 shows that among the respondents, 27.9% were from UG, 14.1% from KNUST, 22.0% from UCC, 31.3% from AAMUSTED, and 4.8% from SDD-UBID, indicating that most of the Undergraduate Accounting students surveyed were from AAMUSTED. Students in Level 300 made up the majority at 77.2% of the total sample of 355, while Level 400 students comprised the remaining 22.8%. In terms of gender, 74.6% of the respondents were males and 25.4% were females, implying that males dominated the study. Age distribution results indicated that 11.0% were younger than 18, while 44.5% each fell within the age brackets of 18-21 and 22 or older, with most respondents aged 18-21 or 22 and above.

**Table 1: Demographic Information of Respondents**

|  |  |  |
| --- | --- | --- |
|  | **Frequency** | **Percentages (%)** |
| **Institution**  | ***355*** | ***100*** |
| UG | 99 | 27.9 |
| KNUST | 50 | 14.1 |
| UCC | 78 | 22.0 |
| AAMUSTED | 111 | 31.3 |
| SDD-UBID | 17 | 4.8 |
| ***Year/ Level*** | ***355*** | ***100*** |
| Level 300 | 274 | 77.2 |
| Level 400 | 81 | 22.8 |
| ***Gender*** | ***355*** | ***100*** |
| Male | 265 | 74.6 |
| Female | 90 | 25.4 |
| ***Age*** | ***355*** | ***100*** |
| Less than 18 years | 39 | 11.0 |
| 18-21 years | 158 | 44.5 |
| 22 years above | 158 | 44.5 |

*Descriptive Statistics*

For each construct, mean and standard deviation were computed. The Likert scale, which ranges from 1 (strongly disagree) to 5 (strongly agree), was used as a reference for discussing the results (See Table 2).

A positive response (agree range) was given as a mean score larger than 3, and a negative response (disagree range) was defined as a mean score less than 3. Respondents agreed that they receive *Reliable* accounting lectures from their lecturers (mean = 3.619). It was further revealed that all the 5 observed items under this construct had mean scores of greater than 3. This indicates that the respondents agreed that their accounting lecturers can finish the syllabus on time, deliver accounting lessons as promised, impress them from the first lesson, deliver content free of errors, and they are trustworthy when it comes to helping students with their accounting learning issues. The items under *Responsiveness* received positive responses (mean = 4.017). It was discovered that the mean scores for each of the four observed items under this construct were higher than 3. This indicates that the respondents believed that their accounting lecturers are on time and consistent in the classroom, that they inform students of the meeting times, that they are willing to respond to questions from students during class, and that they are ready to assist students in times of need. In addition, majority of the respondents believed that their accounting lecturers provide *Assurance* of their capacity to master the accounting course (mean = 3.778). According to the respondents, their accounting instructors are ready to respond to questions from students during class, that they give students confidence, that they are always polite to students, and that they give students hope that passing accounting is achievable. Furthermore, it was identified that the respondents agreed that their accounting lecturers demonstrate *Empathy*in their students’ progress (mean = 3.635).That is, the respondents concurred that their accounting lecturers treat their students with courtesy, comprehend their needs and challenges in learning accounting, act in their best interests, are prepared to help students outside of class, and provide individualised attention to each student. Lastly, respondents believed that their institutions have the *Tangibles*(facilities) needed to improve their learning (4.076). This is because the respondents agreed that their accounting professors are well-groomed and professional when they arrive at class, that colleges have state-of-the-art teaching tools like computers and projectors, that colleges have aesthetically pleasing resources (books, equipment, etc.) related to accounting instruction, and that colleges have aesthetically pleasing buildings and infrastructure.

Since the total mean score for *Performance in Accounting* construct was 3.710 which is greater than 3, it was concluded that the respondents agreed that they perform well in the accounting course. It was further revealed that all the 8 observed items under this construct had mean scores of greater than 3. This means that the respondents agreed that they are confident in their understanding of accounting, accounting is one of their strengths, learn things quickly in accounting, compared to SHS, their current performance in accounting has improved, are good at working out difficult accounting problems, teach their colleagues who need help in accounting, score high marks in accounting exams, and feel happy about their recent test and exam scores.

