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DEVELOPING THE AUDITOR'S CREATIVE THINKING SKILLS TO REDUCE MITIGATING THE POTENTIAL RISKS ASSOCIATED WITH MATERIAL MISREPRESENTATION

ABSTRACT

The primary objective of this study is to examine the correlation between the creative thinking abilities of external auditors and their effectiveness in mitigating significant misstatements. The aim is to enhance the competencies of auditors operating within Iraq's public and private sectors. Given the challenges businesses and government organizations encounter in dealing with fraud and the manipulation of financial statements, it is imperative to address the issue of shading, which is commonly observed in such instances.

A questionnaire was utilized to examine the effect and ascertain the correlation between the variables; a questionnaire was subsequently divided into two distinct sections. The initial study focused on assessing the creative thinking abilities of auditors, whereas the subsequent study aimed to evaluate the extent to which fundamental misstatements were reduced. The initial section comprised a total of 19 inquiries, while the subsequent section encompassed 18 inquiries. A total of 225 questionnaires were given to auditors working at auditing offices. The Federal Bureau of Financial Supervision personnel and its 205 members were obtained. The study employed simple linear regression analysis using the method of least squares to test hypotheses. The findings indicated that external auditors typically exhibit a strong inclination toward generating suggestions that facilitate the development of the audit program and the selection of sample sizes. He can also engage in productive discourse using unambiguous language when presenting specific observations on material misrepresentation faults to the department or corporate executives, aiming to identify and resolve suitable remedies.

Keywords: auditor, creative thinking, critical thinking, audit risks, material misrepresentation

JEL Classification: M48, M53, D81

INTRODUCTION

Learning enhances the development of accounting experience, cognitive interaction, and creativity, and little is known about the precedents or the nature of this interaction between knowledge and the capacity to learn, process information, and communicate. The auditing field requires the most knowledge, and accounting theorists have recently questioned this assumption because it calls for theoretical development and empirical research that considers the implications of more dynamic interactions between knowledge and ability.

The expertise of the auditor and the rules of conduct require auditors to develop a rich and detailed understanding of clients' work environments. Existing psychology literature indicates that decision-makers often have great difficulty understanding the complexity of the work environment, and more efficient use of working memory is likely to improve auditors' ability to create and employ effective auditing strategies. The knowledge structures required to simulate and comprehend new information will influence existing knowledge structures.

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Auditors are anticipated to possess higher levels of professional expertise to reduce the failure to identify material misrepresentation, enhancing their capacity to process data and comprehend its nature during auditing. Creative thinking motivates people to solve societal or work problems quickly. It is the process by which the mind organizes its experiences in a new way to solve a specific problem, which entails mental activity and is the foundation for customer satisfaction and meeting their needs, particularly since these needs and requirements are constantly evolving. Due to the creative ideas in their strategies, programs, products, and services, organizations that have developed well in revenue have achieved success in market transactions and competition in response to shifting desires and new aspirations. We believe that auditors' adoption and comprehension of creative thinking will contribute to the development of their professional skills, not only in terms of identifying material misrepresentation and reducing audit risks but also in terms of creative thinking at the level of the report, how to identify key users, and how to determine the information that these users want or expect to be included in the report. What factors, including qualitative factors, must be considered when determining whether the information is material? By employing creative thinking, we will achieve satisfactory results in this study that will aid in enhancing the abilities and skills of auditors. The significance of this study is raising the level of the external auditor's skills by employing other fields of knowledge, such as creative thinking, to reduce the risks of fundamental misrepresentation.

Most of the studies examined in this review are psychological investigations conducted on students during the early phases of their academic pursuits, focusing on creative thinking. One of the studies conducted by (Zenali et al., 2019) suggests that implementing creative thinking training can be beneficial in enhancing the critical thinking abilities of sixth-grade pupils. According to the findings of (Moreno & Diaz, 2019), there is a strong correlation between training in creative thinking and the development of critical thinking skills, accounting for 78% of the observed variance. Cultivating a well-rounded creative thinking ability, accompanied by a range of abilities, can enhance one's capacity for imagination, creativity, and overall performance. According to research conducted in 2019, it is argued that there is a need to create assessment instruments grounded in the cultivation and evaluation of cognitive abilities. The study conducted by (Azid et al., 2019) highlights the significance of higher education in economic subjects, particularly in critical competencies, price index, and inflation. The authors emphasise the importance of incorporating thinking skills into the technical and vocational training (TVET) curriculum since these abilities are crucial in the evolving global economy. In a recent study by (Yazid et al., 2020), the researchers examined the impact of opportunity, pressure, auditor type, and auditor abilities on evaluating fraud risks. The study specifically focused on the perspectives of internal and external auditors working in public universities in Banten and Jakarta. The present investigation revealed a notable impact on opportunity, pressure, auditor type, and risk assessment competence. The act of fraud refers to the intentional deception or misrepresentation of facts.

The research conducted by (Dimitrijevic et al., 2021) focused on examining the efficacy and constraints of external auditing in identifying significant misstatements in enterprises operating throughout the borders of Serbia, Croatia, Macedonia, Bosnia, and Herzegovina. According to (Herron & Cornell, 2021), the research indicates that enhancing the authority of external auditors will alleviate existing limitations and broaden the range of responsibilities and limitations imposed on their professional duties. A favourable association was also identified between the quality and quantity of auditors' reactions to the dangers associated with material misstatements, specifically about their innovative ideas, personal devotion to the work, and personal preferences for unpredictability, openness, and improvisation. The analysis provides support for their initial hypotheses. The proposition posits that the level of auditors' creativity is a more reliable indicator of their response to material misstatement risks than their assessment of signals. This implies an increasing inclination among auditors with a creative mindset to modify the planning and execution of audits. The evidence suggests a connection between the level of creativity exhibited by auditors and their ability to detect and address material misstatements effectively. Additionally, there is a positive correlation between the adequacy and quantity of auditors' responses to perceived fraud risks and the creativity of their proposed solutions. According to the study conducted by (León et al. (2023), The individuals in question have expressed their intention to engage in activities related to exploration, construction, and connection. The attributes that distinguish a trained professional capable of meeting the demands of contemporary society, which necessitates high-level thinking, are the acquisition and cultivation of critical and creative thinking skills bolstered by self-regulation and an investigative, attentive, honest, and adaptable mindset.

