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## **Internal auditors without proficiency: a giraffe without a neck**

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**Abstract:** This study examines the proficiency of internal auditors in three tertiary institutions. It evaluates three proficiency dimensions – knowledge, experience, and professional skill- and their impact on the overall proficiency of internal auditors. The study employs a quantitative approach, a cross-sectional design, and a survey method. It obtained data through questionnaires from 263 respondents (i.e., accountants and internal auditors) about their perception of internal auditors' proficiency. IBM SPSS version 23 and partial least squares structural equation modelling (PLS-SEM) were used to analyse the data for model robustness. The study reveals that experience and professional skill have a positive significant influence on the proficiency of internal auditors. The study has practical implications as the internal auditors, management of tertiary institutions, Council of tertiary institutions, professional accounting and auditing bodies, and government can use it in their decision making.

**Keywords:** proficiency; knowledge; experience; professional skill; tertiary institutions; internal auditor.

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## **1 Introduction and background**

The Resource-Based Theory and Human Capital Theory posit that knowledge, skills, expertise, competence, experience and other related attributes possessed by an individual constitute intangible asset that aids his performance (Samagaio and Rodrigues, 2016). Thus, the ability of employees to add value to their organisations is dependent on their knowledge-base and intangible resources acquired or developed internally or externally by them (Papa et al., 2018). Owing to this theoretical position, every profession requires that the practitioners acquire not only the knowledge needed to practise but also the proficiency to perform effectively and efficiently. This is buttressed by different standards issued by professional accounting and auditing bodies requiring their members to acquire the necessary knowledge and skills (Enget, 2015).

In Accounting and Auditing profession specifically, the concept of proficiency cannot be underestimated in the achievement of the role for which the Accountants and Auditors are created. The assumption is that auditors' proficiency leads to audit success, audit efficiency and effectiveness, audit quality, and ultimately audit reputation (Phosrichan et al., 2016; Promtong et al., 2018). In internal audit parlance, proficiency is described as the conduct of audit activities in line with the plan (Musig and Ussahawanitchakit, 2011; Phosrichan et al., 2016), thereby utilising audit resources effectively and efficiently in terms of time and cost (Palmrose, 2006; Phosrichan et al., 2016)

Professional Accounting and Auditing standards do not precisely define the concept of proficiency. However, the auditing standard states that audit work should be performed by a person or persons who have "adequate technical training and proficiency" (Public Company Accounting Oversight Board –PCAOB, 2014, AU 210.01). The concept of proficiency is described with four key attributes comprising formal education, technical

training, experience, and commensurate measure of general education (PCAOB 2014, AU 210.03). All these lead to valuable knowledge needed to perform the audit job effectively and efficiently.

Internal auditors (IAs) in the public sector have not escaped the skills and experience deficit (Plant and Padotan, 2017). For internal auditors to perform their tasks effectively and efficiently and ensure quality compromises are not made at all times (Hoos et al., 2018), they need sufficient knowledge, skills, and competence. Hence, the Latin maxim of '*Nemo dat quod non-habet*,' which implies that no one can give what he does not have (Coll, 2008; Duska, 2007; Kochan, 2015; Plank, 2013; Townend, 2018), can be linked to IAs' necessity for competence and audit proficiency. As argued by Al-Twaijry et al. (2003), internal auditors tend to be powerless when they lack the necessary proficiency to discharge their responsibilities. Thus, internal auditors remain a 'toothless bulldog' that can only bark but cannot bite in the absence of proficiency. Consistent with this line of thought and argument, Mihret et al. (2010) posit that internal audit departments in contemporary society need auditors that possess different skills to conduct internal audit operations beyond mere financial activities.

Consequently, the International Standards for the Professional Practice of Internal Auditing (ISPPIA, 2012), in Attribute Standard 1210, mandates Internal Auditors to possess the knowledge, skills, and other competencies needed to perform their responsibilities. It further requires that the internal audit activity collectively must possess or obtain the knowledge, skills, and other competencies needed to perform its task. Knowledge, skills, and other competencies, according to the standard, are collective terms that refer to the professional proficiency required of internal auditors to carry out their professional responsibilities effectively.

In the same manner, the International Federation of Accountants (2014), through Section 130.1 of the Code of Ethics for Professional Accountants, requires Professional Accountants to follow the principle of professional competence and due care in two ways. Firstly, they are required to maintain professional knowledge and skill at the level required to ensure that clients or employers receive competent professional service; and secondly, to act diligently by following applicable technical and professional standards when performing professional activities or providing professional services. The professional code of conduct for members of the Institute of Chartered Accountants of Nigeria (ICAN, 2009), in Section 1.2.3, also requires its members to maintain professional knowledge and skill in their activities. According to Khalid et al. (2018), skills refer to the ability of an individual to apply knowledge and know-how to complete tasks and solve problems.

