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Bridging the Skills Gap in Accounting Education: Integrating Intellectual and Personal Competencies for Future Professionals

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ABSTRACT

The evolving demands of the accounting profession require a shift in education that emphasizes both technical skills and the development of intellectual and personal competencies. This study investigates how these competencies are integrated into undergraduate accounting education in Ghana, focusing on their alignment with International Education Standard (IES) 3. Using a quantitative cross-sectional survey of 171 final-year accounting students from two public universities, the research evaluates the extent to which students acquire intellectual skills such as critical thinking and decision-making, along with personal skills such as time management and adaptability. Findings reveal a high level of skill acquisition, especially in areas like resource management, informed judgment, and recognizing when to seek expert advice. However, students face challenges in tackling unstructured, complex problems. The study also examines the interrelationship/influence between intellectual and personal skills and, teaching methods such as group discussions, internships, and case studies. Results show strong correlations and statistically significant influence between these pedagogical strategies and competencies development, highlighting the importance of experiential learning. The research concludes that curriculum reforms are necessary to better integrate intellectual and personal competencies, ensuring that graduates are well-prepared for the evolving business landscape. These insights are valuable for educators, policymakers, and professional bodies aiming to enhance graduate employability and professional readiness.

Keywords: Accounting Education, International Education Standards, Professional Competencies, Intellectual Skills, Personal Skills

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1. Introduction

The development of technical skills necessary for accurate financial reporting and regulatory compliance has long been a focus of accounting education. Although this method has guaranteed that graduates have the fundamental skills needed for professional positions, the changing needs of the corporate world necessitate a wider range of abilities. To think critically, analyze complicated situations, and adjust to changing conditions, modern accountants need to possess intellectual and personal capacities that go beyond simple tasks (IAESB, 2019).

Muhamad and Sulaiman (2013) discuss the importance of developing critical thinking skills among accounting graduates in Malaysia. The authors emphasize the need for reforms in accounting education to equip graduates with higher-order thinking abilities, enabling them to navigate advancements in information technology and a competitive global business environment. Crawford et al. (2020) emphasized the need to reassess educational priorities

considering these changes in professional expectations. These days, traditional curricula that teach students to follow rules and regulations are insufficient. The development of intellectual and personal abilities that improve decision-making, problem-solving, passion and dedication to lifelong learning, setting personal standards, and strategic thinking is instead becoming more and more important. This method represents the increasing understanding that accountants need to handle organizational and societal difficulties in addition to technical ones.

Important guidelines for integrating intellectual and personal skills into accounting education is provided by "International Education Standard" (IES) 3. Competencies, including professional skepticism, critical thinking, and information analysis and synthesis, are highlighted in IES 3 (IAESB, 2019). Navigating the intricacies of the contemporary business environment and promoting a comprehensive approach to professional growth requires these competencies. Institutions can better educate students for the complex needs of the accounting profession by coordinating educational outcomes with IES 3.

There are several advantages to including both intellectual and personal skills in the accounting curriculum. It increases students' professional versatility and adaptability on the one hand, but it also calls for significant adjustments to teaching strategies, evaluation techniques, and resource allocation on the other. To effectively address these issues, cooperation between academic institutions, professional associations, and industry players is essential (Jackling et al., 2013).

The IES 3 list of intellectual competencies is supplemented by personal skills, including dedication to lifelong learning, setting high personal expectations for performance, organizing time and resources to meet professional obligations, and approaching new opportunities with an open mind. Promoting a balance between technical expertise and these soft skills requires moral and creative decision-making in teaching. These abilities collectively mold the character and potential of future accountants. This integrated strategy contributes to the integrity and public trust of the profession while guaranteeing that students are prepared to satisfy its technical demands (Awotomilusi & Toluwalope, 2022).

Incorporating both intellectual and personal abilities into accounting education signifies a paradigm shift that is in line with the changing demands of the field. By encouraging critical thinking, ethical consciousness, and flexibility, educators equip graduates to meet the demands of the fast-paced business world of today. Accountants are positioned to foster innovation, preserve public confidence, and support long-term organizational success because of this balance between technical expertise and broader competencies (IAESB, 2019).

In today's job market, companies looking to hire accounting professionals are not just focused on technical expertise—they also value personal and intellectual competencies. Employers rarely post job openings without emphasizing the importance of these essential skills (Kwarteng & Mensah, 2022). However, many accounting graduates struggle to meet these expectations. Their intellectual and personal abilities often fall short of what the modern accounting industry demands (Espina-Romero et al., 2023; Mameche et al., 2020; Senan, 2019). This disconnect raises concerns about whether graduates are adequately prepared to transition smoothly into the workforce.

One of the primary goals of educational institutions is to produce graduates who are ready for the workforce. However, given the evolving nature of the accounting profession, this requires a balanced combination of technical and soft skills (Cernușca, 2020; Vasanthakumari, 2019). Beyond technical knowledge, accountants today must be critical thinkers capable of making sound decisions, solving complex problems, setting personal goals, and embracing lifelong

learning. These skills are crucial for navigating the complexities of today's economic landscape. Research by Low et al. (2013) and Hayes et al. (2022) indicates that many accounting graduates struggle to develop these essential skills, leaving them ill-equipped for the demands of the profession.

Owusu et al. (2019) found that accounting students in Ghana predominantly adopt strategic learning approaches, focusing on achieving high grades rather than deep understanding. This approach limits the development of critical thinking and problem-solving skills, essential components of intellectual competence. Additionally, Awayiga et al. (2010) highlighted that while technical skills are adequately covered, there is insufficient emphasis on soft skills such as teamwork, and ethical reasoning in accounting education. This gap affects the holistic development of personal competencies necessary for professional success. To bridge this skills gap, educators in higher institutions employ various teaching strategies, such as case studies, group projects, and internships (Doghonadze & Zoranyan, 2021; Keevy, 2020). These methods can enhance both intellectual and personal competencies among accounting students (Low et al., 2013). While these initiatives highlight the importance of integrating technical knowledge with practical skill-building, there is still uncertainty about how effectively they prepare graduates to acquire intellectual and personal skills for the realities of the job market (Kwarteng & Mensah, 2022).

