DO QMS AUDITORS NEED FURTHER EDUCATION? VIEWS FROM PANEL OF EXPERTS AND CERTIFICATION BODIES

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Abstract. This paper investigates and highlights the similarities and differences of perspectives between the panel of experts and certification bodies on the need for a further and wider education of QMS external quality auditors (EQAs). Two studies were conducted for this purpose. For the first study, a Delphi study was conducted involving panel of experts from Australia, New Zealand, Malaysia and India as respondents. The second study was carried out on accredited certification bodies in Malaysia. Thematic analysis was used to analyze the qualitative part of the findings from the studies. Based on the analysis, there are similarities and differences between the two groups on several aspects of the study. Both of the groups agree that there is a need to improve EQAs education, as most experts reported the quality of audit to be variable, inconsistent, poor and diminishing in value while the certification bodies received complaints about the competency of auditors. This paper contributes to the body of knowledge in the field of quality management system and audit where such work is still limited.
Keywords: *QMS audit, auditor education, auditor competency, quality management system, comparative analysis*

Introduction

For the past 20 years, a lot of research had been conducted on the implementation and maintenance of ISO 9001-based quality management system (Cândido et al., 2016; Djofack and Camacho, 2017). Popular aspects of the implementation include the motivation for and benefits of certification (Kakouris and Sfakianaki, 2018; Wilcock and Boys, 2017; Valmohammadi and Kalantari, 2015; Santos and Costa, 2014), critical success factors (Mehrabioun Mohammadi et al., 2021; Kharub, 2019; Ismyrlis et al., 2015) and the impact of certification (Kakouris and Sfakianaki, 2018; Cândido et al., 2016; Aba et al., 2015; Ochieng et al., 2015; Psomas et al., 2013). However, not many studies have been conducted on the auditors who are responsible for conducting the audits on an organization's quality management system. Auditors are engaged by the certification bodies to carry out audit to assess compliance of the organisation's QMS to the ISO 9001 (ISO, 2015a) standards. A quality management system audit evaluates an organization's existing QMS to ascertain its conformance with company policies, contract commitments, and regulatory requirements. Edly et al. (2007) developed a conceptual framework for audit effectiveness which focus more on auditor related criteria since the auditor is the main contribution toward the effectiveness of audits. According to them, all audit failures described by Karapetrovic and Willborn (2000) can be due to auditor competency. To them, the auditor's main criteria are the auditor should utilise effective auditing techniques, effective auditing process and auditor knowledge level on world class practice for the organisation audited. To do this implies that the auditors need to be knowledgeable and skillful to deliver effective audit that will benefit the client organization.

With the rapid advancement of technology resulting from Industry 4.0 and Quality 4.0, the growing concern about the sufficiency of knowledge, skills and attributes of

auditors become a question mark to client organisations and people in quality such as auditors, certification bodies and accreditation bodies. To make it worse, with Covid-19 pandemic at present, new knowledge, skills and attributes may be needed by auditors to conduct remote and online audit effectively. This would include knowledge on new system, information and, communication technology, new business process, data analytic, and ethical and legal aspects of operation. Therefore, two studies were carried out to compare the perspectives on the need for auditor education on the panel of experts and the certification bodies respectively. The similarities and differences identified will provide an insight on the need for further auditor education and the curriculum that should be developed to improve the knowledge, skills and attributes of auditors. Apart from closing the gap on auditors' competency that would improve the auditors' capability, this would also enhance their audit performance.

Literature review

Auditors' competency and audit performance

The term 'competence' and 'competent' refer to a state or quality of being able and fit (Chouhan and Srivastava, 2014). Usually the term competency/competencies have been used to refer to the meaning expressed as behaviours that a person needs to demonstrate, while the term 'competence' has been used to refer to the meaning expressed as standards of performance (Hoffmann, 1999). Hecklau et al. (2016) defined competencies as "a set of skills, abilities, knowledge, attitude and motivations a person needs to cope with job-related tasks and challenges effectively". Therefore, competence should be evaluated through a process that considers personal behavior and the ability to apply the knowledge and skills gained through education, work experience, auditor training, and audit experience (ISO, 2018).