**Table 2: Descriptive Results of Accounting Teaching Quality Dimensions**

|  |  |  |
| --- | --- | --- |
| **Accounting Teaching Quality** | **Mean** | **Std. Dev.** |
| ***Reliability*** | ***3.619*** | ***1.109*** |
| Accounting lecturers are able to complete the syllabus on time | 3.744 | 1.147 |
| Accounting lessons are delivered as promised by lecturers | 3.730 | 1.066 |
| My accounting lecturer impressed me during the very first lesson with us | 3.580 | 1.175 |
| Accounting lecturers are able to deliver error-free content | 3.535 | 1.105 |
| Accounting lecturers are dependable in handling students’ accounting learning problems | 3.504 | 1.051 |
| ***Responsiveness*** | ***4.017*** | ***1.081*** |
| Accounting lecturers are punctual and regular in class | 4.104 | 1.004 |
| Accounting lecturers keep students well-informed about the meeting times | 4.085 | 1.085 |
| Accounting lecturers are willing to answer students’ questions in class | 4.001 | 1.135 |
| Accounting lecturers are willing to help students when in difficulty | 3.876 | 1.100 |
| ***Assurance*** | ***3.778*** | ***1.079*** |
| Accounting lecturers are well-prepared to answer students’ questions in class | 3.873 | 1.091 |
| Accounting lecturers instil confidence in students | 3.839 | 1.069 |
| Accounting lecturers are consistently courteous when dealing with students | 3.744 | 0.985 |
| Accounting lecturers make students feel passing accounting is possible | 3.654 | 1.170 |
| ***Empathy*** | ***3.635*** | ***1.037*** |
| Accounting lecturers interact with students in a cordial manner | 3.820 | 1.017 |
| Accounting lecturers understand students’ accounting learning challenges and needs | 3.628 | 1.040 |
| Accounting lecturers have students’ best interest at heart | 3.614 | 1.025 |
| Accounting lecturers are willing to assist students outside class hours | 3.572 | 1.080 |
| Accounting lecturers do offer individual attention to students | 3.541 | 1.023 |
| ***Tangibles*** | ***4.076*** | ***1.051*** |
| Accounting lecturers are neatly and formally dressed when they come to class | 4.141 | 1.064 |
| University has modern education equipment like computers, projectors, etc. | 4.113 | 0.991 |
| University has visually appealing materials (books, equipment, etc.) associated with accounting teaching | 4.104 | 0.999 |
| University has visually appealing infrastructures and facilities | 3.944 | 1.151 |
| ***Total*** | ***3.825*** | ***1.071*** |
| ***Students’ Performance in Accounting*** | ***Mean*** | ***Std. Dev.*** |
| I am confident in my understanding of accounting | 3.848 | 1.060 |
| Accounting is one of my strengths | 3.800 | 1.116 |
| I learn things quickly in accounting | 3.734 | 1.162 |
| Compared to SHS, my current performance in accounting has improved | 3.713 | 1.239 |
| I am good at working out difficult accounting problems | 3.659 | 1.185 |
| I teach my colleagues who need help in accounting | 3.648 | 1.225 |
| I score high marks in accounting exams | 3.639 | 1.152 |
| I feel happy about my recent test and exam scores  | 3.639 | 1.269 |
| ***Total*** | ***3.710*** | ***1.176*** |

*Test of normality*

In quantitative data analysis, ensuring normal data distribution is pre-requisite (Appiah-Kubi, 2024), so skewness and kurtosis tests were conducted to verify this. A distribution is deemed normal if skewness falls within ±2 and kurtosis within ±7 (Byrne, 2010). The analysis confirmed normality, as all variables remained within these acceptable skewness and kurtosis ranges. The results of the normality test are shown in Table 3.

|  |  |  |
| --- | --- | --- |
| **Variables**  | **Skewness** | **Kurtosis** |
| **Statistic** | **Std. Error** | **Statistic** | **Std. Error** |
| Reliability | -.513 | .129 | -.278 | .258 |
| Responsiveness | -.952 | .129 | .737 | .258 |
| Assurance | -.959 | .129 | .406 | .258 |
| Empathy | -.524 | .129 | .047 | .258 |
| Tangibles | -.678 | .129 | .192 | .258 |
| Students’ Interest  | -.706 | .129 | .392 | .258 |
| Students’ Commitment  | -1.032 | .129 | 1.005 | .258 |
| Students’ Performance | -.654 | .129 | -.115 | .258 |