In Ghana, the gap between what accounting graduates bring to the table and what employers expect has been the focus of several studies. Employers consistently emphasize the need for a combination of technical expertise and soft skills, such as critical thinking, problem-solving, and ethical integrity. However, many graduates find it challenging to meet these broad expectations, raising concerns about their readiness for the workforce. Kwarteng and Mensah (2022) examined the skills employers in Ghana look for versus those demonstrated by graduates. Their findings revealed significant gaps, particularly in general business skills. Employers ranked their top five expectations as business ethics and integrity, problem-solving and decision analysis, written communication, learning ability, and the application of accounting principles. In contrast, graduates primarily showcased technical skills, highlighting a misalignment between industry expectations and graduate competencies.

Awayiga et al. (2010) explored how both graduates and employers perceive the necessary skills for a successful accounting career in Ghana. Graduates identified honesty, continuous learning, strong work ethics, problem-solving abilities, time management, analytical thinking, decision-making, teamwork, ethical awareness, flexibility, critical thinking, and stress management as key to their profession. However, employers noted gaps in areas such as continuous learning, time management, oral communication, critical thinking, proficiency with accounting software, written communication, analytical thinking, decision-making, teamwork, ethical awareness, and flexibility. This suggests that while graduates recognize the importance of these skills, they may not yet have mastered them to the level employers expect.

To address these gaps, educational institutions in Ghana are exploring various strategies. Zotorvie et al. (2024) investigated the integration of information and communication technology (ICT) and higher-order thinking skills into accounting education. Their study utilized the quadruple helix model, which involves collaboration among government officials, academics, employers, and graduates. Their findings emphasized the urgent need for accounting curricula to incorporate ICT competencies and critical thinking skills to improve graduate employability.

The literature consistently highlights a persistent gap between the skills accounting graduates possess and what employers expect. While technical expertise remains vital, there is an

increasing need for soft skills, including intellectual and personal competencies. To better prepare students for the evolving demands of the accounting profession, educational institutions must rethink their curricula and teaching approaches. This study focuses on the perspectives of final-year accounting students. The goal is to assess whether their academic programs sufficiently equip them with intellectual and personal skills for the workforce. And to explore the interrelationships between teaching strategies and intellectual and personal competences. Specifically, the study seeks to achieve the following objectives:

1. To explore final-year accounting students' perspectives on how effectively their academic training fosters personal competencies, including teamwork, ethical reasoning, communication, and adaptability, in preparation for the workforce.
2. To explore final-year accounting students' perspectives on how effectively their academic training fosters intellectual competencies such as critical thinking, problem-solving, and analytical skills.
3. To examine the interrelationships among intellectual skills and teaching strategies in accounting education.
4. To examine the interrelationships among personal skills and teaching strategies in accounting education.

1.1. Significance

This study has important implications for accounting educators, universities, employers, graduates, government authorities, and International Federation of Accountants (IFAC) member organizations. It helps identify the intellectual and personal skills that accounting students develop during their four years at university. By focusing on students' perspectives, the study offers insights into interrelationships between intellectual and personal skills and, learning strategies that can improve the development of these skills within the accounting curriculum.

Additionally, the research highlights the gaps between the intellectual and personal skills outlined in IES 3 by IFAC and those that accounting graduates acquire after their "Initial Professional Development" (IPD). It provides a foundation for further studies on a broader scale to explore these gaps and recommend solutions for better alignment between education and professional requirements.

2. Literature Review

2.1. Theoretical Framework

This study is theoretically supported by IES 3 on personal and intellectual skills issued by the International Accounting Education Standards Board (IAESB). The IES 3 specified skills under both personal and intellectual skills that undergraduate accounting students should acquire after their initial professional development. For accounting education to meet this target, university accounting students should acquire to a great extent these skills as specified under IES 3 when they complete school. Specifically, personal skills as a broad soft skill have the following specific learning targets accounting graduates should develop as IPD according to IES 3, (i) Exhibit a dedication to lifelong learning, (ii) Establish high personal expectations for performance and keep track of them through introspective work and outside feedback, (iii) Organize your time and resources to meet your professional obligations, (iv) Prepare potential solutions for problems you might encounter, (v) Approach new opportunities with

an open mind, (vi) Recognize the potential effects of organizational and individual bias (IAESB, 2019).

Conversely, intellectual skills have the following sub-learning outcomes expected to be developed by graduates' accountants as Initial Professional Development issued by the IAESB under International Education Standard – 3 (IES3). It states that graduates' accountants should be able to (i) Research, integration, and analysis are used to evaluate facts and information from a range of sources and viewpoints, (ii) Use critical thinking techniques to solve issues, support judgments, make choices, and come to well-informed decisions, (iii). Determine the circumstances in which specialist consultation is warranted, (iv) Offer recommendations for unstructured, complex challenges, (v) Be able to adapt quickly to new situations or knowledge to solve issues, inform judgments, make choices, and come to well-informed conclusions. (IAESB, 2019).

Ralph W. Tyler's curriculum development model is where the third objective of teaching strategies is anchored. Tyler (1990) asserts that three types of resources, individuals (students), contemporary life, and professional ideas of the field of study, are used to plan the purpose of education. Tyler advised curriculum designers to collect information from the three categories of learner, society, and subject matter (Mehmood Bhuttah et al., 2019). From this approach to curriculum development, the study will collect data from learners (undergraduate accounting students), society (review of related literature), and the subject matter itself (intellectual and personal skills) to suggest ways to improve the provision of these skills at the university for accounting graduates.

2.2. Personal Skills in Accounting Education

Personal skills are abilities that relate to the character and capacity of a specific accountant. The development of these abilities can enhance learning styles and personality. With these abilities, an accountant can influence, encourage, settle disputes, and assign responsibilities to team members to advance the objectives of a company (Tsiligiris & Bowyer, 2021). Atanasovski et al. (2018) also found that students have developed a high level of personal skills in a study on skills acquisition by undergraduate students. Furthermore, data found by Mariappan et al. (2021) show that accounting students have developed a high level of lifelong learning, leadership, information management, teamwork, critical thinking, problem–solving and, communication skills in Malaysia.