In the Nigerian context, the proficiency of accountants and auditors embraces much importance, especially in the public sector. Evidence abound by the rigorous examination process instituted by the major accounting professional bodies in Nigeria, namely: the Institute of Chartered Accountants of Nigeria (ICAN) and the Association of National Accountants of Nigeria (ANAN), as confirmed by previous studies (Ijeoma and Aronu, 2013; Nkiko et al., 2015; Uche, 2002), and frequent workshops, conferences, and other training constituting MCPE for the accountants and auditors organised by these professional bodies. Aside from this, organisations in which accountants and auditors work usually organise in-house and outside training for auditors to build their proficiency. Despite these, the proficiency level of internal auditors, particularly those in tertiary institutions, appears to be very low. This is indicated by different findings from

the literature pointing out weak performance, lack of effectiveness and efficiency, inadequate support of the management, and lack of recognition being accorded internal auditors (Achua and Alabar, 2014; Achua and Ogunjuboun, 2014; Akpomi et al., 2005; Kiabel, 2012; Unegbu and Kida, 2011).

The reports of the Auditor-General for the Federation of Nigeria (2009–2018) show many lapses in the financial performance of tertiary institutions, which cast doubt on the proficiency of internal auditors. Despite this problem, accounting, auditing, and public sector researchers pay little or no attention to the study of internal auditors' proficiency in the context of Nigerian higher educational institutions. The objective of this study, therefore, is to empirically examine the proficiency of internal auditors in tertiary educational institutions in Oyo State, Nigeria, and the correlation of knowledge, experience, and professional skill on the proficiency of internal auditors.

## **2 Literature review**

### *2.1 Proficiency*

Internal auditing provides service to the management, thus, it is a service profession (Su et al., 2016). Because of the uncertainties in the auditing processes, internal auditing activity is premised on knowledge, expertise, and experience to succeed. Moeller (2009) states that an enterprise's control environment can be severely eroded if a significant number of positions are filled by persons lacking the required job skills. Hence, the performance of Internal Auditors depends on the level of competence and proficiency of the Internal Auditors themselves (Baharud-din et al., 2014). Competence, according to Popoola (2014), is the actual demonstration of performance, and its essence is to demonstrate the ability to perform tasks to the expected standard. As viewed by Ma'ayan and Carmeli (2016), proficiency is essential because it builds a role modelling upon which auditees are interested and ready to engage in learning such that the main organisational issues are quickly identified, and appropriate responses are developed.

In literature and professional standards, a variety of constructs such as knowledge (academic and professional), experience, skills, training, and other competencies have been pointed out as constituting proficiency (Cohen and Sayag, 2010; Ma'ayan and Carmeli, 2016; Samagaio and Rodrigues, 2016). Holt and Wampler (2012) and Harrington (2004) describe the proficiency tool, in terms of qualifications and other attributes, to be looked into in the Internal Auditors (IAs) by the external auditors or by the employers willing to employ the Director of Audit and the Staff of the Internal Audit Department.

The researchers pointed out 14 attributes to be considered in determining the proficiency of internal auditors. Though these qualifications, according to Harrington (2004), may not be possessed in totality by the IAs, having a higher percentage of the qualifications and attributes is desirable. These include:

- a First degree in accounting or related field
- b Being a certified public accountant (CPA)
- c Have a cognitive experience 5–15 years in internal auditing

- have any other professional certificates with designations such as CIA, CISA, CFE, CMA or CFM
- d have a good record of continuing professional education (CPE) attendance
- e have strong computer knowledge, including financial systems and databases
- f be proficient in accounting and auditing software packages
- g have experience with Big Four audit firms with finance and accounting background
- h have a high-level personal and professional ethics
- i have any behavioural skill in interacting with the management and the governing board
- j have strong written and oral communication
- k have skill in handling internal controls and Sarbanes-Oxley requirements
- l have solid analytical and problem-solving skills
- m have the ability to manage and motivate a staff of financial professionals.

In Nigeria, the career structure or scheme of service of each tertiary institution spells out the knowledge, skills, and competence requirements of Internal Auditors at the point of appointment to the service of the institution and as they progress through promotion from one level to the other. An insight into the content of the career structure of some institutions, as shown and summarised in Table 1, shows that there are five to seven different levels of Auditors in the Internal Audit Department (IAD), depending on whether the department is being operated as Directorate or not. The levels comprise Auditor II, Auditor I, Senior Internal Auditor, Principal Internal Auditor, Chief Internal Auditor, Deputy Director of Audit, and Director of Audit (CHIADINU, 2007). Each level has different proficiency requirements.

**Table 1** Knowledge requirement of internal auditors in Nigerian tertiary institutions

| <i>S. No.</i> | <i>Rank</i> | <i>Proficiency requirements</i>   |
|---------------|-------------|---|
| 1             | Auditor II  | First degree/HND in Accounting or other relevant discipline with minimum of second class lower  |
| 2             | Auditor I   | By Appointment- <ul style="list-style-type: none"> <li>i Degree/HND in Accounting or other relevant discipline</li> <li>ii Local or international Professional certificates e.g., ACA, ACCA, ANAN etc.</li> <li>iii Minimum of 3 years post qualification cognate experience</li> </ul> By promotion- <ul style="list-style-type: none"> <li>i Minimum of 3 years on the position of Auditor II</li> <li>ii Membership of relevant professional bodies</li> </ul> |