**Table 4: Normality Results**

*Exploratory Factor Analysis (EFA)*

To enhance content validity and ensure each observed variables accurately measure their intended construct, an exploratory factor analysis (EFA) was conducted using SPSS (version 25). Items with factor loadings below 0.5 and/or those that loaded on multiple constructs were excluded (Appiah-Kubi, 2024). For EFA to be valid, specific criteria had to be satisfied, such as Total Variance Extracted (TVE), Kaiser-Meyer-Olkin (KMO), Bartlett’s Test of Sphericity (BTS), and the Determinant of Correlation (DOC) (Fornell & Larcker, 1981). The thresholds include a TVE above 50%, a KMO value over .60, a statistically significant BTS (≤ .05), and a DOC not equal to zero. The results of the EFA, as displayed in Table 4, revealed a TVE of 75.97%, a KMO value of .910, a BTS statistic of 12801.519 (significant at the .01), and a DOC of 5.059E-17. Since all these criteria were met, the retained items were considered appropriate for measuring the intended constructs.

|  |
| --- |
| **Measurement Items** |
| **1** | **2** | **3** | **4** | **5** | **6** |
| REL1 | .880 |  |  |  |  |  |
| REL2 | .688 |  |  |  |  |  |
| REL3 | .673 |  |  |  |  |  |
| REL4 | .894 |  |  |  |  |  |
| RES1 |  | .731 |  |  |  |  |
| RES2 |  | .676 |  |  |  |  |
| RES3 |  | .836 |  |  |  |  |
| ASS1 |  |  | .774 |  |  |  |
| ASS2 |  |  | .728 |  |  |  |
| ASS3 |  |  | .724 |  |  |  |
| ASS4 |  |  | .682 |  |  |  |
| EMP1 |  |  |  | .840 |  |  |
| EMP2 |  |  |  | .680 |  |  |
| EMP3 |  |  |  | .888 |  |  |
| EMP4 |  |  |  | .773 |  |  |
| TAN1 |  |  |  |  | .594 |  |
| TAN2 |  |  |  |  | .731 |  |
| TAN3 |  |  |  |  | .866 |  |
| TAN4 |  |  |  |  | .773 |  |
| SPA1 |  |  |  |  |  | .821 |
| SPA2 |  |  |  |  |  | .808 |
| SPA3 |  |  |  |  |  | .685 |
| SPA4 |  |  |  |  |  | .629 |
| SPA5 |  |  |  |  |  | .885 |
| SPA6 |  |  |  |  |  | .786 |
| Total Variance ExplainedKaiser-Meyer-Olkin Measure of Sampling Adequacy | 75.97% |
| .910 |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 12801.519 |
|  | Df | 630 |
|  | Sig. | .000 |
| a. Determinant | 5.059E-17 |  |

**Table 5: Exploratory Factor Analysis (EFA)**

*Confirmatory Factor Analysis (CFA)*

Following the attainment of the required thresholds in the EFA, a confirmatory factor analysis (CFA) was performed using Amos (v.23) to validate the measurement model. For this validation, multiple fit indices had to meet the set benchmarks, including Standardised Factor Loading (SFL), Chi-Square/Degree of Freedom (CMIN/DF), Standardised Root Mean Square Residual (SRMR), Root Mean Square Error of Approximation (RMSEA), Goodness of Fit Index (GFI), Comparative Fit Index (CFI), and Tucker-Lewis Index (TLI), as recommended by Appiah-Kubi et al. (2024). Acceptable values are SFL > .5, CMIN/DF < 3, SRMR < .08, RMSEA < .08, GFI > .9, and both CFI and TLI > .9. The CFA results, displayed in Table 6 and Figure 2, confirm the model fit, with CMIN/DF at 2.809, SRMR at .064, RMSEA at .055, GFI at .893, CFI at .937, and TLI at .914.