The primary obstacle faced by the researchers was the need for a specific investigation of the research subject. Consequently, they had to rely on studies closely aligned with the variables of interest and draw upon the theoretical framework to inform their analysis.

This article is divided into the following parts: In the first part, we will discuss the literature that deals with creative thinking, focusing on its relationship with the external auditor. We will also review the literature related to material misstatements. In the second part, we will review the study methodology, and in the third part, we will review the results we reached through statistical analysis. As for the last part, we will present the most important conclusions we have reached regarding the effect of creative thinking on reducing material distortions.

LITERATURE REVIEW

A philosophical introduction to creative thinking

Researchers and pedagogical developers are interested in discovering the optimal method for teaching creative thinking abilities. When the inquiry strategy is employed, creative thinking significantly impacts how well individuals acquire cognitive skills (Atamtajani & Putri, 2019). Creativity is one of the twenty-first century's most important life and work skills because it is an innovative method to approach and analyze ideas, solve problems, and think critically. This skill can be developed and enhanced through various methods and exercises. In problem-solving, creative thinking consistently considers the deliberate departure from conventional patterns. According to (Atamtajani, 2020), creative thinking refers to the cognitive process of approaching problems and finding solutions from an unconventional standpoint, deviating from conventional methods and embracing innovative approaches. The aforementioned creative process facilitates the exploration of interconnections, the engagement with novel obstacles, and the identification of unconventional, innovative, and unprecedented resolutions (Gafour & Gafour, 2020). The capacity for creative thinking facilitates a receptive mindset towards the resolution of problems, and creative thinking is a fundamental competency in formulating adaptable ways to address change and attain solutions. Developing thinking skills is contingent upon utilizing a methodology that fosters the generation of innovative and imaginative outputs. Hence, individuals employ cognitive processes to address certain occurrences and challenges based on their respective cognitive capacities. Cognitive processes encompass the generation and collection of ideas, the ability to perceive things from other perspectives, and the utilization of various talents. According to (Harwati, 2021) and Rokhmat, creative thinking can be characterised as divergent thinking, whereas free thinking is not constrained to a singular perspective. Furthermore, creative thinking involves the cognitive process of identifying and investigating several options. Hence, the process of creative thinking entails the exploration of novel and valuable concepts that others have not previously contemplated. Extensive scholarly research has yielded substantial insights into creativity's historical origins and development. Nevertheless, creative thinking is frequently perceived as an enigmatic process that necessitates input and yields innovative results. Gaining insight into the connection between cognition and creative thinking facilitates the identification of strategies individuals can employ to foster creative thinking, as well as the recognition of cognitive obstacles that need to be overcome. An extensive comprehension of the connection between cognition and creative thinking, as well as its precursors, facilitates the identification of managerial actions that can promote creative thinking and the identification of cognitive obstacles that should be addressed (Pinkow, 2023).

Creative thinking encompasses the aptitude to handle complexity, exhibit curiosity, engage in self-management, demonstrate creativity, take risks, engage in high-level thinking, and possess logical thinking skills (Kozikoğlu & Küçük, 2020). Creativity is the cognitive ability to generate novel and valuable solutions to problems or engage in activities that deviate from the ordinary or conventional. The creative thinking process enables individuals to produce ideas, perceive hidden linkages, and create or change unique arrangements among seemingly unconnected components. In essence, creative thinking encompasses a variety of approaches and is not limited to a singular mode of intervention. (Triche et al., 2012). Numerous scholars have examined creativity as a cognitive activity that exhibits distinct characteristics compared to other cognitive processes. Guilford is considered a pioneering author who introduced the concept of creative thinking as a cognitive activity intricately intertwined with the intelligence framework. The theoretical framework proposed by the individual in question regarding the composition of the human mind (SOI) continues to serve as a prominent point of reference in elucidating and forecasting an individual's capacity for creativity and subsequent creative output. This is primarily attributed to a cognitive process known as differentiated production, which is closely linked to the generation of innovative problem-solving strategies characterised by proactive action. As Guilford stated, divergent thinking differs from convergent thinking in that it encompasses multiple directions rather than a singular path toward finding a definitive solution. He identified four distinct processes that underlie divergent thinking. (Hundleby, 1967).

1. Fluency, as a cognitive ability, encompasses the generation of a substantial quantity of ideas and can be categorized into three distinct forms: intellectual, collaborative, and expressive.
2. Flexibility refers to the capacity to modify one's cognitive processes of a concept's significance, interpretation, or application. It encompasses adopting alternative perspectives, approaches, or strategies to enhance comprehension or problem-solving, leading to novel problem interpretations.
3. Authenticity refers to generating unique and astute responses from remote locations.

Creative thinking has been seen to exert a significant influence across several domains, including but not limited to science, technology, economics, and education. This suggests that creative thinking possesses a higher-order cognitive capacity, hence crucial in facilitating individuals' academic achievement and professional success. The topic has garnered growing interest among scholars, resulting in a surge of enthusiasm for creative thinking. Consequently, creative thinking has

transitioned from being a peripheral aspect of education to occupying a central position (Yang & Zhao, 2021). The critical attributes associated with creative thinking encompass fluency, adaptability, attention to detail, originality, complexity, willingness to take risks, imagination, and curiosity. Based on the theoretical exposition, it can be inferred that creative thinking encompasses the capacity to generate novel ideas characterised by originality, fluency, and flexibility. Furthermore, individuals who perceive themselves as lacking the ability to generate new ideas can still engage in creative thinking by actively seeking to cultivate and amalgamate existing associations, thereby engendering distinct connections (Nuraeni & Fitriyani, 2023). Identifying the many stages of creative thought facilitates the individual's progression toward the ultimate creative outcome, alleviating the distress and strain arising from the subject matter or predicament (Eddine & Ramadan, 2022). Kaufman and Beghetto have established a conceptual framework including four distinct categories of creativity. The concept called 4C for creativity delineates two distinct forms of individual creativity, namely Little-C, and Mini-C, alongside two categories of collective creativity, Pro-C and Big-C, as seen in the diagram provided (Larraz, 2021).