**Table 1** Knowledge requirement of internal auditors in Nigerian tertiary institutions (continued)

| <i>S. No.</i> | <i>Rank</i>                | <i>Proficiency requirements</i>  |
|---------------|----------------------------|--|
| 3             | Senior Internal Auditor    | By Appointment- <ol style="list-style-type: none"> <li>i Degree/HND in Accounting or other relevant disciplines</li> <li>ii Professional certificates</li> <li>iii Minimum of 6 years post qualification Experience</li> </ol> By promotion- <ol style="list-style-type: none"> <li>i Minimum of 3 years on the position of Auditor I</li> <li>ii Membership of relevant professional bodies</li> </ol>  |
| 4             | Principal Internal Auditor | By Appointment- <ol style="list-style-type: none"> <li>i First degree/HND in Accounting or other</li> <li>ii Professional certificates</li> <li>iii At least 10 years post qualification Experience and 3 years post professional qualification experience</li> </ol> By promotion- <ol style="list-style-type: none"> <li>i Minimum of 4 years on the position of Senior Internal Auditor</li> <li>ii Membership of relevant professional bodies</li> </ol>   |
| 5             | Chief Internal Auditor     | By Appointment- <ol style="list-style-type: none"> <li>i Postgraduate degree (e.g., Master) in relevant discipline</li> <li>ii Professional certificates e.g., ACA, ACCA, ANAN etc.</li> <li>iii At least 14 years post qualification cognate Experience and 6 years post professional qualification experience</li> </ol> By promotion- <ol style="list-style-type: none"> <li>i Minimum of 4 years on the position of Principal Internal Auditor</li> <li>ii Membership of relevant professional bodies</li> </ol> |
| 6             | Deputy Director of Audit   | <ol style="list-style-type: none"> <li>i First degree plus master degree in Accounting or other relevant field</li> <li>ii Professional certificates e.g., ACA, ACCA, ANAN etc.</li> <li>iii Four years on the post of Chief Internal Auditor</li> <li>iv Membership of relevant professional bodies</li> <li>v At least 8 years post qualification cognate Experience and 8 years post professional qualification experience</li> </ol>   |
| 7             | Director of Audit          | <ol style="list-style-type: none"> <li>i First degree plus master degree in Accounting or other relevant field</li> <li>ii Professional certificates e.g., ACA, ACCA, ANAN etc.</li> <li>iii At least 22 years post qualification cognate in higher educational institution</li> <li>iv Experience and 10 years post professional qualification experience</li> </ol>  |

*Source:* Summarised by Researcher from University of Ibadan Career Structure (2015), Osun State University Career Structure (2015), Federal University of Agriculture, Abeokuta Career Structure (2015)

Arising from Table 1, the proficiency or competence determination of internal auditors in tertiary institutions majorly centres on knowledge, experience, and professional skill. Hass and Burnaby (2010) examined the knowledge areas, aside from academic and professional qualifications, that can aid the proficiency of IAs, and invariably influence their performance. Their empirical result, based on the perception of the CAEs and audit practitioners, revealed that aside from the grounded knowledge in Auditing and Internal Audit Standards, IAs should have a good knowledge of the industry they operate, fraud awareness, and sound knowledge of ethics.

Going by the prescription of Holt and Wamper (2012) and Harrington (2004), scholars have made use of academic qualifications in evaluating the proficiency of IAs. For instance, in their studies, Alzeban and Sawan (2013) and Badara and Saidin (2014) found a higher percentage of IAs not having a first-degree certificate. The studies, therefore, classified the Internal Audit Department as having a low level of qualified personnel. Contrarily, several studies (e.g., Abu-Azza, 2012; Abuazza et al., 2015; Al-Twajjry et al., 2003; Alzeban and Gwilliam, 2014; Fischer and Montondon, 2005; Hass and Burnaby, 2010) found a large number of IAs having a first degree with many of them being first-degree in Accounting.

However, it is argued that having a majority of the Internal Audit team possessing a first degree with a specialisation in Accounting would limit the scope of Internal Audit Department operation to a financial audit, and non-financial audit would be neglected (Abu-Azza, 2012; Abuazza et al., 2015). For internal audit to have effective and efficient coverage of tasks, Abu-Azza (2012) and Abuazza et al. (2015), therefore, recommended the audit team to have divergent academic qualifications, while Soh and Martinov-Bennie (2011) stressed that the “*IAF needs to be staffed with a wide range of skills including finance, audit, operational (business), technological and occasionally legal competencies*” (p.614)

From the professional skill point of view, Holt and Wampler (2012) and Harrington (2004) stressed that professional qualification matters when considering the proficiency of IAD. Literature indicates that IAD in many organisations is characterised either by no officer with professional qualifications (Alzeban and Sawan, 2013) or by few numbers of officers having professional qualifications (Alzeban and Gwilliam, 2014; Badara and Saidin, 2014; Baharud-din et al., 2014; Ebaid, 2011), hence, may not add value to the organisation (Abu-Azza, 2012).

The proficiency principle, according to Dickins and Christian (2011), requires Internal Auditors to:

- a be involved only on the engagements for which they have required knowledge, capability, skills, and experience
- b conduct internal audit activities in accordance with the dictate of ISPPIA
- c continuously improve their proficiency and the effectiveness and quality of their services.