In a fifteen-year review of about 120 accounting education literature, Kroon and Alves (2023) found that providers of accounting education have developed students' communication, teamwork, problem–solving, time management, and leadership skills. Also, Ajward and Madhumali (2019) found that accounting education undergraduates ranked highly important teamwork, time management, meeting deadlines, and achieving given targets set skills as what accounting education has developed in them. Furthermore, Barišić et al. (2022) found that the interdependence between an accountant job function and personal skills is 33.3%. However, Ekpoh (2015) found a deficit in accounting graduates planning potentials in Nigeria.

2.3. Intellectual Skills in Accounting Education

Intellectual skills involve critical thinking, problem-solving, data analysis, making informed judgments, and proposing solutions to unstructured problems (Chaker & Abdullah, 2011; Barišić et al., 2022). These competencies align with Gardner's Logical-Mathematical Intelligence, emphasizing deductive reasoning, pattern recognition, and analytical problem-

solving (Kaushik, 2017). Intellectual skills are essential in accounting for decision-making, judgment, and navigating complex financial and regulatory environments (Chaker & Abdullah, 2011). Barišić et al. (2022) reported a 94.4% interdependence between intellectual skills and accountants' job functions, highlighting their critical role in professional practice.

Studies indicate that accounting education enhances intellectual competencies. Malaysian students developed strong data evaluation and analytical skills (Latif et al., 2019; Mariappan et al., 2021) while Ghanaian undergraduates also demonstrated above-average critical thinking development (Sefenu & Andoh, 2022). Contrastingly, deficits in analytical reasoning were noted among Nigerian graduates (Wogboroma & Joy, 2022). Despite evidence of positive outcomes, there is limited research in Ghana examining how curricula align intellectual skills development with IFAC framework, including critical thinking, problem-solving, and analytical skills.

2.4. Teaching Pedagogies for Soft Skills Development

Pedagogy encompasses the methods instructors use to guide learning, including both instructional practice and discourse. In accounting education, effective pedagogical strategies aim to develop professional competencies critical for employability and professional success (Abubakari et al., 2025). Interactive and collaborative approaches—such as case studies, seminars, presentations, class discussions, and feedback sessions—have been widely employed to enhance personal and intellectual skills (Berková & Holečková, 2022; Reyneke & Shuttleworth, 2018). Collaborative learning, in particular, supports teamwork, accountability, and higher-order thinking, often outperforming lecture-based instruction (Steenkamp & Brink, 2024).

Group discussions encourage collaboration, problem-solving, and analysis, fostering leadership, critical thinking, and analytical skills (Mortenson & Sathe, 2017; Steenkamp & Brink, 2024). Evidence from New Zealand indicates that group work develops teamwork, problem-solving, time management, leadership, communication, and interpersonal skills (Low et al., 2013), highlighting its value as a strategy for cultivating both personal and intellectual competencies. However, E. Opdecam and Everaert (2018) identified seven common disagreements about cooperative learning, including concerns about free-riding and assessment challenges.

Internships provide experiential learning opportunities that bridge theory and practice, supporting the development of workplace readiness, decision-making, and professional judgment (Ahmad et al., 2018; Cernușca, 2020). Accounting students participating in internships report improvements in application of accounting principles, problem-solving, and personal skills regardless of gender or course of study(Ahmad et al., 2018; Imjai et al., 2024). However, challenges such as low confidence may limit skill acquisition, highlighting the importance of structured support to cultivate innovation, creativity, and self-regulation (Min-en et al., 2024).

The case study method promotes critical thinking, problem-solving, and communication by engaging students with realistic accounting scenarios (Nghia, 2024; Reyneke & Shuttleworth, 2018). Through guided discussion and feedback, students integrate intellectual and personal skills while applying theory to complex real-world problems. Case studies complement group learning by providing context for analytical reasoning and decision-making. Fatimah et al. (2023) conducted a quasi-experimental study comparing case-based instruction to conventional lectures, finding the experimental group's critical thinking scores increased dramatically from 5.97 to 16.87 ($p = 0.000$), with significant between-group differences.

Mahdi et al. (2020) examined 42 business students and found case studies meaningfully enhanced critical thinking skills.

Although previous studies indicate that group assignments, internships, and case studies contribute to the development of accounting students' personal and intellectual competencies, there is limited empirical evidence within the Ghanaian context on how accounting curricula align with the competency framework proposed by the International Federation of Accountants (IFAC). In particular, little is known about the extent to which instructional practices in Ghanaian universities support the development of competencies outlined in the International Education Standards (IES), such as critical thinking, professional judgment, and communication. Addressing this gap is important for understanding whether accounting education in Ghana adequately prepares graduates to meet internationally recognized professional competency expectations.

3. Methodology

3.1. Research Design

To gather data from a population at one moment without altering the variables in their natural environments, this study used a quantitative cross-sectional survey approach (Levin & Levin, 2014). The study's main goals were to ascertain the degree to which graduates of accounting programs acquire intellectual and personal skills and to get feedback from participants on how educational institutions might better provide these abilities. The design was suitable for gathering feedback from a sizable sample of participants regarding the intellectual and personal skills acquired by accounting graduates as well as for determining pedagogical strategies to enhance the development of these skills at postsecondary institutions without changing the variables' inherent conditions (Creswell & Creswell, 2018).

3.2. Source of Data

The study's data were gathered by fieldwork and were primary data. Later in their last semester, final-year students were given questionnaires to complete.

3.2.1 Target Population

The study focused on final-year undergraduate accounting students in the later part of their final semester. Four accounting programs across two public universities and a student population of 171 was sampled and targeted.

Table 1: Summarizes the Population Distribution

Faculty/School	Program of Study	Sample Frame	Sample Size
Business	HND Accounting	36	36
Business	BSc. Accounting	35	35
Business	BCom. Accounting	81	81
Education	BED. Business Studies	19	19
		171	**171**

Source: Authors Field Survey (2025).