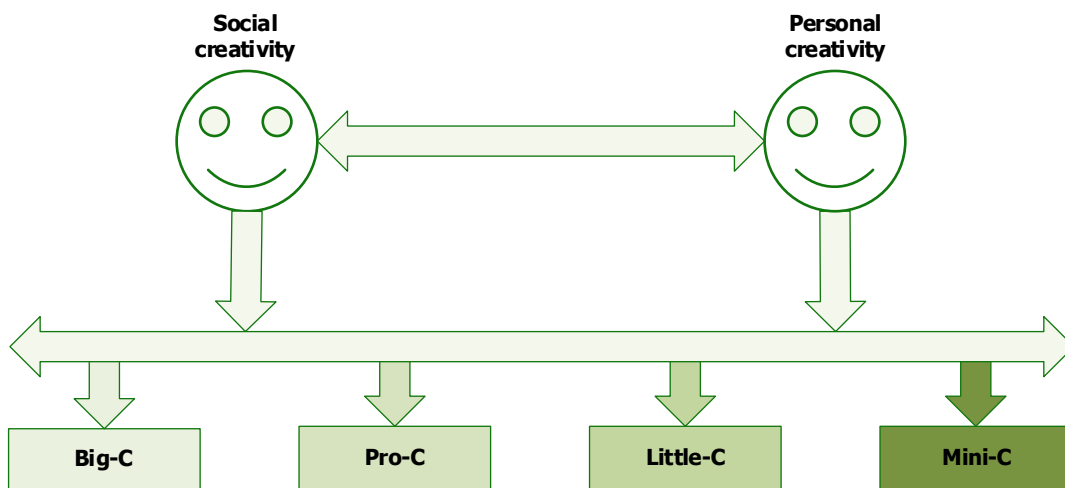


Figure 1. Types of creativity.

Based on the observations, it becomes evident that external auditors must possess the attribute of creative thinking to elevate the auditing profession to its utmost potential and effectively address the complexities arising from technological advancements and the expanding business landscape, encompassing even the most remote locations across the globe. Consequently, individuals responsible for auditing must demonstrate exceptional intellectual capabilities.

Enhancing the creative thinking of the auditor

Carvalho asserts that fostering the auditor's creative thinking is vital. Applying diverse training tactics, which can be categorised based on characteristics such as technology, knowledge, metacognition, and problem-solving, can boost performance in numerous training domains. Using creative thinking (Carvalho et al., 2021) enables the presentation of different options that deviate from the norm. According to (Monteza, 2021), there is a long-standing tradition of utilising appropriate knowledge transfer methods. The acquisition of creative thinking is essential as it plays a significant role in modifying behaviour through acquiring lifelong knowledge. Furthermore, enhancing the creative thinking abilities of auditors can lead to an improvement in their overall capabilities and skills.

According to (Mejía & Cedeño, 2021), The cultivation of creative thinking enables auditors to engage in novel cognitive processes, see alternative possibilities, and adopt unconventional approaches. According to (Muñoz, 2022), auditors can convert uncomplicated concepts into inventive resolutions for addressing intricate challenges. This capacity enables them to adapt to their environment and confront the demanding circumstances prevalent in contemporary society. Creative thinking facilitates the generation of novel ideas and thoughts, enabling auditors to exhibit innovation and explore alternative approaches to resolving challenges and fulfilling requirements. According to (Vásquez, 2021), developing the auditor's creative thinking entails fostering individuals who possess more significant levels of independence, adaptability, and originality while exhibiting initiative, confidence, and leadership qualities. The cultivation of creative thinking skills in auditors The auditor's role is highly significant as it facilitates the generation of original ideas, optimal problem-solving, and, ultimately, the attainment of exceptional outcomes. Furthermore, other than fostering positive concepts and enhancing the auditor's motivation, it yields significant practical advantages across various dimensions of the auditor's personal life (Tixi & Barahona, 2023). The auditor must critically analyze perceptions and offer targeted solutions to address specific issues alongside other activities to foster creative thinking and facilitate the exchange of educational techniques during

training (Zambrano, 2021). Creative thinking is a fundamental cognitive aspect of human creativity, and its stimulation is imperative for resolving diverse problem types. The attainment of success is not solely contingent upon one's knowledge or extent but on the capacity to engage in innovative thinking and action. Consequently, training strategies can enhance an individual's foundational and imaginative thinking capabilities in acquiring knowledge (Salamanca & Badilla, 2021).

The auditor's creative abilities lie in their capacity to develop innovative tools that facilitate and ensure the execution of formal and consistent work, leading to compelling outcomes and the production of the final audit report (Motta & Lizbeth, 2022). Creative thinking enhances the individual's aptitude for divergent thinking, efficient problem-solving, and the identification of suitable resolutions. The capacity for creative thinking can facilitate the discovery of answers to previously unsolved situations. The capacity to diverge from conventional thought patterns is contingent upon brainstorming, which fosters innovative thinking. The auditor initiates critical thinking during this stage and generates ideas and potential solutions. After documenting the ideas and solutions, the auditor selects the most suitable ideas (Thabet, 2017). The cognitive processes employed by auditors play a significant role in shaping their judgment, decision-making, and expression of opinions. The significance of human diversity and diverse thinking approaches becomes evident since thinking ways correlate with fraud detection, and the designers of such methods are associated with their respective capabilities. The characteristics encompass a range of dimensions, including creativity, emotionality, cognition, multidimensionality, and one-dimensionality. An individual trait is attributed to individual variations that impact their conduct, performance, and the quality of their audits. The capacity to identify fraudulent activities is a crucial skill within auditing. The failure to provide due consideration to this matter results in disregarding the auditor's capacity to identify instances of fraudulent activity (Rezaei et al., 2023). Furthermore, to carry out an efficient audit procedure, it is imperative to possess expertise and understanding in researching identified instances of fraud and the capability to employ appropriate methodologies to identify fraudulent activities. It is important to note that the audit process involves examining pertinent information. The process of initiating and strategizing the investigative audit, executing the investigative audit, compiling reports, and implementing subsequent actions (Arifin, 2022).