A significant number of studies (e.g., Baharud-din et al., 2014; Dukic and Dordevic, 2014; Suwaidan and Qasim, 2010) have also associated experience on the job with proficiency. The assumption is that the number of years spent on the job increases mastery of the job, hence, promoting productivity and proficiency. Abidin and Baabbad (2015) regard experience as the events someone has undergone. They state further that the experience will continue to happen as long as people exist. Unfortunately, literature



search has found a significant number of internal auditors having low experience on the job and consequently not performing well (Abu-Azza, 2012; Alzeban and Gwilliam, 2014; Alzeban and Sawan, 2013; Baharu-din et al., 2014). However, the study of Badara and Saidin (2014) proves the contrary as they found internal auditors having a high level of experience.

Furthermore, literature search found other factors influencing proficiency such as the number of hours acquired in CPE (Alzeban and Gwilliam, 2014; Alzeban and Sawan, 2013; Suwaida and Qasim, 2010), computer skill and usage (Abu-Azza, 2012), and other audit-related training (Dukic and Dordevic, 2014). The general view of the scholars is that, for internal auditors to be proficient and seen to be maintaining proficiency, they need to be continuously improving their knowledge, experience, and professional skills.

## 2.2 Knowledge

In the contemporary world, the common conception is that knowledge is essential for the success of any society (Puhakka et al., 2010). In business parlance, knowledge is the most organisational crucial resource for the actualisation of serious competition with peers and creating unique advantages (Papa et al., 2018). According to Oeberst et al. (2016), knowledge refers to individual property or information of a special quality that resides in the memory or mind of a person. In the context of this paper, we refer to knowledge as the academic knowledge acquired in the universities or polytechnics which leads to the award of degrees or higher diplomas.

The conception of some people is that university education gives students theoretical knowledge which needs to be practically demonstrated and applied in the work setting after graduation. But to have a prosperous society, graduates with the ability, capability and capacity to apply their theoretical knowledge in the workplace are needed (Puhakka et al., 2010). However, where this cannot be demonstrated and applied, the candidates are usually considered unemployable, and where they are employed, they are found not to be proficient.

Knowledge is the bedrock of proficiency. In internal audit parlance, the scope of auditing is restricted when auditors lack the necessary knowledge required for their audit activities (Wu et al., 2017). Some scholars have argued that having a university education alone does not fully provide an individual with the necessary knowledge to be proficient in his field (Awayiga et al., 2010), while others consider it a significant factor influencing proficiency. From the auditing perspective, Westermann et al. (2015) argue that university education provides only a small proportion of the knowledge required by auditors to perform well in the discharge of their duties. They, therefore, emphasise that Auditors must master a substantial body of highly complex knowledge in order to reach the desired level of proficiency for their activities. Similarly, Awayiga et al. (2010) suggest that accountants and auditors in contemporary society should have the knowledge and fundamental understanding of accounting, auditing, tax and other related fields in order to succeed in their task performance. Thus, auditors who are seeking knowledge tend to perform well in an organisation (Causholli et al., 2021).

Arising from the above, it is hypothesised that:

*H<sub>1</sub>: There is a significant positive relationship between knowledge and proficiency.*

### 2.3 Experience

Experience has been regarded as one of the strongest ways by which an auditor can gain proficiency. What an individual sees or demonstrates tends to sink into his brain and remain therein for a long time. Evidence from the literature indicates that most knowledge acquired by auditors happens on the job, thus, accountants and auditors learn through experience (Idris et al., 2019; Popova and Wright, 2019). Their gradual experience on the job from time to time enhances their knowledge and skills (Badara and Saidin, 2013; Promtong et al., 2018). Where an auditor possesses different and comprehensive experience, he becomes proficient and will be able to handle auditing issues accurately, effectively, and efficiently (Promtong et al., 2018). According to Westermann et al. (2015), proficiency is mostly attained by experience as most knowledge acquired by auditors happens on the job in the team setting and in the form of supervision, thus, experience in auditing is basically a professional apprenticeship.

Granting the preceding discussion, a relationship appears to exist between experience and proficiency, thus, it is hypothesised that:

*H<sub>2</sub>: There is a significant positive relationship between experience and proficiency.*

### 2.4 Professional skill

Generally, skills refer to knowledge about how something is to be done (Bolisani and Bratianu, 2018). In this study, we consider a person as a professional internal auditor if such a person is certified or chartered by a local or international professional accounting or auditing bodies such as ICAN, ANAN, ACCA, IIA, Information Systems and Audit Control Association –ISACA, and any other recognised one by the law of Nigeria. Thus, we regard internal auditors as having professional skills when they are chartered or certified and when they have acquired different skills through professional conferences, workshops, and training. Ma'ayan and Carmeli (2016) consider professional skill as one of the capacities needed by auditors to achieve meaningful performance and attain proficiency. They see the professional skills of auditors as manifested in their knowledge and experience, and professional credibility. According to them, possession of academic background alone is not enough for the attainment of proficiency but also the acquisition of specific and relevant training experience. The International Education Standards (IES 3), issued by the International Federation of Accountants (IFAC, 2019), provide seven categories of skills before an accountant or auditor is regarded as possessing professional skills that will lead to an intermediate level of proficiency. These include intellectual skills, interpersonal skills, communication skills, organisational skills, personal skills, integration of technical competence, professional skills and professional values, ethics and attitudes.