With the CFA criteria met, the standardized factor loadings (SFLs) were used to calculate composite reliability (CR) and average variance extracted (AVE) for convergent validity, alongside Cronbach's alpha (CA) for internal consistency. Following Fornell and Larcker’s (1981) criterion, the thresholds for CR and CA were set at above 0.70 and for AVE above 0.50. As shown in Table 6, all these criteria were met, confirming both convergent validity and reliability for the measurement model.

Robustness tests are crucial in quantitative data analysis to assess how well the dataset fits the predicted model. Partial correlation analysis was used in this work to assess for robustness. When the zero-order correlation coefficients and the partial correlation coefficients do not deviate significantly, robustness is established (Borah et al., 2023). As shown in Table 7, the results indicate no substantial difference between these coefficients, leading to the conclusion that robustness was achieved in this study.

Using the Fornell and Larcker (1981) criterion, the square roots of the average variance extracted (AVE) values were compared against the associated correlation coefficients in order to test discriminant validity. As displayed in Table 6, the minimum square root of AVE was .727, while the highest inter-correlation coefficient was .669. Since the lowest AVE square root exceeded the highest correlation coefficient, the results confirmed discriminant validity for this study.

**Table 6: Confirmatory Factor Analysis (CFA)**

|  |  |
| --- | --- |
| **Model Fitness:** CMIN=1674.33; DF=596; CMIN/DF=2.809; GFI=0.893; TLI=0.914; CFI=0.937; RMSEA=0.055; SRMR=0.064 | **Std. Factor Loadings** |
| ***Reliability (REL): CA=0.831; CR=0.840; AVE=0.569*** |  |
| REL1 | .710 |
| REL2 | .826 |
| REL3 | .762 |
| REL4 | .713 |
| ***Responsiveness (RES): CA=0.828; CR=0.826; AVE=0.619*** |  |
| RES1 | .860 |
| RES2 | .596 |
| RES3 | .873 |
| ***Assurance (ASS): CA=0.818; CR=0.814; AVE=0.529*** |  |
| ASS1 | .554 |
| ASS2 | .756 |
| ASS3 | .686 |
| ASS4 | .876 |
| ***Empathy (EMP): CA=0.878; CR=0.894; AVE=0.685*** |  |
| EMP1 | .938 |
| EMP2 | .950 |
| EMP3 | .758 |
| EMP4 | .619 |
| ***Tangibles (TAN): CA=0.892; CR=0.895; AVE=0.680*** |  |
| TAN1 | .809 |
| TAN2 | .851 |
| TAN3 | .860 |
| TAN4 | .776 |
| ***Students’ Performance (PERF): CA=0.928; CR=0.957; AVE=0.789*** |  |
| SPA1 | .874 |
| SPA2 | .919 |
| SPA3 | .886 |
| SPA4 | .860 |
| SPA5 | .909 |
| SPA6 | .881 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Variables** |  **1** |  **2** |  **3** |  **4** |  **5** |  **6** |  **7** |  **8** |  **9** |  **10** |  **11** |  **12** |
| INST (1) |  - | .175 | -.263 | -.161 | .267 | .025 | .034 | .030 | .082 | -.061 | -.187 | .148 |
| YEAR (2) | .184\*\* | - | .024 | .188 | .068 | .038 | .035 | .067 | .088 | .040 | .055 | .039 |
| GENDER (3) | -.184\*\* | .084 | - | .032 | -.035 | .094 | .074 | .036 | .057 | .077 | .165 | .011 |
| AGE (4) | -.149\*\* | .200\*\* | .086 | - | .003 | .023 | .045 | .074 | .041 | -.006 | .096 | -.040 |
| REL (5) | .273\*\* | .078 | .014 | .014 | ***.754*** | .600 | .549 | .494 | .582 | .440 | .662 | .665 |
| RES (6)  | .032 | .049 | .125\* | .033 | .613\*\* | ***.787*** | .647 | .415 | .618 | .642 | .681 | .689 |
| ASS (7) | .041 | .045 | .103 | .054 | .552\*\* | .659\*\* | ***.727*** | .451 | .571 | .500 | .565 | .520 |
| EMP (8) | .033 | .071 | .049 | .078 | .444\*\* | .415\*\* | .456\*\* | ***.830*** | .230 | .253 | .771 | .332 |
| TAN (9) | .084 | .091 | .065 | .044 | .571\*\* | .608\*\* | .579\*\* | .290\* | ***.825*** | .430 | .588 | .590 |
| PERF (12) | .157\*\* | .054 | .068 | -.025 | .669\*\* | .669\*\* | .502\*\* | .362\*\* | .539\*\* | .493\*\* | .554\*\* | ***.888*** |