3.3. Questionnaire Administration

The questionnaires were created by the researchers using the IES 3 learning outcomes as a guide. The intellectual and personal abilities that accounting graduates should possess after finishing their Initial Professional Development are the focus of these learning objectives. Additionally, based on the literature, a self-made questionnaire on instructional practices that promote the growth of intellectual and personal skills was created. Responses ranged from 1 (strongly agree) to 4 (strongly disagree) on a four-point Likert scale. The four-point scale will ensure more responses from a relatively small population and this is supported by studies such as Imam et al. (2022) and Yaska & Nuhu (2024).

3.3.1 Pilot Testing of Questionnaire

Thirty final-year accounting students from two similar Universities rather than where this study was conducted participated in a pilot study of the questionnaires to guarantee their consistency and dependability. Nineteen completed surveys were sent back and examined. For the study objectives, Cronbach's alpha coefficients were as follows: teaching methodologies for the development of intellectual and personal skills ($\alpha = 0.916$), personal skills ($\alpha = 0.714$), and intellectual skills ($\alpha = 0.872$). Strong internal consistency was shown by the total alpha coefficient of 0.834 (Taber, 2018). This supported the data-gathering procedure and confirmed the instrument's dependability.

3.4. Sampling Procedure

All 171 final-year accounting students from the four programs were studied using a census technique, as shown in Table 1 Using a census guaranteed representativeness and made it easier to generalize the results because of the population's controllable size. Out of the total population, 151 students completed and returned usable questionnaires, representing a response rate of 88.3%.

3.5. Approach to Data Analysis

Statistical tools were used to analyze quantitative data. Version 20 of the Statistical Package for Social Sciences (SPSS) was used to enter and analyze the data. The data was summarized using descriptive statistics, such as frequencies, percentages, means, and standard deviations. Additionally, the relationship among key skills, teaching tactics, and the development of skills were examined using Pearson Correlation. Linear regression was performed to predict the effect of teaching strategies on intellectual and personal competencies. The findings were evaluated per the goals of the study and displayed in tables.

3.6. Ethical Considerations

The study followed stringent ethical requirements because it involved human volunteers. Ethical approval for the study was obtained from the appropriate institutional review authorities prior to data collection. Participation was voluntary, and respondents provided informed consent. Anonymity and confidentiality of responses were assured, and data were used solely for academic research purposes. These precautions guaranteed the validity and dependability of the study findings while defending the rights, privacy, and dignity of the participants.

4. Results and Discussions

4.1. Analysis and Interpretation of Data

Responses were measured using a four-point Likert scale. Although Likert-scale data are ordinal in nature, prior methodological studies suggest that aggregated Likert responses may be treated as approximately interval data when items are combined and sample sizes are adequate, thereby permitting the computation of means and parametric statistical analyses commonly used in social science research (Boone Jr & Boone, 2012; Samuel J, 2018). The scale ranges from 1 to 4, where 1 means "Strongly Agree" (indicating the highest level of skill enhancement) and 4 means "Strongly Disagree" (indicating the least enhancement). A lower average score suggests that more students strongly believe their accounting studies have significantly improved their skills. On the other hand, a higher average score means fewer students feel their skills have been greatly enhanced. Correlation and regression analysis were also performed to establish relationships between teaching strategies and how significant is the influence on intellectual and personal competencies.

4.1.1 Final Reliability Analysis

Internal consistency reliability was re-assessed using the final study sample (n = 151). Cronbach's alpha coefficients indicated satisfactory reliability across all constructs. The scale measuring teaching methodologies for the development of intellectual and personal competencies produced an alpha coefficient of $\alpha = 0.863$, while the personal competencies scale yielded $\alpha = 0.778$. The intellectual competencies scale recorded an alpha of $\alpha = 0.818$. The overall instrument demonstrated strong internal consistency, with average alpha coefficient of $\alpha = 0.820$. All reliability coefficients exceeded the minimum recommended threshold of 0.70, indicating acceptable to strong internal consistency (Taber, 2018). These results confirm the stability and reliability of the measurement instrument within the final study sample. Because data were collected using a single self-report instrument, procedural remedies were applied to minimize common-method bias, including assurance of anonymity, neutral wording of items, and separation of construct sections within the questionnaire.

4.2. Sex of Respondents

Table 2 shows the sex information of the respondents generated from the field data from the two universities. The results show male dominance of the population, out of 151 responses, 68.9% represent male and 31.1% represent female respondents (see Table 2).

Table 2: Sex Distribution

Sex	Frequency	Percent
Male	104	68.9
Female	47	31.1
Total	151	100

Source: Authors Field Survey (2025).

The results indicate that the male student population is twice of the female. However, this is not new in the Ghanaian context because there is male dominance in similar studies conducted in Ghana (Kwarteng & Mensah, 2022; Sefenu & Andoh, 2022). This implies that male students are more likely to pursue careers in accounting than female counterparts in Ghana. And the accounting profession will be male dominated. This is consistent with the findings of Silva et al. (2016) who showed that the accounting profession has historically

been dominated by men. It also suggests that men are more likely to rule over women in the accounting-related work environment. As a result, the accounting industry is thought to be dominated by men.

However, a study (Low et al., 2013) in New Zealand revealed a sharp contrast to the findings in Ghana. In that study, female participants dominated their male counterparts in accounting education. This may be a result of different geographical locations and how some societies may view the pursuit of some careers in accounting in relationship to the gender of the student. Despite this, the results of this study suggest that the male gender in the study area is more likely to pursue a career in accounting than the female gender at the tertiary level.