Consequent upon this, the following hypothesis is formulated:

*H<sub>3</sub>: There is a significant positive relationship between skill and proficiency.*

## 3 Methodology

This study employed a quantitative approach, a cross-sectional design, and a survey method. We administered 350 questionnaires to Accountants and Internal Auditors in

three tertiary institutions in Oyo State, Nigeria. The institutions comprise a University and two Colleges of Education. The items of the questionnaire instrument were adapted from the studies of Samagaio and Rodrigues (2016), Ma'ayan and Carmeli (2016), and Cohen and Sayag (2010). A total number of 15 items were adapted to measure proficiency through its three dimensions of knowledge, experience, and professional skill. Also, a 5-point Likert Scale ranging from strongly disagree (1) to strongly agree (5) was applied. The study used a statistical package for the social sciences (SPSS) to capture and analyse the data obtained from the respondents.

The respondents of the study were accountants and internal auditors who were senior staff on Grade Level 6 and above in their institutions. The justification for using the combination of the Accountants and Internal Auditors is to avoid common method bias on the part of Internal Auditors in their submission. We conducted a preliminary analysis of the data obtained through the SPSS by substituting the missing values, and the cases of outliers were removed. The relationship between the constructs was subjected to a statistical test through partial least squares structural equation modelling (PLS-SEM).

## 4 Results

### 4.1 Demographic information

Out of the 350 questionnaires administered, a total number of 292 questionnaires were returned, and only 263 questionnaires were found usable. This represents a 75.14% valid response rate. The result of the demographic information, as contained in Table 2, reveals that 57.4% of the respondents are male, while 42.6% are female. Similarly, 66.2% of the entire respondents have a first-degree/Higher National Diploma (HND), while only 7.2% have an Ordinary National Diploma/Nigeria Certificate in Education (NCE). Furthermore, 26.6% of the respondents possessed postgraduate academic qualifications (that is, Postgraduate Diploma, Masters, and Doctor of Philosophy).

**Table 2** Demographic profile

|   | <i>Demographic profile/item</i> | <i>No of respondents<br/>(N = 263)</i> | <i>Valid percentage<br/>(%)</i> |
|---|---------------------------------|--|---------------------------------|
| 1 | Gender:                         |  |                                 |
|   | Male                            | 151                                    | 57.4                            |
|   | Female                          | 112                                    | 42.6                            |
| 2 | Academic Qualification:         |  |                                 |
|   | OND/NCE                         | 19                                     | 7.2                             |
|   | Degree/HND                      | 174                                    | 66.2                            |
|   | PGD                             | 39                                     | 14.8                            |
|   | Masters                         | 30                                     | 11.4                            |
|   | PhD                             | 1                                      | 0.4                             |

**Table 2** Demographic profile (continued)

|   | <i>Demographic profile/item</i> | <i>No of respondents<br/>(N = 263)</i> | <i>Valid percentage<br/>(%)</i> |
|---|---------------------------------|--|---------------------------------|
| 3 | Professional body:              |  |                                 |
|   | None                            | 64                                     | 24.3                            |
|   | ICAN                            | 96                                     | 36.5                            |
|   | ANAN                            | 75                                     | 28.5                            |
|   | Others                          | 28                                     | 10.6                            |
| 4 | Work status:                    |  |                                 |
|   | Accountant                      | 184                                    | 70                              |
|   | Internal Auditor                | 79                                     | 30                              |
| 6 | Work experience:                |  |                                 |
|   | 5 year and below                | 21                                     | 8                               |
|   | 6–10                            | 75                                     | 28.5                            |
|   | 11–15                           | 102                                    | 38.8                            |
|   | 16–20                           | 37                                     | 14.1                            |
|   | 21 and above                    | 28                                     | 10.6                            |

Furthermore, 75.7% of the respondents belong to professional bodies and have professional certificates, while only 24.3% are without professional certificates. Moreover, significant portions (that is, 70%) of the respondents are accountants, while a greater number of respondents (i.e., 92%) have more than 5 years working experience.

#### 4.2 Descriptive analysis of proficiency and its dimensions

As contained in Table 3, the descriptive statistics of proficiency and its dimensions indicate the mean ranging from 4.019 to 4.337. Knowledge has the highest mean value of 4.337 (standard deviation, 0.607), while Professional skill has the lowest mean score of 4.019 (standard deviation, 0.692). The mean score implies that the respondents perceive knowledge as having the most significant impact on the proficiency of the auditors.