Herron and Cornell (year) highlight significant correlations between auditors' creative thinking and their capacity to identify and address indicators of fraudulent activities. The linkages encompass four broad dimensions of creativity in identifying fraudulent activities: creative place, creative person, creative product, and creative process. According to (Herron & Cornell, 2022), a creative work environment within the auditing profession facilitates the identification of a more significant number of high-quality indicators of fraudulent activities. One of the contributing factors to auditors' failure to detect fraud is their limited understanding and implementation of professional scepticism during the execution of audit procedures. Auditors who adopt a mindset of heightened professional scepticism will proactively seek supplementary information when presented with indicators of fraudulent activities. This will enhance the vigilance of auditors towards detecting fraudulent activities, strengthen evidential support, prolong the process of forming judgments, and adapt the audit planning and procedures until a satisfactory and precise body of evidence is acquired to assure the integrity of decisions.

Material misrepresentation refers to the deliberate manipulation of accounting information, which may involve the addition or removal of factual data and have the capacity to impact the auditor and their ethical decision-making; the task necessitates the identification of fraudulent activities by the auditor to develop alternative approaches for fraud detection. (A-Tameemi & Wahhab, 2023) In addition, the extraction of data from diverse sources and the application of innovative thinking in selecting fraud detection methodologies. The auditor's proficiency in identifying fraudulent activities is initially demonstrated through how they present their findings (Murtanto et al., 2022), highlighting their awareness of their fraud detection capabilities. Subsequently, the objective outlined in this delineation pertains to identifying fraudulent activities. Ultimately, the attainment of quality occurs when the auditor discerns the indicators of potential fraud and determines its occurrence (Mui, 2018). Hence, auditors in the corporate setting must remain vigilant regarding emerging developments. They must consistently engage in ongoing preparation to effectively navigate the competitive landscape and avoid professional marginalisation resulting from transformative shifts that may impact their job and hinder achieving established objectives (Herrera et al., 2016).

Material misrepresentation and potential audit risks

Audit risk refers to the potential occurrence of an auditor rendering an erroneous opinion on the financial statements after conducting an audit. The risk pertains to the potential inability to identify errors or fraudulent activities because of employing an unsuitable sampling technique, inadequate sample size, inappropriate timing of the audit, or the failure of the audit process to arrive at an accurate conclusion employing reviewing audit evidence and conducting analytical examinations (Adow & Hussien, 2020). Furthermore, control risk refers to the potential occurrence of errors inside the internal control framework. The risks associated with non-disclosure or disclosure are inherent and beyond the control of auditors. While auditors could assess these inherent risks and evaluate the effectiveness of controls, they do not possess the power

to impact them directly. In both scenarios, the auditor can manage the risks associated with disclosure and modify the audited tests' objectives, timing, and specifics. Furthermore, the auditor is exposed to an additional form of audit risk, wherein their professional practice may be jeopardized or disrupted due to litigation, adverse publicity, or other circumstances on the financial statements under audit and the corresponding audit report that has been subject to complaint (S) The determination of the magnitude of material errors by the auditor is essential in mitigating audit risks. If the auditor determines a high materiality level, the associated audit risks will be diminished, resulting in a reduced requirement for evidentiary support by the auditor. When the auditor establishes a materiality threshold at a lower level, it results in increased audit risks, necessitating the acquisition of additional evidence to mitigate these risks. Hence, it is imperative to promote the cultivation of professional scepticism among auditors, as it bolsters their confidence and independence (Hamshari & Alqam, 2021).

The study conducted by Kizyma et al. examines prevalent techniques employed in contemporary Ukraine for perpetrating fraud using state financial resources. The study focuses on the illicit and unsuitable utilisation of public funds, tax evasion, fraudulent practices in public procurement, and falsifying financial records (Kizyma et al., 2023). The auditor's primary duty is to ascertain the financial accounts' authenticity, precision, and integrity while verifying their freedom from material misrepresentations. The auditor's job's effectiveness is contingent upon utilizing a process-oriented approach and strict adherence to internationally recognized auditing standards (Wahhab & Ibrahim, 2023). The study conducted by Wang highlights the importance for auditors to increase their understanding of the potential risks associated with significant misstatements throughout the audit procedure. It is crucial for auditors to diligently comply with auditing standards, as well as applicable rules and regulations. Additionally, auditors must ensure the integrity and accuracy of accounting information starting from the initial stages of audit planning. To effectively mitigate audit risks, it is imperative to enhance the quality control system (Wang, 2023). The aforementioned instances of misrepresentation stem from insufficient oversight of potentially fraudulent activities within the audited organizations. Both phenomena arise as a result of inadequate quality auditing. A novel understanding of audit quality has been recently introduced, exhibiting notable distinctions from previous conceptions. As a result, this process enables the precise recognition of patterns, approaches, fundamental concepts, and other elements of audits, significantly improving their overall calibre. Enhancing auditing standards over an extended duration would effectively reduce the likelihood of crises arising within the sector of the economy.

Gaining a sufficient level of understanding regarding fraudulent activities becomes crucial for formulating policies aimed at preempting and identifying such behaviours in the future, influencing the organization's long-term prospects (Flowerastia et al, 2021). Auditors must possess a heightened level of vigilance to detect instances of fraudulent activity. In addition to the cognizance of corporate leadership in addressing fraudulent activities, auditors must possess a comprehensive understanding of the methodologies and technological tools available for detecting fraud indicators. The auditor's role necessitates a sceptical approach and a mindset of curiosity, vigilance against potential misrepresentation stemming from fraud or error, and a critical assessment of audit evidence (Sipayung et al., 2021). It is important to note that fraud might result in detrimental consequences or financial losses for the organization (Yuri & Sari, 2022).