4.3. Means and Standard Deviations on Personal Skills of Respondents

A high degree of agreement is indicated by the overall mean of 1.4989, which shows that respondents think their college education has improved their personal skills. Managing time and resources to achieve personal targets Set (1.3113) had the lowest mean among the specific skills examined under personal talents, with the strongest agreement (lowest mean). Skills that garnered moderate agreement were setting high-performance expectations for oneself (1.4570) and keeping track of those standards through introspection and feedback (1.5563). These findings emphasize how important self-discipline and self-evaluation are for personal growth. The eagerness and dedication to lifelong learning (1.6026) and keeping an open mind to new prospects (1.5364) were associated with higher means, but the agreement was considerably lower. The somewhat higher numbers indicate that some respondents may not feel as strongly about certain areas, even though they agree that these skills have improved (See Table 3).

The standard deviation (0.5663) shows that responses to the personal skills categories are generally consistent. "Managing time and resources" had the least amount of variability (0.49241), but "Zeal and commitment to lifelong learning" had the most (0.63329). This implies that, in contrast to lifelong learning, respondents' opinions on time management are more similar (See Table 3).

Table 3: Personal Skills

My undergraduate studies have enhanced my ability to;	***Mean***	***Std. Deviation***
Have zeal and commitment to lifelong learning	1.6026	.63329
setting personal high standards for performance	1.4570	.56255
Monitoring Personal Standards Through Reflection and Feedback from Others	1.5563	.60702
Managing Time and Resources to Achieve Personal Targets Set	1.3113	.49241
Anticipate challenges and plan potential solutions	1.5298	.53923
Apply an open mind to new opportunities	1.5364	.56303
Overall Average	**1.4989**	**0.566255**

Source: Authors Field Survey (2025).

The findings indicate that undergraduate accounting education has significantly enhanced students' personal skills, this stemmed from the high level of agreement among respondents. Notably, the strongest agreement was observed in time and resource management, highlighting students' appreciation for learning effective planning and resource allocation strategies. These skills are essential for personal and professional success, demonstrating that the accounting education curriculum effectively instills critical life competencies in

accounting graduates. Students also concur that their education enabled them to hold themselves to high-performance standards, which is essential for personal development.

On the other hand, while there is agreement on skills such as zeal for lifelong learning and open-mindedness, these areas recorded relatively higher means, suggesting that respondents felt less strongly about the improvements in these competencies. This indicates a potential area where educational programs can introduce more engaging and stimulating opportunities to foster a deeper commitment to continuous learning and adaptability. Critical abilities including time management, introspection, and performance tracking seem to have been successfully improved by undergraduate accounting curricula. A study assessing accounting education in Saudi public universities found that while there was a significant contribution to developing intellectual and technical skills, there was a moderate emphasis on personal skills development. The study recommends a balanced approach that incorporates both technical content and soft skills to enhance the employability and professional readiness of accounting graduates (Elzain, 2021).

4.4. Means and Standard Deviations on Intellectual Skills of Respondents

From Table 4, a high degree of agreement across all intellectual capabilities is indicated by the average mean of 1.5265, which suggests that most respondents think their university education has significantly improved their intellectual capacity. The statement that earned the highest agreement (Lowest Means) was "Critically think to solve problems (1.4106) and identify when it is appropriate to consult with experts for assistance (1.4172)." There was moderate agreement with skills such as "Research, Integration, and analyze Data (1.5695), Evaluate Data (1.5497), and Respond Effectively to Changing Circumstances (1.5298)." Even though these abilities were improved, there is still a little more space for development. The statement "Suggest solutions to unstructured, complex problems (1.6556)" had the highest mean, indicating relatively less agreement. This was the lowest agreement (highest mean). The standard deviation (0.5746) shows that responses were generally consistent across the skills. "Identify when to consult with experts" had the lowest variability (0.50804), while "Recommend solutions to complex problems" had the highest variability (0.68358).

Table 4: Intellectual Skills

My undergraduate studies have enhanced my ability to;	**Mean**	**Std. Deviation**
Evaluate data and information from a variety of sources	1.5497	.62917
Research, integrate, and analyze data from different sources	1.5695	.55988
Critically think to solve problems	1.4106	.53256
Critically think to make informed judgments	1.4967	.57590
Critically think to make decisions, and reach well-reasoned conclusions	1.5828	.52099
Identify when it is appropriate to consult with experts for assistance	1.4172	.50804
Recommend solutions to unstructured, complex problems	1.6556	.68358
Respond effectively to changing circumstances	1.5298	.58661
Overall Average	**1.5265**	**0.5746**

Source: Authors Field Survey (2025).

The research findings reveal that undergraduate education has a significant positive impact on the development of intellectual skills, as demonstrated by the overall mean score of 1.5265,

indicating a high level of agreement among respondents. Notably, the strongest agreement was observed in the ability to critically think to solve problems and identify when it is appropriate to consult with experts. This implies that the development of problem-solving and consulting abilities, which are essential for intellectual progress, was especially strong in undergraduate accounting studies. And suggests that undergraduate accounting programs are particularly successful in developing practical intellectual skills essential for professional success. However, the relatively higher mean for recommending solutions to unstructured, complex problems points to a gap in students' ability to handle ambiguous scenarios. This implies that students may need more exposure to real-world, unstructured problem-solving tasks, indicating an area where curricula could be improved by incorporating more case-based learning and complex scenario analysis.

The findings also speak highly of the caliber of the educational offerings by the Universities under study when it comes to developing accounting graduates' intellectual skills. And these findings are similar to a study by Castillo (2014) at Batangas State University in the Philippines, students rated themselves as excellent on variables under intellectual skills such as the ability to make informed judgments, critical thinking, problem-solving, recommend solutions to unstructured problems, consult experts, integrate data from different sources, and research and analyzing data. Furthermore, Mariappan et al. (2021) in Malaysia, critical thinking to solve problems by accounting students scored the highest mean among other skills, suggesting that intellectual skills of development of accounting graduates were achieved by the university curriculum. In the Ghanaian context, Sefenu and Andoh (2022) found that graduates' intellectual skills such as critical and problem-solving abilities were developed by their university education. However, the findings differ from the findings of Ekpoh (2015) from Nigeria in a similar study. The findings indicated that the university curriculum was not inadequately enhancing students' intellectual skills.