**Table 3** Descriptive statistics

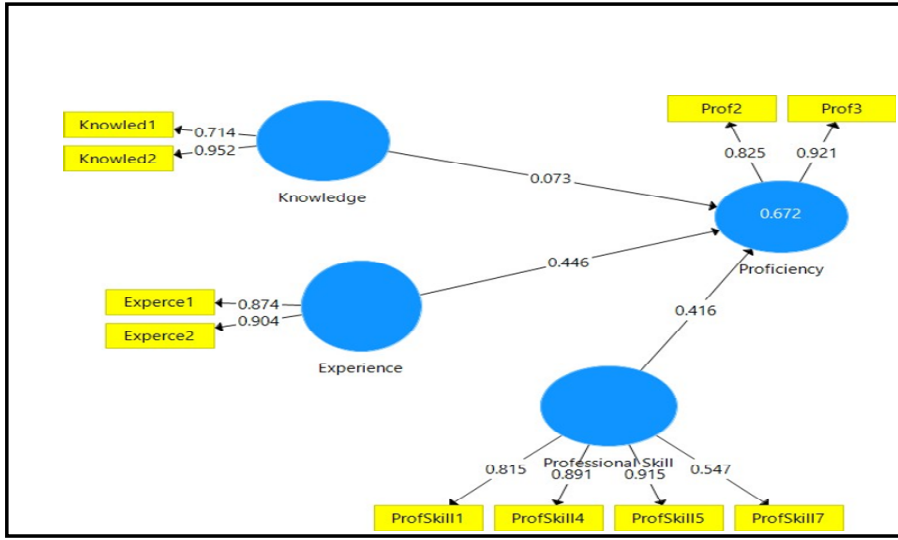
|                    | <i>N</i> | <i>Minimum</i> | <i>Maximum</i> | <i>Mean</i> | <i>Std. deviation</i> |
|--------------------|----------|----------------|----------------|-------------|-----------------------|
| Proficiency        | 263      | 2.00           | 5.00           | 4.144       | 0.772                 |
| Knowledge          | 263      | 2.00           | 5.00           | 4.337       | 0.607                 |
| Experience         | 263      | 1.75           | 5.00           | 4.156       | 0.650                 |
| Professional skill | 263      | 2.00           | 5.00           | 4.019       | 0.692                 |
| Valid N (listwise) | 263      |                |                |             |                       |

#### 4.3 Measurement model

In order to evaluate the validity and reliability of the items adapted for the measurement of this study's constructs, the convergent validity, discriminant validity, and Internal

Consistency Reliability were assessed through PLS-SEM measurement model (Hair et al., 2020). With the aid of algorithm in the measurement model, we deleted five items because of their low outer loadings. Specifically, and as contained in Figure 1, one item was deleted in the Proficiency construct, one in the Experience construct, and three in Professional Skill construct.

**Figure 1** Result of the measurement model (see online version for colours)



In the aspect of convergent validity, the Indicator Reliability and average variance extracted (AVE) were examined based on the recommendation of Hair et al. (2016). Convergent validity refers to the extent to which a measure relates to other measures of the same phenomenon (Cheah et al., 2018; Hair et al., 2014). As shown in Table 6, the AVE of any of the constructs is more than 0.5, and it ranges from 0.649 to 0.790 for all the constructs.

For discriminant validity, this study employed Fornell-Larcker Analysis and Cross Loadings. Discriminant validity, otherwise known as divergent validity (Garson, 2013), refers to the principle that the indicators for different constructs should not be so highly correlated across constructs as to lead one to conclude that the constructs overlap (Garson, 2013). In other words, discriminant validity analysis refers to testing statistically whether two constructs are dissimilar or different (Hair et al., 2017; Garson, 2013; Privitera, 2014; Vinzi et al., 2010). It is demonstrated when the shared variance within a construct (AVE) is greater than the shared variance between the constructs (Hair et al., 2020). As shown in Table 4, the diagonal figures are the square root of AVE of the latent variable and indicate the highest number in any row or column.

In a similar manner relating to the cross-loading analysis, the outer loadings of a construct, as contained in Table 5, on its associated construct are greater than all its loadings on other constructs.

**Table 4** Discriminant validity

| <i>Discriminant validity (Fornell and Larcker Criterion)</i> |                   |                  |                           |                    |
|--|-------------------|------------------|---------------------------|--------------------|
| <i>Construct</i>   | <i>Experience</i> | <i>Knowledge</i> | <i>Professional skill</i> | <i>Proficiency</i> |
| Experience   | <b>0.889</b>      |                  |                           |                    |
| Knowledge  | 0.437             | <b>0.841</b>     |                           |                    |
| Professional Skill   | 0.598             | 0.710            | <b>0.805</b>              |                    |
| Proficiency  | 0.727             | 0.563            | 0.735                     | <b>0.874</b>       |

\*The diagonal figures are the square root of AVE of the latent variable and indicate the highest number in any row or column

**Table 5** Cross-loading

| <i>Indicator Cross-loadings</i> |                   |                  |                           |                    |
|---------------------------------|-------------------|------------------|---------------------------|--------------------|
|                                 | <i>Experience</i> | <i>Knowledge</i> | <i>Professional Skill</i> | <i>Proficiency</i> |
| Experce1                        | <b>0.874</b>      | 0.483            | 0.558                     | 0.603              |
| Experce2                        | <b>0.904</b>      | 0.305            | 0.509                     | 0.686              |
| Knowled1                        | 0.015             | <b>0.714</b>     | 0.467                     | 0.262              |
| Knowled2                        | 0.546             | <b>0.952</b>     | 0.694                     | 0.598              |
| ProfSkill1                      | 0.468             | 0.751            | <b>0.815</b>              | 0.573              |
| ProfSkill4                      | 0.589             | 0.628            | <b>0.891</b>              | 0.651              |
| ProfSkill5                      | 0.603             | 0.582            | <b>0.915</b>              | 0.73               |
| ProfSkill7                      | 0.128             | 0.249            | <b>0.547</b>              | 0.328              |
| Prof2                           | 0.526             | 0.234            | 0.515                     | <b>0.825</b>       |
| Prof3                           | 0.721             | 0.677            | 0.74                      | <b>0.921</b>       |

Furthermore, this study employed composite reliability (CR) analysis in determining the Internal Consistency Reliability because of its superiority over Cronbach's Alpha ( $\alpha$ ). As contained in Table 6, the composite reliability of the constructs ranges from 0.826 to 0.883, which is higher than the minimum standard threshold of 0.7 (Revicki, 2014).