Fraud risk management is a systematic procedure that facilitates organizations in comprehending inevitable risks and empowers them to establish protocols for preempting the occurrence of fraud, promptly identifying instances of fraud, and effectively responding to such incidents (Eze et al., 2022). Mitigating the risks associated with substantial misstatements encompasses five sequential steps. The initial stage involves evaluating the potential hazards associated with material misstatements. The subsequent phase involves identifying, enhancing, and delivering control actions. The third step involves the establishment of a systematic procedure for the reporting of these inaccuracies. Step 4 involves closely observing and evaluating the ongoing process, documenting the outcomes, and implementing enhancements to optimize performance. According to (Rani et al., 2021), Step 5 involves establishing a risk management policy, including addressing misrepresentations or fraud inside the company's governance. The company's management must establish and promote a risk management culture. This entails recognizing and assessing the potential risks that the company may encounter presently or in the future. Additionally, it is the auditor's responsibility to examine the protocols and practices used by the firm in the risk management domain. According to (Merecí-Mejía & Cedeño-Tuárez, 2020), the source cited is on the page.

Based on the discussion, it may be argued that the concepts of "material misrepresentations" and "fraud" are closely related, with the distinction being that unintended fundamental errors arise from an incorrect interpretation, as posited by our perspective. Hence, based on this, it can be inferred that fraud, in its various manifestations, categories, and techniques, has the potential to impact the outcome of the activity's operations, regardless of whether this impact is immediate or delayed. The failure to uncover this information may result in heightened audit risks and, thus, a tendency to issue an unsuitable opinion. The auditor must exhibit caution and maintain a professional level of scepticism throughout all phases of the audit procedure.

AIMS AND OBJECTIVES

Numerous researchers and professionals globally are dedicated to exploring subjects aimed at enhancing the efficacy of external auditors and addressing the deficiencies or challenges encountered within the auditing profession due to behavioural shifts among specific individuals in the accounting and auditing field, as well as technological advancements that pose a risk to auditors' credibility and investors' interests. Hence, the present study is a modest endeavour aimed at enhancing the behavioural competencies of Iraqi external auditors, explicitly focusing on cultivating creative thinking abilities. The research findings will make a valuable contribution towards enhancing the performance of Iraqi auditors, addressing the challenges they encounter during the audit process, and improving their ability to handle complex professional problems in the workplace effectively. Furthermore, it will explicitly focus on enhancing their skills in minimizing material misrepresentation.

METHODS

The study cohort comprised auditors from the audit offices in Baghdad, the governorates, and the Federal Board of Financial Supervision auditors. A random sample was chosen from the two study communities using a questionnaire as the basis for selection. 125 questionnaires were issued to the auditors working at audit offices, out of which 92 were deemed valid for analysis. The auditors of the Federal Board of Financial Supervision administered a total of 125 questionnaires, out of which 113 questionnaires were deemed valid and, after that, collected for analysis.

The questionnaire form was partitioned into two axes. The initial axis depicted the independent variable (the external auditor's creative thinking skill) and encompassed three facets of creative thinking: fluency, flexibility, and originality. A total of twenty-four questions were prepared for the dimensions. The second axis depicted the dependent variable (reducing material misrepresentation), serving to mitigate distortions. A set of twelve questions was created per international auditing standards.

The statistical software packages utilised in this study were SPSS version 26. The collected data underwent fundamental linear regression analysis, employing the least squares approach. Based on this analysis, conclusions were derived and discussed.

The study Problem

The study's problem pertains to the specific issue or question that requires investigation and analysis within the context of a scholarly study.

The auditing profession encounters numerous challenges from various factors, such as social, professional, economic, technological, and behavioural changes. Consequently, professional associations, notably the International Federation of Accountants (IFAC), continually strive to develop and update professional standards in response to these challenges. Countries often revise their domestic standards if they do not accept worldwide standards, as desired by scholars in this field. Knowledge acquisition is driven by identifying resolutions for current or prospective challenges to assist professional entities. The accounting profession in Iraq, a developing country, faces considerable obstacles stemming from the political, economic, and social circumstances over four decades ago. These situations have hindered the establishment and advancement of auditing standards inside the country. Due to these factors and additional considerations, the study focuses on examining the behavioural aspects of external auditors and identifying their accessibility. Furthermore, in the event of observing these behaviours, it is essential to devise suitable remedies to enhance and elevate their performance, thereby mitigating material misrepresentation and achieving a high level of quality audit. Hence, the research question is as follows:

Does the creative thinking of external auditors impact the reduction of material misrepresentation?

The hypotheses

The present study is grounded on the hypotheses derived from the research question that has been posed.

The hypothesis posits a notable correlation between the creative thinking abilities of external auditors and their capacity to mitigate material misrepresentation.

RESULTS

The scale's reliability was assessed through the computation of Cronbach's alpha coefficients, which were used to evaluate the scale's stability. Additionally, reliability coefficients were calculated using the split-half approach. The obtained results are presented below (Table 1):

Table 1. Split-half reliability. Note: ^a - the items are: QUST1, QUST3, QUST5, QUST7, QUST9, QUST11, QUST13, QUST15, QUST17, QUST19, QUST21, QUST23, QUST41, QUST43, QUST45, QUST47, QUST49, QUST51, QUST53; ^b - the items are: QUST53, QUST2, QUST4, QUST6, QUST8, QUST10, QUST12, QUST14, QUST16, QUST18, QUST20, QUST22, QUST24, QUST42, QUST44, QUST46, QUST48, QUST50, QUST52.

Cronbach's Alpha	Part 1	Value	.981
		N of Items	19 ^a
	Part 2	Value	.980
		N of Items	18 ^b
Total N of Items			37
Correlation Between Forms			.985
Spearman-Brown Coefficient	Equal Length		.993
	Unequal Length		.993
Guttman Split-Half Coefficient			.981

The provided table displays a correlation coefficient of 1.000, indicating a significantly high level of reliability between the two halves of the questionnaire. It is important to note that a statistically acceptable reliability value is typically considered at least 0.7. The dataset was partitioned into two distinct sections. The initial segment comprises 19 individual questions, while the subsequent section encompasses 18 even questions, resulting in 37 questions across both sections. The study's findings revealed that the Spearman-Brown coefficient yielded a value of 1.000, while the Guttman coefficient for the half-half likewise exhibited a value of 1.000. These results suggest a strong connection between the variables under investigation.