4.5. Correlation Analysis of Key Relationship among Variables of Intellectual and Personal Skills and, Teaching Strategies

4.5.1 Interpretation of Effect Sizes

Effect sizes are interpreted using conventional benchmarks for correlation coefficients. Correlations in the range of $r = .10–.19$ were considered small, values between $r = .20–.39$ were interpreted as moderate, and coefficients of $r \geq .40$ were regarded as strong, indicating increasingly meaningful practical significance of the observed relationships.

4.5.2 Confidence Interval

Correlations significant at $p < .05$ correspond to 95% confidence intervals that do not include zero, while those significant at $p < .01$ correspond to 99% confidence intervals excluding zero. The absence of zero within the confidence interval indicates that the observed relationships are unlikely to have occurred by chance and provides greater confidence in the stability of the estimated associations.

4.6. Major Relationships – Intellectual Skills

From the correlation matrix 1, "I can critically think to solve problems" and "I can critically think to make informed judgments" have the most positive correlations among the variables related to intellectual skills. ($p < 0.01$) Correlation = 0.700. This shows that problem-solving and making wise decisions have a close link and that both abilities frequently grow

simultaneously. "I can critically think to make informed judgments" along with "I can critically think to make decisions and reach conclusions" 0.473 is the correlation ($p < 0.01$).

4.6.1 Teaching Strategies and Intellectual Skills

Critical thinking to solve problems as a skill is favorably correlated with group discussions and assignments = 0.226 ($p < 0.01$). And with analytical skills = 0.179 ($p < 0.01$). Analytical and critical thinking skills are successfully developed through group discussions. University-supervised internships had a positive correlation with critical thinking skills to solve problems = 0.476 (see Correlations Matrix 1). Again, from matrix 1, "Case study methods of assignment" correlate with Critical thinking skills that help students to reach conclusions = 0.463 ($p < 0.01$). Problem-solving skills = 0.165 ($p < 0.05$) and relate positively (.218**) with the ability to evaluate data and information from a variety of sources.

"I can evaluate data and information" and "Internship helped develop critical thinking" were two examples of variables that displayed weaker or non-significant correlations: 0.034 (not significant). "Recommend solutions to unstructured problems" with "Case study method and critical thinking": 0.038 (see Correlations Matrix 1). It is possible that certain instructional techniques do not directly support these cognitive abilities, or that the connections depend on the situation. There are a few faint negative relationships such as "Research, integration, and analysis" = -0.054 and "Case study method helps problem-solving skills" shows this negative relationship (see Correlations Matrix 1).

Correlations Matrix 1: Intellectual Skills and Teaching Strategies

	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
I can evaluate data and information from a variety of sources (1)	1											
I can research, integrate, and analyze data from different sources (2)	.411**	1										
I can critically think to solve problems (3)	.297**	.351**	1									
I can critically think to make informed judgments (4)	.290**	.357**	.700**	1								
I can critically think to make decisions and reach well-reasoned conclusions (5)	.176*	.294**	.453**	.473**	1							
I can identify when it is appropriate to consult with	.112	.143	.225**	.358**	.209*	1						

	1	2	3	4	5	6	7	8	9	10	11	12
experts for assistance (6)												
I can recommend solutions to unstructured, complex problems (7)	.149	-.042	.208*	.082	.230**	.359**	1					
Group discussions/assignments helped me develop critical thinking skills (8)	.062	-.016	.226**	.197*	.124	.143	.116	1				
Group discussions/assignments helped me develop analytical skills (9)	.059	.033	.179*	.133	.092	.216**	.338**	.535**	1			
Internships organized and supervised by my university help me develop critical thinking skills. (10)	.034	.023	.476**	.072	.104	.280**	.181*	.105	.442**	1		
Case study method of assignment help me develop critical thinking skills (11)	.218**	.106	.035	.077	.463**	.117	.038	.069	.297**	.413**	1	
Case study method of assignment help me develop problem-solving skills (12)	-.030	-.054	.001	.033	-.033	-.020	.063	.127	.253**	.099	.165*	1

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

4.6.2 Discussions of Major Relationships – Intellectual Skills

The correlation analysis highlights key interrelationships among intellectual skills. The strongest positive correlation exists between critical thinking to solve problems and making informed judgments, indicating that these skills are closely linked and tend to develop concurrently. This interdependence indicates that as students enhance their problem-solving abilities, they also become more capable of making thoughtful, well-reasoned decisions. Another notable correlation between making informed judgments and reaching well-reasoned conclusions emphasizes the role of critical thinking in effective decision-making. Additionally, there is moderate agreement regarding skills like evaluating data and research

and data integration. The findings show that intellectual skills related to data analysis and research integration, which are crucial in accounting are not strongly related.

4.6.3 Discussions of Major Relationships – Intellectuals and Teaching Strategies

Teaching strategies such as group discussions, internships, and the case study method were associated with the development of intellectual skills. Group discussions and assignments showed moderate correlations with critical thinking for problem solving and with analytical skills. The strongest correlation among the teaching strategies was observed between internships and critical thinking skills, indicating that practical, real-world experiences are linked with students' ability to apply theoretical knowledge in practical contexts. The case study method also demonstrated a strong positive correlation with the critical thinking skills required for making decisions and drawing conclusions. However, this method showed weaker correlations with problem-solving and recommending solutions to complex problems, suggesting that although case studies are related to critical thinking, they are less strongly associated with unstructured problem-solving abilities. Overall, these findings indicate that while current teaching strategies are associated with several intellectual competencies, there may still be value in incorporating more real-world and unstructured problem-solving activities within educational programs.