Audit performance can be evaluated by measuring the achieved effectiveness and efficiency and comparison of actual performance with expected goals (Beckmerhagen et al, 2004). Measuring audit effectiveness involved the evaluation of the whole audit system; objectives, processes and resources (Karapetrovic and Willborn, 2000). To ensure successful audit performance will include the principles of measuring QMS audit effectiveness such as the auditor role, auditor qualification and competence (Beckmerhagen et al, 2004). To ensure effective audits, the auditors (EQAs) must be competent in order to achieve intended results. Further, the ISO 19011 (ISO, 2018) states that confidence in the audit process and the ability to achieve its objectives depends on the competence of those individuals who are involved in planning and conducting audits, including auditors and audit team leaders.

The role of QMS auditors in audit

The CQI Competency Framework is structured around the context in which quality professionals work and the behaviours they must show that covers five areas; governance, assurance, improvement, leadership and context. According to IRCA (2016), it is imperative that management system auditors understand the essentials of governance, and are able to differentiate the good from the bad. He said to avoid the possibility that something critical will be overlooked, auditors must employ risk-based thinking during audit planning to identify where the greatest risks to assurance lie, and develop representative sampling plans to focus on these areas. With the introduction of Annex SL, auditors may find they need to increase their IT skills in order to interrogate

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the organization's IT systems. To establish the commitment to and existence of continual improvement, the external quality auditors will have to look for evidence of: non-conformities and corrective action carried out in a timely manner; the action taken to address risks and opportunities are evaluated, the context is being periodically revisited, and top management is using its performance data for business continuity. At the same time, IRCA (2016) is in the opinion that management system auditors need to demonstrate leadership competencies as well.

As auditors, to establish context, it is imperative to be clear on the audit client's requirements and expectations as effective communication is important to ensure both the auditor and auditee have a shared understanding of the expected outcomes of the audit. Any regulatory and statutory requirements applicable to the clients must be understood by auditors IRCA (2016).

Expectations on external auditors and the need for auditor further education

The expectations on external auditors have been clearly outlined by the ISO 19011 (ISO, 2018), ISO 9001 (ISO, 2015a) and ISO/IEC 17021-1 (ISO, 2015b) as well. The IS0 9001 (ISO, 2015a) standards makes it mandatory and an explicit requirement for a process-based management system. Therefore, auditors need to understand both the process and the business management system that determine the organization's performance. At the same time, they must also be able to understand the interaction of these processes with each other in order to understand the bigger and overall picture of the organizations. According to Clause 7.2.3 of the ISO 19011 (ISO, 2018), an auditor should possess the knowledge and skills necessary to achieve the intended results of the audits they are expected to perform. The four generic knowledge and skills QMS auditors should have are on the audit principles, processes and methods, management system standards and other references, the organization and its context, and applicable statutory and regulatory requirements and other requirements. It also states that achieving auditor compliance can be done through completing training problems, having experience in relevant technical, managerial or professional position, having education/training and experience in a specific management system discipline/sector, and having audit experience under the supervision of a competent auditor within the same discipline.

In addition, Clause 7.2.2 of the standard states that auditors should possess necessary attributes or qualities to enable them to act in accordance with the principles of auditing and they also should exhibit professional behaviour during the performance of audit activities. These include being ethical, open-minded, diplomatic, observant, perceptive, versatile, tenacious, decisive, self-reliant, open to improvement, culturally sensitive, collaborative, and acting with fortitude. Similarly, Annex D of the ISO/IEC 17021-1 (ISO, 2015b) displays the desired personal behavior of personnel involved in the certification activities for any type of management system.

Materials and Methods

Two studies were conducted for this purpose. For the first study, a Delphi study was conducted in the middle of 2018 involving 26 experts, later on called as panel of experts (POEs) from Australia, New Zealand, Malaysia, Thailand and India as respondents (Ab Wahid and Grigg, 2020). Panelists were given between 10-14 days for each round to complete the survey. Thematic analysis was used to analyze the qualitative part of the

findings from the study while the quantitative findings used level of agreement of the experts' ranking scores which was measured by Kendall's coefficient of concordance (Kendall's W). The second study was carried out in late 2019 on 26 accredited certification bodies (CBs) in Malaysia (Ab Wahid and Tan, 2021). The respondents were chosen based on their job designation and experience in the management and operation of a certification body, quality and auditing area. A survey questionnaire was distributed to Head of Certification and Technical Reviewer of the CBs. Thematic analysis as described by Braun and Clarke (2006) was used to analyze the qualitative part of the findings while a univariate and bivariate analysis were utilized for the quantitative part of the study. The results from the qualitative part from both of the studies on the need for further auditor education were then analyzed and compared in this paper. Similarities and differences between the studies were reported in the following section.