An internal consistency analysis was conducted on the questions included in the first section, which pertained to developing the auditor's critical thinking, and the second section, which focused on material misstatements. In the context of Sig, it was observed that all correlation coefficients between the two portions, as well as the questions comprising each section, exhibited statistical significance. All trades had (2-tailed) values below 0.05. All the observed values in the first section ranged from 0.666 to 957, while in the second section, they ranged from 0.546 to 0.955. These findings suggest a significant positive correlation between each paragraph and its respective axis, indicating a robust internal consistency within the paragraphs of both parts.

The responses of the sample participants to the questions in the initial section were also subjected to analysis. The findings indicate that the weighted arithmetic mean for this axis is 4.016, which is statistically more significant than the default mean of the scale, which is 3 degrees. Additionally, the standard deviation for this axis is relatively low at 0.997. On the other hand, the variance value of 1.061 was observed, suggesting a significant level of convergence among the individuals in the sample concerning this particular axis. At the granular level of this axis, it is evident that all components exhibited estimated arithmetic means that surpassed the default mean of the scale. The paragraph about the twentieth question in the dimension of originality, which assesses the external auditor's capacity to generate innovative ideas and think creatively to enhance the work team's capabilities, had the lowest variance value. The obtained value of 0.306 indicates a substantial level of concordance among the responses provided by the participants in the sample. The calculated arithmetic mean of the data set was determined to be 4.29, accompanied by a standard deviation of 0.553. This suggests that the participants in the survey sample believe that the external auditor exhibits creative thinking characterized by originality and is capable of generating innovative ideas through a cognitive approach. This, in turn, is perceived to enhance the work team's capacity to effectively execute their tasks with optimal performance throughout the audit process.

The paragraph about the seventh question states that the organization I am affiliated with possesses sufficient communication channels among all stakeholders involved in the audit process and obtained the most fantastic variance score of 2.496 in the dimension of collaborative fluency within the creative thinking skill axis. The arithmetic mean of the data set was determined to be 2.51, indicating a lower value than the mean. The default value for the five-point Likert scale employed is set at 3 points, accompanied by a standard deviation of 1.580. This finding suggests that the survey sample

participants favour that the audit departments and offices they are employed in should possess sufficient communication channels among all stakeholders involved in the audit procedure.

Regarding the second section of the questionnaire, the research revealed that the weighted arithmetic mean for this section is 4.115, surpassing the default mean of 3 degrees. Additionally, the standard deviation for this section is relatively low at 0.847, and the variance value is also 0.847. This suggests a significant convergence of perspectives among the sampled persons regarding the questions. Upon closer examination, it becomes evident that most of the questions exhibited arithmetic means that surpassed the default mean of the scale. Question forty-three, which pertained to the impact of weak internal control on the likelihood of material misrepresentations, demonstrated the lowest percentage of variance obtained a value of 0.446, indicating a substantial level of consensus among the participants' responses. The arithmetic mean of the data was calculated to be 4.46, with a standard deviation of 0.660. This finding suggests that the individuals included in the sample believe that inadequate internal control systems can heighten the likelihood of significant material misrepresentations.

Regarding the fifty-first paragraph, the utilization of information and communication technology is found to have a significant impact in mitigating fundamental errors. This finding is supported by the highest variance value of 2.010, which indicates the level of agreement among the participants in the sample. Consequently, this paragraph is ranked thirteenth in terms of its significance within the context of this axis. The arithmetic mean of the data set was calculated to be 3.12, which is more than the default mean of the five-point Likert scale. The standard deviation of the data set was found to be 1.418. This finding suggests that the participants in the study do not endorse the notion that using information and communication technology in the auditing procedure will lead to a decrease in material misrepresentations.

Results of testing the study hypothesis

Primary hypothesis: A notable correlation between the creative thinking abilities of external auditors and their capacity to mitigate material misrepresentation.

To test this first sub-hypothesis, simple linear regression analysis will be used using the least squares method and according to the following regression model:

$$FR = B_0 + B_1 X + \epsilon$$

where: - FR- the unsupported variable (the creative thinking skill of the external auditor); ϵ - estimation errors, or so-called statistical residuals; B_0 -the regression equation's constant represents the dependent variable's value when the non-dependent variable's value equals zero; B_1 -the slope of the regression function, which measures the effect of the independent variable on the dependent variable.

Using the statistical program SPSS, the results were as follows (Table 2):

Table 2. Correlation matrix between the independent variable and the dependent variable.			
		Limiting material misrepresentations	Creative thinking of the auditor
Pearson Correlation	Limiting material misrepresentations	1.000	.994
	Creative thinking of the auditor	.994	1.000
Sig. (1-tailed)	Limiting material misrepresentations	.	.000
	Limiting material misrepresentations	.000	.
N	Creative thinking of the auditor	205	205
	Limiting material misrepresentations	205	205

The provided table displays the variables within the regression matrix. Notably, the correlation coefficient between these variables is 0.994, with a significance level below 0.01. The association between the two variables exhibits a strong and statistically significant relationship, as evidenced by the independent variable's Sig value of 0.00 and the dependent variable's Sig value of 0.00.

Table 3 shows the Pearson correlation coefficient between the dependent and non-dependent variables. The value of R between the variables reached 0.994, which is very high.

Table 3. Model Summary (Dependent Variable: Limiting material misrepresentations). Note: ^a. Predictors: (Constant): Creative thinking of the auditor.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.994 ^a	.988	.988	1.10930

The coefficient of determination R square reached 0.988, representing the “explanatory power” of the model, the non-dependent variable (creative thinking). For the auditor, it explains 98.8% of the variance occurring in the dependent variable (reducing material misrepresentations), and the standard deviation of the estimation error was 1.10930, a deficient number. The lower this type of error, the better it is from a statistical standpoint, and it explains the strength of the model.

I've included in Table 4 an examination conducted to assess the significance of a regression.