**Table 7: Partial Correlation, Zero-Order Correlation and Discriminant Validity**

\*\* significant at the 0.01 level (2-tailed); \* significant at the 0.05 level (2-tailed).

*√AVE are* **bold** *and* underlined

**Assessment of Structural Model, Path Analysis, and Hypothesis Testing**

With regards to the hypothesised paths, it was found that accounting teaching *reliability* has a statistically significant direct positive effect on undergraduate students’ performance in financial accounting ($β=.628;p ˂ .01$). This means that a 100% increase in accounting teaching reliability will result in 62.8% increase in undergraduate students’ performance in financial accounting. Hence, *H1* was accepted by the study. Also, the study found accounting teaching *responsiveness* to have a statistically significant direct positive effect on undergraduate students’ performance in accounting ($β=.293;p ˂ .01$), implying that a 100% increase in accounting teaching responsiveness will result in 29.3% increase in undergraduate students’ performance in financial accounting. Hence, *H2* was accepted by the study. It was discovered that the impact of accounting teaching assurance on undergraduate students’ performance in accounting is positive but statistically insignificant ($β=.013;p ˃ .05$), leading to the rejection of *H3*. Similarly, the study found the effect of accounting teaching empathy on undergraduate students’ performance in financial accounting to be statistically insignificant positive ($β=.143;p ˃ .05$). Hence, *H4* was rejected by the study. Also, accounting teaching tangibles was found to influence undergraduate students’ performance in financial accounting positively but statistically insignificant ($β=.118;p ˃ .05$), which lead to the rejection of *5*. Therefore, at the end of the analysis, the empirical model has two dimensions of financial accounting teaching quality acting as determinants of students accounting performance (See Fig. 2).

**Table 8: Direct Effect Estimates**

|  |  |  |  |
| --- | --- | --- | --- |
| **Direct Paths** | **UnStd. Estimate** | **S.E.** | **C.R.** |
| REL → PERF | .628 | .112 | 5.607\*\* |
| RES → PERF | .293 | .043 | 6.814\*\* |
| ASS → PERF | .013 | .120 | .108 |
| EMP → PERF | .143 | .090 | 1.589 |
| TAN → PERF | .118 | .095 | 1.242 |

Bootstrap Bias-Corrected Confidence Interval at 95%

\*\*Sig. at 1%; \*Sig. at 5%

Reliability (REL)

Responsiveness (RES)

Financial Accounting performance (PERF)

$$β=.628;p ˂ .01$$

$$β=.293;p ˂ .01$$

Fig. 2: Empirical Model

**5. DISCUSSION**

Previous studies have shown considerable evidence of the relationships between teaching quality and academic performance of students among HEIs. However, research on this topic is few in Ghana, that is, only a small number of studies examined the effects of teaching quality dimension variables on undergraduate students' academic performance particularly in the field of financial accounting. This study investigated the extent to which accounting teaching quality dimensions affects undergraduate financial accounting students' performance using cross-sectional data and effective teaching theory in Ghanaian Public Universities.

According to our research, undergraduate students' performance in financial accounting was significantly predicted by the reliability component of accounting teaching. Reliability, according to Asadpoor and Abolfazli (2017), influences consumers' trust in the service provider as well as their general opinion after using the service. According to Kaura and Datta (2012), the human component of service quality in this case, the "people" are the accounting instructors is how reliability is experienced. This suggests that undergraduate students' performance in financial accounting was predicted by the ability of accounting lecturers to deliver lessons as promised, address students' accounting learning difficulties, finish the syllabus on time, provide error-free content, and leave a lasting impression on students during their first encounter. The results of the study concur with those of Arthur et al. (2022), who discovered that students' mathematical achievement was significantly predicted by the reliability component of mathematics instruction quality.