Results and Discussion

Demographics

In the first study (Delphi study), a panel of 26 experts was chosen from Australia, New Zealand, Thailand, India and Malaysia based on their expertise and experience in the quality and auditing area and represent several categories such as top managers, quality practitioners, academicians, quality auditors, quality consultants, quality managers, operations and assurance managers, and a financial auditor. More than half (53.8%) of the experts have been involved in QMS audit for more than 10 years while 23.1% have been involved within 3-10 years, 7.7% less than 3 years and 15.4% not specified. *Table 1* displays the expert panel composition for the study.

Table 1. *Expert panel composition of the Delphi study.*

Category	Position & country	Experience in QMS audit
Top manager	Managing Director of a Quality Association, Australia	Not specified
	Chief Executive Officer of Certificate Body, Australia	> 10 years
	Managing Director of Certification Body, India	23 years
	Chief Operating Officer of a Certification Body, Australia	< 3 years
Quality practitioner	Quality Practition and Consultant, Australia	25 years
	Director of Quality Systems at a University, Malaysia	15 years
	Director & Regulatory Manager of companies, New Zealand	34 years
	Board Member & Chair of a Nomination Committee of a Quality Association, Australia	8-10 years
Academician	Professor of Quality Systems at a University, New Zealand	< 3 years
	Professor at a University, Thailand	Not specified
	Professor of Operation Management & Sustainability at a University, New Zealand	4-7 years
Quality auditor	General Manager of a Certification Body, Australia	8-10 years
	Auditor of Certification Body, New Zealand	4-7 years
	CEO of a Certification Body, Australia	8-10 years
	Head of Certification of a Certification Body, Australia	Not specified
	Certified Lead Auditor, Australia	4-7 years
Quality trainer/ Consultant	Global Quality & Training Manager, Australia	> 10 years
	Principal Consultant of a Quality Management Consulting, Malaysia	24 years

	Consultant of Training & Verifier Academy, New Zealand	25 years
	Managing Director of Management Consultants, Australia	30 years
	Principal Consultant of Management Consultants, Australia	Not specied
Quality manager	Head of Quality Assurance of a company, Australia	25 years
	Quality Assurance & Compliance Manager of a company, New Zealand	20 years
Financial auditor	Director of a Financial Audit Firm, Australia	25 years
Operationals/ assurance manager	Operaions Manager of a company, Australia	> 10 years
	Business Assurance Manager of a company, Australia	25 years

For the second study, there were 26 CBs accredited by the Department of Standards Malaysia (DSM) as at 2019. However, two of them cannot be contacted as their websites' telephone contact number was not in service. Out of the remaining 24, four did not want to participate in the study, another four did not respond and 16 CBs responded (66.7%). Survey questionnaires using Google forms were emailed to Head of Certification of 24 CBs. The Head of Certifications were asked to extend the questionnaire to their Technical Reviewers as it was difficult to obtain information on the identity of the Technical Reviewers from each of the CBs. 19 questionnaires were returned. Those respondents comprise of 14 Head of Certifications (73.7%), 4 Technical Reviewers (21.1%) and 1 Head of Business Assurance Unit (5.3%) from 16 CBs. More than half of the respondents (52.6%) have been with their company between 2-5 years; 10.5% less than 2 years; and 36.9% more than 5 years. In terms of job experience, 63.2% of the respondents have auditing/quality background while 31.5% come from other areas. One (5.3%) of the respondents does not have any job experience as this is his/her first job. *Table 2* shows the CBs involved in the study.

Table 2. *Participating certification bodies, designation of respondents, years with CB and previous experience.*

Respondent	Name of CB	Designation of respondent	Years with CB	Previous experience (Job position)
1	FC	Head of certification/director	2-5	Certification lead auditor
2	IC	Head of certification	2-5	Lead auditor
3	GC	Head of certification	> 5	Lead auditor management system
4	GC	Technical reviewer	2-5	Managing director
5	SM	Head of certification/GM	> 5	ISO consultant
6	PS	Head of certification	2-5	Director general of DSM
7	SC	Head of certifcation	> 5	Quality manager
8	BC	Technical reviewer/manager	> 5	ISO consultant
9	LR	Head of certification/assessor manager	2-5	Business centre manager
10	TN	Head of certification	2-5	Commercial manager
11	NC	Technical reviewer	> 5	Teachnical reviewer
12	SS	Head of certification	> 5	Engineer
13	SS	Head of certification	2-5	Certification auditor
14	BI	Technical reviewer/scheme manager	2-5	Project manager