Table 4. Hypothesis testing variance (ANOVA - Dependent Variable: Creative thinking of the auditor). Note: ^b. Predictors: (Constant), Limiting material misrepresentations.

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	20697.388	1	20697.388	16819.592	.000 ^b
	Residual	249.802	203	1.231		
	Total	20947.190	204			

The F value obtained was 16819.592, surpassing the critical value from the table corresponding to the degrees of freedom (203.1). Additionally, the mean square of the residuals was calculated to be 1.231 at a significance level of 5%. The significance level of the test, denoted as Sig. 0.000 is lower than the specified error value commonly used in social sciences, which is 0.05. This finding suggests the rejection of the null hypothesis and the adoption of the alternative theory, which posits the significance of the regression. Consequently, the non-dependent variable exerts an influence on the dependent variable.

The table below (Table 5) displays the coefficients for the standard and non-standard regression functions, along with the corresponding standard errors.

Table 5. Regression function coefficients for the hypothesis (Coefficients - Dependent Variable: Limiting material misrepresentations).

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	8.644	.354		24.398	.000		
	Creative thinking of the auditor	.470	.004	.994	129.690	.000	1.000	1.000

It also includes the results of the T-test, including the associated probability values, variance inflation factors (VIF), and tolerance coefficients. The table indicates that the Variance Inflation Factor (VIF) has a value of 1.000, suggesting no issues observed in the results. The level of multicollinearity observed among the inflation coefficients of the variables is below 3.00, indicating statistical acceptability. Furthermore, the constant term in the regression equation was 8.644. The slope of the regression equation was determined to be 0.470, indicating the impact of the independent variable on the dependent variable through factor B. The positive value of the factor suggests a significant and direct relationship between the two variables, namely the unsupported and the approved. Stated otherwise, a one-unit rise in the independent variable (the auditor's creative thinking skill) results in a 47.0% increase in the dependent variable (the reduction of material misrepresentation). The table above indicates that the T-value for the independent variable is statistically significant at a level of 0.00, which is significantly lower than the specified acceptable error rate of 0.05 commonly used in the social sciences. This implies that the presented sample data presents compelling evidence for rejecting the null hypothesis and accepting the alternative hypothesis. *(A notable correlation between the creative thinking abilities of external auditors and their capacity to mitigate material misrepresentation).*

Below are the figures that show the normal distribution of the dependent variable (Limiting material misrepresentation):

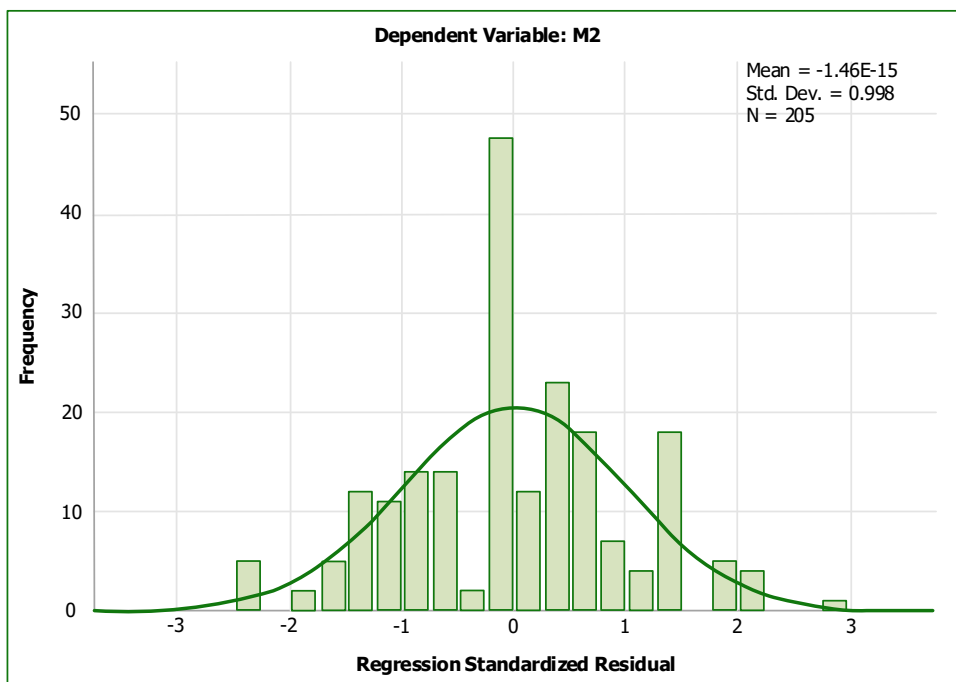


Figure 2. Histogram of regression of the residuals of the dependent variable.

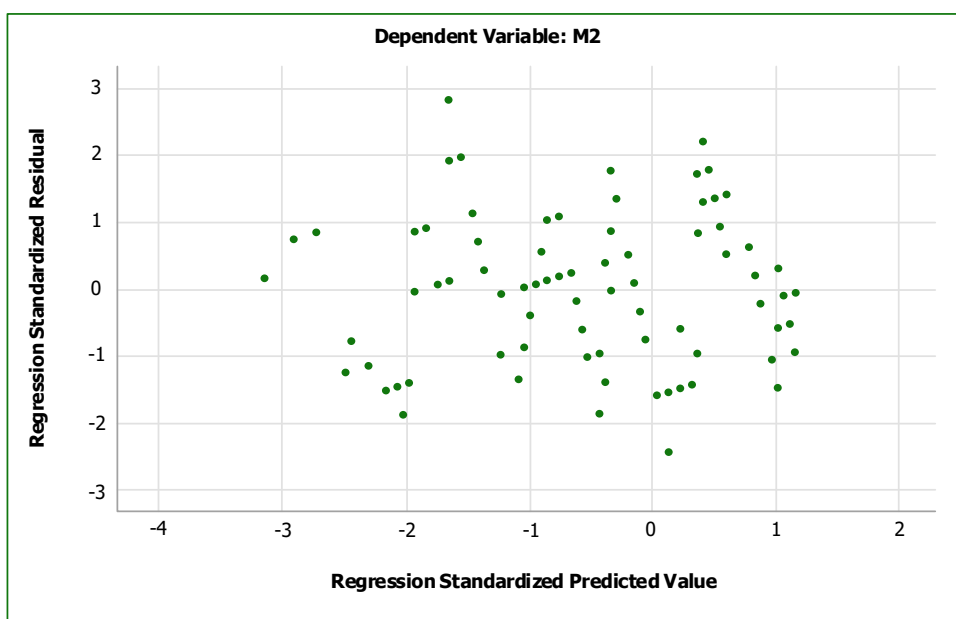


Figure 2. Scatterplot of the dependent variable.