Arising from the analysis contained in Table 6, the requirements for the measurement model are satisfied as the loadings, indicator reliability, AVE, CR, and discriminant validity for the retained items are within the acceptable range.

#### 4.4 Structural model

Having satisfied the requirements for the measurement model, we subjected the relationship between the constructs to a statistical test. Through the process of bootstrapping, the statistical result, as contained in Figure 2 and Table 7, indicates that the relationships between experience and proficiency and that of professional skill and proficiency are statistically significant at 1% level of significance. However, the relationship between knowledge and proficiency is not significant.

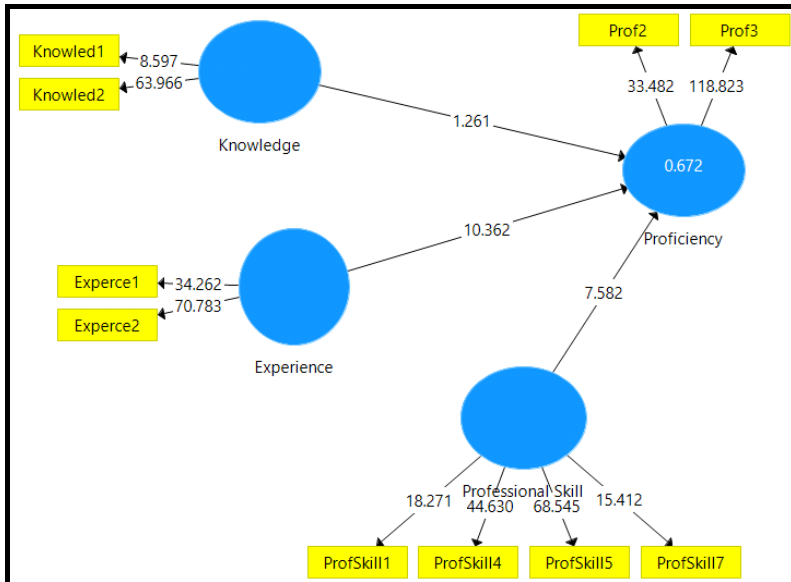
**Table 6** Summary of measurement model

| <i>Key quality criteria – Measurement model</i> |              |                            |                              |            |   |  |
|---|--------------|----------------------------|------------------------------|------------|---|--|
|   |              | <i>Convergent validity</i> |                              |            | <i>Internal consistency reliability</i> | <i>Discriminant validity</i>                       |
|   | <i>Items</i> | <i>Loadings</i>            | <i>Indicator reliability</i> | <i>AVE</i> | <i>Composite reliability (CR)</i>       | <i>Fornell-Larcker analysis and cross loadings</i> |
| Experience                                      | Experce1     | 0.874                      | 0.764                        | 0.79       | 0.883                                   | Yes  |
|   | Experce2     | 0.904                      | 0.817                        |            |   |  |
| Knowledge                                       | Knowled1     | 0.714                      | 0.510                        | 0.708      | 0.826                                   | Yes  |
|   | Knowled2     | 0.952                      | 0.906                        |            |   |  |
| Professional Skills                             | ProfSkill1   | 0.815                      | 0.664                        | 0.649      | 0.877                                   | Yes  |
|   | ProfSkill4   | 0.891                      | 0.794                        |            |   |  |
|   | ProfSkill5   | 0.915                      | 0.837                        |            |   |  |
| Proficiency                                     | Prof2        | 0.825                      | 0.681                        | 0.764      | 0.866                                   | Yes  |
|   | Prof3        | 0.921                      | 0.848                        |            |   |  |

Items removed: indicator loadings are below 0.5 – ProfSkill3, ProfSkill6, Expernce3, and Profcy1.

- a All Indicator Reliability represents the square of all item loadings (Hair et al., 2014).
- b All item loadings > 0.50 indicate Indicator Reliability (Hulland, 1999, p.198).
- c All average variance extracted (AVE) > 0.50 indicates Convergent Reliability (Bagozzi and Yi, 1988; Fornell and Larcker, 1981; Hair et al., 2012).
- d All Composite Reliability (CR) > 0.70 indicates Internal Consistency (Gefen et al., 2000).

**Figure 2** Result of the structural model (see online version for colours)



**Table 7** Direct relationship

| <i>Hypothesis</i> | <i>Relationship</i>              | <i>Std Beta</i> | <i>Std. error</i> | <i>T-Statistics</i> | <i>P Values</i> | <i>Decision</i> |
|-------------------|----------------------------------|-----------------|-------------------|---------------------|-----------------|-----------------|
| H <sub>1</sub>    | Knowledge → Proficiency          | 0.074           | 0.057             | 1.261               | 0.207           | Not supported   |
| H <sub>2</sub>    | Experience → Proficiency         | 0.444           | 0.042             | 10.362**            | 0               | Supported       |
| H <sub>3</sub>    | Professional Skill → Proficiency | 0.42            | 0.055             | 7.582**             | 0               | Supported       |

\*\*Confidence Intervals at 0.10 (2-tailed).