The study also discovered a strong positive relationship between undergraduate students' performance in financial accounting and the responsiveness of accounting teaching. According to Ye et al. (2017), responsiveness is the ability of the service provider to promptly resolve client concerns. As a component of the quality of accounting instruction, responsiveness also refers to the lecturers' capacity to quickly resolve students' difficulties when they are studying financial accounting. According to Kaura et al. (2012), responsiveness is considered a human component of service quality and is made possible via customer service interfaces, websites, emails, and other means in a variety of other service industries. The responsiveness of financial accounting lecturers, demonstrated through their punctuality, readiness to assist students facing challenges, and their openness to answering questions during class, was found to significantly influence students' success in financial accounting. Consequently, undergraduate students' academic performance in accounting improved as a result of the assistance that accounting professors gave. The results of the study are consistent with those of Arthur et al. (2022), who discovered that students' mathematical achievement was significantly predicted by the responsiveness component of mathematics teaching quality.

Khan and Fasih (2014) suggested that when service staff exhibit their knowledge during service interactions, it gives customers confidence in the quality of the service provided. This display of knowledge is even more crucial when evaluating the quality of teaching. Since education revolves around the influence of knowledge, one cannot impart what they do not have. As a sector that requires a deep understanding, the expertise displayed by accounting lecturers instil a sense of confidence in their students. Because their lecturer has the expertise to support their efforts, students are inspired to succeed. Effective communication and personal explanations are seen as essential elements in assessing the quality of services (Alolayyan et al., 2018; Naidoo, 2014). Students' academic performance will improve when lecturers exhibit these qualities in the classroom. Similarly, the current study discovered that accounting teaching assurance, demonstrated by the lecturers' capacity to inspire confidence in their students, gave them the impression that passing financial accounting was feasible, and that the lecturers' readiness to respond to their questions during class had insignificant impact on the financial accounting performance of undergraduate students. The results of the study are inconsistent with those of Arthur et al. (2021), who discovered that students' achievement in mathematics was significantly predicted by the assurance dimension of accounting teaching quality.

According to Khan and Fasih (2014), empathy is the ability of a service business to give each customer's wants and concerns individualised attention, effectively address those needs and challenges, and take responsibility for resolving those challenges. Furthermore, empathy is seen to be a human component of service quality that might enhance student performance in learning environments (Bahadur et al., 2018). For example, giving pupils individualised support will improve their academic achievement. The current results also showed that undergraduate students' financial accounting performance was not significantly impacted by accounting teaching empathy. To put it another way, students' success in accounting was significantly impacted by the ability of accounting lecturers to give each student individualised attention, to genuinely care about their welfare, and to comprehend the difficulties and demands that students encounter when learning financial accounting. This ran counter to the findings of Arthur et al. (2021), who discovered that students' achievement in mathematics was significantly predicted by the empathy dimension of accounting instruction quality.

According to Farooq et al. (2018), tangibles are items that can be seen or touched. Like the other SERVQUAL dimensions, customers perceive and interpret tangibles differently, and service providers use them in diverse ways. The current study found that undergraduate students' financial accounting performance was unaffected by the observable component of accounting teaching quality. In other words, students' performance in financial accounting was unaffected by the facilities' and infrastructure's aesthetic appeal or the lecturers' looks. This was in contrast to the findings of Koklic et al. (2017), who acknowledged tangibles as crucial for service businesses since they are special assets that improve client interaction and experience. However, rather than the aesthetic appeal of the learning environment or the quality of the equipment, the lecturer's qualities (expertise, instructional abilities, interpersonal skills, etc.) are used to evaluate the quality of teaching (perceived service quality) in higher education. For example, a state-of-the-art laboratory or classroom is not required to teach financial accounting. The capabilities (both knowledge and teaching ability) of the lecturer are crucial for accounting education at the higher education level.

Consequently, the results regarding accounting teaching quality in relation to student performance reinforce the effective teaching theory and contribute to the literature for future research on student outcomes.

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