The above figures show the normality of the residual distribution and the data collection around the straight line. The residuals will meet the normal distribution, which is one of the conditions for conducting regression analysis correctly.

DISCUSSION

Numerous professional groups and institutes endeavour to enhance the proficiency of external auditors and academics in accounting and auditing. Iraq has enhanced its professional development in accounting by establishing the Accounting Profession Council within the Federal Audit Office and the Iraqi Society of Certified Public Accountants. As part of this endeavour, Iraq has taken steps to issue national auditing standards and has relied on international standards, particularly around auditing, in the absence of local standards. Additionally, these local organizations offer continuous training to enhance the professional competence of accountants in both the public and commercial sectors. It is imperative to

acknowledge the significant contribution of researchers affiliated with Iraqi universities, who have effectively addressed the needs of local professional groups through their research and studies and specialized university theses.

This study reinforced what previous studies presented on reducing fundamental errors and the significant challenges that the profession in Iraq suffers from because of fraud by management or employees. What is new in this study is measuring the creative thinking of external auditors and its relationship to reducing material misrepresentation and then searching for methods that can develop auditors' skills in this behavioural field. The results showed a strong correlation and influence between them through fluency, flexibility, and originality.

CONCLUSIONS

The present study examined the philosophical aspects of creative thinking within behavioural science. Specifically, it aimed to investigate the feasibility and potential for enhancing the professional competencies of external auditors through the use and cultivation of this mode of thinking. Will it effectively mitigate the occurrence of material misrepresentations and fraudulent activities perpetrated by management and personnel, regardless of whether they are operating within the public or private sector? The study's findings revealed a statistically significant association and a notable impact between the level of creative thinking skills and the reduction of fundamental errors. Moreover, a significant number of auditors must get a comprehensive understanding of the various aspects encompassed inside this skill set. To cognitive proficiency, auditors systematically generate ideas within a defined domain of financial records. In terms of collaborative fluency, individuals can frequently get ample and unbiased evidence by cultivating positive relationships with the management of the audited department or firm.

Concerning fluency of expression, the external auditor can articulate observations made in the worksheet using clear and comprehensible language. Regarding flexibility, the external auditor can transition seamlessly across concepts, facilitating adequate and suitable evidential support evaluation. Regarding originality, the findings indicated that auditors exhibit unique cognitive processes compared to their colleagues, facilitating the generation of innovative ideas for problem-solving.

The study revealed that during the audit preparation phase, auditors focus on identifying the risks associated with fundamental errors to minimize them. Nevertheless, concurrently, he demonstrates professional scepticism. The individual consistently anticipates the presence of foundational mistakes, but most auditors believe that a corporate governance committee is established within the department or organization. Furthermore, the work team employs unique cognitive approaches to mitigate the potential occurrence of substantial misstatements.

The study suggests that professional organizations and researchers in accounting and auditing across developing nations must consider the behavioural dimensions of auditors and their professional growth. Alongside enhancing auditors' proficiency in understanding the psychological aspects of fraudsters and their evolving tactics, whether initiated by management or employees, equal emphasis should be placed on comprehending the behavioural aspects of the auditor's activities.

ADDITIONAL INFORMATION

AUTHOR CONTRIBUTIONS

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Methodology: *Iman Ameen*

Resources: *Iman Ameen*

Supervision: *Asaad Wahhab*

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РОЗВИТОК НАВИЧОК ТВОРЧОГО МИСЛЕННЯ АУДИТОРА ДЛЯ ЗМЕНШЕННЯ ПОТЕНЦІЙНИХ РИЗИКІВ, ПОВ'ЯЗАНИХ ІЗ СУТТЄВИМ ВИКРИВЛЕННЯМ МАТЕРІАЛІВ

Основна мета роботи полягає в тому, щоб дослідити взаємозв'язок між творчими здібностями зовнішніх аудиторів та їхньою ефективністю в пом'якшенні серйозних викривлень. Метою є підвищення кваліфікації аудиторів, які працюють у державному й приватному секторах Іраку. Ураховуючи проблеми, з якими стикаються бізнес-підприємства та державні організації в боротьбі з шахрайством і маніпулюванням фінансовою звітністю, вкрай важливо вирішити проблему тіньового сектора, яка зазвичай спостерігається в таких випадках. З цією метою було використано анкету для вивчення ефекту й установлення кореляції між змінними; згодом анкету було розділено на дві окремі частини. Початкове дослідження було зосереджене на оцінці творчих здібностей аудиторів, а наступне дослідження мало на меті оцінити ступінь зменшення фундаментальних викривлень. Початкове опитування містило загалом 19 запитань, а наступне охоплювало 18 запитань. Усього аудиторам, які працюють у ревізійних службах, було роздано 225 анкет. Опитано персональний склад Федерального бюро фінансового нагляду в кількості 205 осіб. У дослідженні використовувався простий лінійний регресійний аналіз із використанням методу найменших квадратів для перевірки гіпотез. Висновки показали, що зовнішні аудитори зазвичай виявляють велику схильність до генерування пропозицій, які полегшують розробку програми аудиту та вибір розмірів вибірки. Вони також можуть брати участь у продуктивній дискусії, використовуючи недвозначну мову, коли представляють конкретні спостереження щодо суттєвих помилок у спотворенні інформації керівникам департаменту або компанії з метою виявлення та вирішення питань щодо використання відповідних засобів захисту.

Ключові слова: аудитор, креативне мислення, критичне мислення, аудиторські ризики, суттєві викривлення

JEL Класифікація: M48, M53, D81