Specifically, the t-value of the relationship between experience and proficiency ( $t = 10.362$ ) has the highest value, which indicates that experience is the highest contributor to audit proficiency. Also, the t-value for the link between professional skill and proficiency ( $t = 7.582$ ) is strong and significant at 1% level of significance. Arising from this, the hypotheses  $H_2$  and  $H_3$  are supported, thus, experience and professional skills are determinants of proficiency in the context of internal auditors.

## 5 Discussion

In many occasions, internal auditors have been challenged for lack of effectiveness, efficiency and inability to add value to their organisations. This criticism is most premised on their inability to demonstrate a high level of proficiency in the discharge of their duties. Internal auditors need to be highly proficient in the discharge of their task. Thus, proficiency becomes an essential issue for the accomplishment of their responsibilities. Arising from this, and based on literature and theories, we examine the proficiency of internal auditors in some Nigerian tertiary institutions from the perspectives of knowledge, experience, and professional skills. We employed a cross-sectional design and survey method in obtaining data from the accountants and internal auditors in three tertiary institutions. Based on a statistical result, we found that experience is the most substantial factor determining internal auditors' proficiency. This implies that the internal auditors' ability to master their job through experience can go a long way in enhancing their task performance. The more and more the senior officers in the internal audit department and those ones at the managerial level are exposing the junior and subordinate auditors to work by giving them different tasks and supervising them appropriately, the more they learn through experience.

This finding supports the earlier finding of Promtonget al. (2018). Based on this, the university system, particularly in Nigeria, needs to take cognizance of the experience of their internal auditors in their career progression by allowing them to spend a reasonable period of time in a particular position before moving to another position. As contained in Table 1, the movement of internal auditors from the rank of Auditor II through Auditor I up to the rank of the Director of Audit requires a minimum of three years. The expectation is that an internal auditor in a particular rank must have mastered what is required to be proficient in auditing relating to his position within the period through on-the-job learning and training. Once the auditors have a result-based experience, it is expected that their effectiveness, efficiency, and general productivity will be enhanced.



Our study also has a managerial implication on the Universities as it can impact on the universities' decision making. The appointment beyond the Auditor II level and progression of the internal auditors and their promotion should be based on their on-the-job experience. In other words, the advancement of the auditor from one level to the other should be based on the obvious display of value-adding experience. The Key Performance Indicator (KPI) for their advancement should also take cognizance of the demonstration of valuable experience over time.

We also found that professional skills have a significant impact on the proficiency of internal auditors, as our hypothesis  $H_2$  is supported. In other words, possession of professional qualifications from the local or foreign professional accounting and auditing bodies such as ICAN, ANAN, ACCA, ISACA, among others, is a catalyst for the proper execution of audit duties. Thus, professional qualifications, attending professional training, workshops, and conferences, and upholding the ethics of professional bodies have an impact on the proficiency of internal auditors. This accounts for the reason why the career structure of tertiary institutions in Nigeria places much emphasis on professional qualification as one of the bases for the appointment and promotion of internal auditors from the entry-level (Internal Auditor II) to the highest level on the professional cadre of the department. Therefore, the Management and Councils of tertiary institutions should lay much emphasis on the professional training of internal auditors by encouraging and supporting them in the achievement of professional fit.

However, we found that the relationship between knowledge and proficiency is not significant, thus, our hypothesis  $H_1$  is not supported. This implies that having a university first degree or its equivalent in other tertiary institutions is not enough to attain the proficiency required to be a good auditor. This aligns with the submission of Westermann et al. (2015) that university education provides a small proportion of knowledge required to be a proficient auditor. So, the mere fact of having a first degree or Higher National Diploma in accounting, auditing and other related course does not confer the knowledge that can immediately lead to proficiency in auditing, rather, it is the basis upon which experience and professional skills rest.

Based on the fore discussion, though, knowledge is not significant in this study, the combination of the three constructs (knowledge, experience, and professional skills) are jointly essential as the coefficient of determination ( $r^2$ ), indicated in Figure 1, is 67.2%. Our findings align with the resource-based theory which considers experience and skills as intangible assets that make an auditor competitive.

## **6 Conclusion and recommendation**

The ability of internal auditors to add value to their organisations by providing quality assurance and consulting services depends on their level of experience and professional skills. For internal auditors to contribute meaningfully to their organisation, they need to be proficient in auditing because internal auditors without proficiency are just like a giraffe without a neck. It is our submission, therefore, that the Council, Management, and other relevant stakeholders in tertiary institutions should support the internal audit department in all ramifications to achieve the intention for which it is created through valuable experience and professional skills. It is, therefore, recommended that internal auditors attach much importance to their on-the-job experience and professional certification and training to attain the necessary expertise in their field of operation.

This study has practical implications for the internal auditors, management, and Councils of tertiary institutions, professional accounting and auditing bodies, and the government at large. The finding can be used in their policy formulation and decision making.

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