4.7. Major Relationships – Personal Skills

Responding effectively to changing circumstances shows moderate positive correlations with setting personal high standards ($r = .312$, $p < .01$), reflecting a tendency for adaptable individuals to set and pursue ambitious goals. And exhibits lower but significant correlations with other personal skills such as zeal for lifelong learning ($r = .247$, $p < .01$) and anticipating challenges ($r = .266$, $p < .01$). Zeal and commitment to lifelong learning indicate the strongest correlation is with setting personal high standards ($r = .419$, $p < .01$), indicating that those committed to continuous learning tend to hold themselves to higher standards. And correlate moderately with monitoring personal standards ($r = .388$, $p < .01$) and applying an open mind ($r = .303$, $p < .01$). Setting personal high standards exhibits significant correlations with multiple variables, particularly monitoring personal standards ($r = .461$, $p < .01$), time management ($r = .374$, $p < .01$). Monitoring personal standards through reflection and feedback shows a strong correlation with applying an open mind ($r = .545$, $p < .01$), emphasizing the role of self-reflection in fostering receptiveness to new ideas. And a significant relationship with anticipating challenges ($r = .377$, $p < .01$), (see Correlations Matrix 2).

Managing time and resources has shown the strongest correlation with anticipating challenges and planning solutions ($r = .480$, $p < .01$), highlighting the importance of time management in proactive problem-solving. Anticipating challenges and planning potential solutions also shows the strongest correlation with applying an open mind ($r = .529$, $p < .01$), indicating that those who plan for challenges are more receptive to diverse perspectives. Applying an open mind also has the highest correlation with monitoring personal standards ($r = .545$, $p < .01$). And a strong relationship with anticipating challenges ($r = .529$, $p < .01$) and time/resource management ($r = .428$, $p < .01$), (See Correlations Matrix 2).

4.7.1 Major Relationships – Teaching Strategies and Personal Skills

Zeal and commitment to lifelong learning indicate a moderate association with the case study method ($r = .325$, $p < .01$, 99% CI [.17, .46]), The confidence interval does not cross zero,

confirming a reliable positive relationship. Setting personal high standards exhibits significant correlations with group discussions (r = .327, p < .01, 99% CI [.18, .47]). And also, there is significant relationship was also observed with internship experience (r = .258, p < .01, 99% CI [.10, .40]) and group discussions. Monitoring personal standards through reflection and feedback shows a significant relationship with group discussions method of teaching (r = .223, p < .01, 99% CI [.07, .37]). Time and resources management show a significant association with group discussions (r = .309, p < .01, 99% CI [.15, .44]) and case study methods (r = .224, p < .01, 99% CI [.07, .37]). Anticipating challenges and planning potential solutions also shows a moderate correlation with internships (r = .197, p < .05, 95% CI [.04, .34]) and group discussions (r = .133, p > .05, 95% CI [.03, .29]), (see Correlations Matrix 2).

Correlations Matrix 2: Personal Skills and Teaching Strategies

	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
[1] Respond effectively to changing circumstances	1									
[2] Zeal and commitment to lifelong learning	.247*	1								
[3] Set personal high standards	.312*	.419**	1							
[4] Monitor my personal standards through reflection and feedback	.290*	.388**	.461*	1						
[5] Manage time and resources	.187*	.271**	.374*	.220**	1					
[6] Anticipate challenges and plan potential solutions	.266*	.250**	.251*	.377**	.480*	1				
[7] Apply open mind	.224*	.303**	.231*	.545**	.428*	.529**	1			
[8] Group discussions	.174*	.178*	.327*	.223**	.309*	.133	.228*	1		
[9] Internship	.256*	.297**	.258*	.139	.163*	.197*	.199*	.434**	1	
[10] Case study method	.066	.325**	.159	.133	.224*	.178*	.118	.271**	.371*	1

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

4.7.2 Discussions of Major Relationships -- Personal Skills

The correlation analysis indicates several positive relationships among key personal skills. Commitment to lifelong learning was positively correlated with setting personal high standards, reflection and feedback, and openness to new opportunities, suggesting that these attributes tend to occur together among individuals. These patterns are consistent with previous studies which report associations between lifelong learning, openness to experience, and self-efficacy (Drewery & Sproule, 2026; Malan et al., 2025). Similarly, research by Dhar and Machhar (2024) highlights links between sustained learning engagement, novelty seeking, and reflective tendencies. Overall, the results suggest that students who report stronger commitment to lifelong learning also tend to report higher levels of self-reflection, openness to opportunities, and personal performance standards.

Additional correlations were observed between setting personal high standards and reflection and feedback, as well as between time and resource management and high standard setting.

These relationships indicate that these personal attributes tend to appear together among participants. Prior research also notes similar associations between goal setting, feedback, reflective practices, and performance-related behaviors (Merino & Aucock, 2017). Furthermore, openness to new ideas was positively correlated with anticipating challenges and planning solutions, highlighting the interconnected nature of proactive and reflective skills. Taken together, these findings illustrate that several personal competencies—including openness, reflection, goal setting, and planning—are closely related within the dataset.

4.7.3 Discussions of Major Relationships -- Teaching Strategies and Personal Skills

The correlation analysis indicates that several teaching strategies are associated with the development of personal skills. Group discussions, internships, and the case study method all showed moderate positive correlations with various personal competencies. Group discussions demonstrated consistent correlations (ranging from 0.309** to 0.133), suggesting associations with skills such as reflection, openness, and time management through peer interaction and collaborative learning. Prior research also notes that group work supports active learning by creating a social environment that encourages participation and shared problem-solving. For example, Ngwenya and Africa (2022) reported that collaborative group work among pre-service accounting teachers in South Africa was linked with positive interdependence, interaction, and improved interpersonal engagement, allowing students to participate more actively in discussions and analytical tasks.

Internships also showed positive correlations (ranging from 0.297** to 0.139), indicating that practical learning experiences are associated with personal competencies such as adaptability and time management. Internship programs are often discussed in the literature as opportunities for connecting academic learning with professional practice and for exposing students to real workplace contexts (Ahmad et al., 2018). Similarly, Betrum et al. (2019) found that internships among business students were associated with improvements in interpersonal communication, networking, and problem-solving skills, although the study noted some limitations in technical skill development due to resource and supervision constraints. The case study method, while showing slightly lower correlations (0.066 to 0.325**), was also associated with skills related to analytical thinking and anticipating challenges. Overall, the observed relationships highlight the value of using varied instructional approaches—including collaborative learning, experiential opportunities, and analytical exercises—to support the development of personal competencies among undergraduate accounting students.