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15	PI	Head of certification	2-5	Senior production executive
16	M2	Head of certification/MD	< 2	Managing director
17	CU	Head of certification	2-5	ISO consultant
18	NC	Head of business assurance unit	< 2	No experience: find job
19	NC	Head of certification	> 5	Research officer/project leader

Qualitative findings

Similarities and differences of opinion between the two groups of respondents

Based on the qualitative findings, there are similarities and differences in perspective on several aspects of the study in terms of how both groups view the present quality of auditing service provided by the auditors to the customers, the feedback/complaints regarding the audit performance of EQAs, the need to improve the EQAs education, and the reasons for improvement of education and competency of auditors.

Quality of auditing service provided by EQA to their clients

For CBs, 94.7% of the respondents found the quality of auditing service provided by the EQAs satisfactory, good and excellent. Only 5.3% said it was poor. On the other hand, for the panel of experts of the Delphi study, only 28.6% found it satisfactory, good and excellent while 57.1% found it variable and inconsistent and 14.3% found it poor and diminishing in value. This is quite a contrast in opinion between the two groups.

Feedback or complaints regarding the audit performance of EQAs

From the panel of experts' opinion, the highest frequency of comments (31.11%) is related to lack of knowledge on audit method and audit skill (including audit planning & report writing) and this is followed by poor attitude of auditors (17.78%), lack of knowledge on the requirements of the standard (11.11%), lack of communication/interpersonal skill (11.11%), and document/desk audit (11.11%). As for the CBs, more than half (57.9%) of the respondents pointed out that they have received negative comments or complaints from their clients on the EQAs. Some of the complaints received from clients on EQAs by their CBs are mostly on auditors being unprofessional, e.g. rush job, soft grading, cut corners and low quality of work (36.36%), relying too much on the standard and following checklist and 'no added value' (18.18%), bad attitude when handling the customer and not communicating with the customer (9.09%), lack of understanding of the industrial practice (9.09%), lack of practical skill (9.09%), not knowledgeable (9.09%), and focused on documentation (9.09%).

Although the percentage of each type of complaints is different, there are obvious similarities that can be observed from the two groups of respondents. For example, the lack of knowledge on audit method and audit skill lamented by the expert panel is similar to lack of practical skill found by the CBs' clients of auditors. Both group of respondents also found that auditors have bad or poor attitude towards their clients by not communicating with them; this might be due to the lack of communication or interpersonal skill; not knowledgeable/lack of knowledge on organization's business

and processes (the industrial practice) and the requirements of the standard; relying too much on the standard; focused on documentation that can be reflected by doing document or desk audit; and insufficient time spent on the audit that can be construed as being unprofessional that resulted in a rush job, soft grading, cutting corners and low quality of work by auditors (*Table 3*).

Table 3. *Complaints received on EQAs from the panel of experts and the clients of CBs.*

No.	Panel of experts	Certification bodies
1	Lack of knowledge on audit method and audit skill (31.11%)	Unprofessional (36.36%)
2	Poor attitude of auditors (17.78%)	Rely too much on the standard, following checklist, no added value (18.18%)
3	Lack of knowledge on the requirement of the standard (11.11%)	Bad attitude when handling the customer & not communicating with the customer (9.09%)
4	Lack of communication/interpersonal skill (11.11%)	Lack of undrstanding of the industroal practice (9.09%)
5	Document/desk audit (11.11%)	Lack of practical skill (9.09%)
6	Lack of knowledge on organization's business and processes (4.44%)	Not knowledgeable (9.09%)
7	Insufficient time spent on audit and workplace (4.44%)	Focused on documentation (9.09%)

The need to improve the EQAs education

When asked their opinion on whether there is a need to improve the external auditor's education in order to enhance their audit performance, 14 out of 21 participants (66.67%) from the panel of experts said 'yes', six were unsure (28.57%), and only one participant said 'no' (4.76%). On the other hand, from the CBs, 63.2% of respondents answered 'yes' while 31.6% says 'no' and one (5.3%) says whether it is 'yes' or 'no' depends on the experience of the auditor. Although the percentage with 'yes' is quite similar (66.67% and 63.2%), the gap in percentage of those who said 'no' between the two groups is quite large (4.76% and 31.6%). The high percentage of respondents from the CBs responding 'yes' on the need to improve auditors' education is quite surprising as only one respondent (5.3%) said the quality of auditing service is poor (referred to Quality of auditing service provided by EQAs to their clients). However, it is not totally unexpected as 57.9% of the respondents said that they have received negative comments or complaints from their clients on their EQAs (referred to Feedback/Complaints regarding the audit performance of EQAs). As for the panel of experts, more than one-fourth of the experts were unsure whether there is a need for further auditors' education. This is quite unsettling given their current and previous experience, involvement and knowledge in managing quality and audit.

The reason for external quality auditors' further education

The panel of experts from the Delphi study who said 'yes' provide several reasons on the need for external auditor education as shown in *Table 4*.

Table 4. *Reasons for external quality auditors' further education-Panel of expert (Delphi study).*

Reasons	Frequency, N

	(Percentage, %)
Auditors' knowledge (e.g. of the ISO 9001 standards, risk management, process approach, technologies in business) and skills (e.g. report writing communication, IT, analytical) are updated, upgraded, enhanced and imporved.	12 (35.30)
Better relevance and audit value for customers.	5 (14.71)
Better understanding of the auditors on business improvement, the overall business environment, different industries, and the context of the organisation.	3 (8.82)
Auditors' personal development and education are continuosly improved.	3 (8.82)
Auditors capable of conducting the audit and reporting the audit results.	2 (5.88)
Auditors understand and fulfil the customers' needs and expectations of the audit.	2 (5.88)
Auditors and audits' performance are improved and enhanced.	2 (5.88)
Auditors' knowledge on the standards and auditing skills are standardsed and qualified.	2 (5.88)
Consistent audit performance by auditors.	2 (5.88)
Expanding role of auditors expected by the market is met.	1 (2.95)
Total	34 (100)

As for the CBs, those who said 'yes' on the need for further auditor education, the reasons given are shown by *Table 5*.

Table 5. *Reasons for external quality auditors' further education-Certification bodies.*

Reason	Frequency, N (Percentage, %)
Lack of knowledge un auditing the scope, business and risk management and how to audit/lack of audit skill.	5 (38.46)
To enhance their competence and consistent with the CB requirements.	2 (15.39)
To be up-to-date on current issues, new technology and latest information.	2 (15.39)
Too much focus on documentatuon, not looking at the business process, risk assessment, targets and objectives and customer satisfaction.	1 (7.69)
Lacking in soft skill, leadership skill and analytical skill.	1 (7.69)
Continuous Professional Development (CPD) via this auditors' education program is a good idea.	1 (7.69)
Young external auditors do not have sufficient industry experience.	1 (7.69)
Total	13 (100)

Further analysis shows that overcoming lack of knowledge and upgrading/updating and improving knowledge are two main reasons given by both groups for further education of EQAs. By looking at the tables, some of the components of knowledge considered lacking in auditors lamented by both groups are on the ISO 9001 standards (e.g. context of the organization, process approach), risk management (assessment), business (environment, industry, process, improvement, technologies), new technology, auditing and current issues. For skills, the auditors need to be educated further due to

lacking in report writing ability, auditing, communication, information technology (IT), leadership and analytical skills.

Conclusion

From the comparative analysis on the two groups, it could be concluded that there are similarities between the two groups on the need for auditors' further education, feedback/complaints regarding the audit performance of EQAs and the reasons for improvement of education for EQAs. However, differences in opinion occur on the quality of auditing service provided by EQAs to their clients. External quality auditors need to be further educated to address and overcome the lack of certain knowledge, skills, and attributes. Both the panel of experts and certification bodies agree that addressing the lack of knowledge and lack of skills of auditors are two main reasons for further education of EQAs. Other important reasons given are to enhance auditors' competence and provide audit value for client organisations. In conclusion, with further and wider education, EQAs will be developed both personally and professionally. This will improve their competence, auditing skill and audit performance that will directly add value to client organisations. In addition, the auditors' repertoire will be broadened and this will help in expanding their roles as expected by the market. This is important especially for young auditors and those with insufficient industry experience.

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Conflict of interest

The author confirms that there is no conflict of interest with any parties involved with this study.

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