4.8. Regression Analysis

Multiple regression model was performed to establish the how significant teaching strategies predict intellectual and personal competencies. As a result, two assumptions were tested:

- H1: Teaching strategies (Group Discussions, Internship Experience, and Case Study Method) collectively and significantly predict the intellectual competencies
- H2: Teaching strategies (Group Discussions, Internship Experience, and Case Study Method) collectively and significantly predict the personal competencies.

Table 5 presents the results of multiple regression analyses examining the extent to which teaching strategies—Group Discussions, Internship Experience, and Case Study Method—predict students' intellectual and personal competencies. Standardized and unstandardized coefficients, t-values, and significance levels are reported for both outcome variables,

alongside model summary statistics (R, R^2, and F), allowing comparison of the relative contribution of each teaching strategy across competency domains.

Table 5: Regression Analysis of Teaching Strategies Predicting Intellectual and Personal Competencies

Predictor	Intellectual Competencies (H1)					Personal Competencies (H2)				
	B	SE	β	t	p	B	SE	β	t	p
Constant	1.365	0.228	—	5.987	< .001	1.420	0.215	—	6.605	< .001
Group Discussions	0.198	0.068	.221	2.912	.004	0.284	0.062	.315	4.581	< .001
Internship Experience	0.342	0.061	.398	5.607	< .001	0.192	0.058	.210	3.310	.001
Case Study Method	0.176	0.070	.189	2.514	.013	0.145	0.065	.158	2.231	.027

Table 6: Model Summary

Model	R	R^2	F	df	p
Intellectual Competencies	.589	.347	26.01	(3, 147)	< .001
Personal Competencies	.524	.275	18.42	(3, 147)	< .001

To examine the predictive capacity of teaching strategies on professional competency development, two multiple regression analyses were conducted. The predictors included Group Discussions, Internship Experience, and Case Study Method, while the dependent variables were Intellectual Competencies (H1) and Personal Competencies (H2).

For H1, the regression model predicting intellectual competencies was also statistically significant, $F(3, 147) = 26.01$, $p < .001$, accounting for 34.7% of the variance ($R^2 = .347$; $R = .589$). Internship experience was the strongest predictor ($\beta = .398$, $p < .001$), followed by group discussions ($\beta = .221$, $p = .004$) and the case study method ($\beta = .189$, $p = .013$). These results suggest that experiential learning plays a particularly prominent role in strengthening analytical reasoning, problem-solving, and evidence-based judgment.

For H2, the model predicting personal competencies was statistically significant, $F(3, 147) = 18.42$, $p < .001$, explaining 27.5% of the variance ($R^2 = .275$; $R = .524$). All three teaching strategies contributed significantly. Group discussions emerged as the strongest predictor ($\beta = .315$, $p < .001$), followed by internship experience ($\beta = .210$, $p = .001$) and the case study method ($\beta = .158$, $p = .027$). These findings indicate that collaborative and experiential pedagogies meaningfully enhance reflective capacity, adaptability, and lifelong learning orientation.

5. Conclusion and Recommendations

5.1. Conclusion

The study demonstrates that diversified instructional strategies—including group discussions, internships, and case study methods—effectively foster both personal and intellectual competencies among undergraduate accounting students, aligning with the competency

framework outlined in IES 3. Teaching strategies significantly predicted outcomes across both domains, with group discussions exerting the strongest influence on personal competencies and case study learning most strongly enhancing intellectual competencies. These findings highlight the need for an integrated pedagogical approach that combines collaborative, experiential, and analytical learning to fully develop the professional competencies required under IES 3.

5.2. Limitations of the Study

This study has several limitations. The sample was drawn from only two public universities in Ghana, which may limit the generalization of the findings to other institutions. The use of self-reported questionnaire data may also introduce response bias. In addition, the cross-sectional design captures students' perceptions at a single point in time and therefore does not allow causal interpretations. Although the study was guided by competency expectations outlined by the International Federation of Accountants through the International Education Standards (IES), the analysis relied on students' perceptions rather than direct assessment of competency outcomes. Future studies could include more institutions and employ longitudinal or mixed-method approaches to provide deeper insights into competency development

5.3. Recommendation

Given the significant predictions of outcomes, universities should emphasize group discussions, internships, and case study methods as core teaching strategies to improve critical thinking, analytical, and problem-solving skills. More practical and interactive teaching approaches may bridge gaps in weak or insignificant correlations. Most especially, the negative relationship between the case study method and how it helps students to solve problems and the ability to research, integrate, and analyze data. Because research abilities are part of problem-solving abilities.

Further research is needed to investigate the reasons for weak or negative correlations, such as possible mismatches in teaching delivery and intellectual skill development. And differences in student engagement with specific strategies.

5.3.1 Practical Implications for Accounting Educators

Universities may think about focused support programs to promote ongoing personal development to further strengthen areas like commitment to lifelong learning and openness to opportunities. Educators should design activities that encourage reflection, such as peer feedback sessions, and self-assessment exercises. Structured reflection can help students monitor their progress and align their personal goals with learning objectives. And leverages the strong interrelationships among intellectual skills to design integrated learning modules where problem-solving, decision-making, and informed judgment are taught together.

Internships and case studies should be central components of curricula to bridge theory and practice. Real-world exposure helps students internalize concepts and build confidence. Group discussions or collaborative projects can complement these strategies by fostering abilities to suggest solutions for difficult, unstructured problems. Embedding themes of continuous improvement and adaptability within the curriculum can inspire students to pursue ongoing personal and professional development.

5.3.2 Personal Growth for Accounting Undergraduates

Students should prioritize developing time/resource management, anticipating challenges, and openness to new opportunities as these skills reinforce each other. Reflection and feedback should be integrated into learning routines.

Students should actively participate in group projects, internships, or case studies that can enhance personal and intellectual abilities. These experiences foster practical understanding and help individuals apply theoretical knowledge effectively.

Students should cultivate a zeal for lifelong learning, which ensures that learners remain adaptable and prepared for change. This mindset is essential in navigating career transitions and staying relevant in evolving industries.

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