**Part 1**

**1a) Working Research Question**

What is the effectiveness of information systems in enhancing the audit process?

**1b) Topic**

The effectiveness of information systems in improving the audit process

**Part 2: Search Terms**

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|  | **Search Terms** |
| **1** | Audit process |
| **2** | Information Systems |
| **3** | Audit Software |
| **4** | Information system + impact on audit process |
| **5** | Audit technology + Auditing process |
| **6** | Information Technology and the audit Process |

**Part 3: Exigence (Personal, Social, Research)**

1. **Personal exigence:** The information systems field interests me significantly, owing to its ability to offer solutions to societal problems. Implementing a research on information systems offers solutions to diverse environments, making it pertinent to individual’s livelihood. Equally, the auditing sector enhances integrity in business operations, rendering it crucial in the national economy. I value integrity as a virtue, making a research about use of the information systems to promote integrity through auditing critical for me.
2. **Social exigence:** information technology is shaping significant issues in the society presently. Notably, management information systems have become critical aspects of successful businesses. The use of management information systems in the accounting sector has raised diverse opinions, with its advantages and disadvantages drawing equal support. Implementing integrated management information systems in the audit process offers an opportunity to improve and simplify the process. However, the effectiveness of the approach in enhancing the audit process is not clear, owing to the dynamics of evolving information systems that calls for substantial financial investments.
3. **Research exigence:** Different scholars have researched in the field of management information systems, culminating in various solutions for businesses and other organizations. Essentially, researchers have provided information system-based solutions to the auditors, simplifying their audit process. However, despite the significant researches in the management information system seeking to improve the audit process, scholars have failed to offer information on the effectiveness of management information systems in improving the audit process.

**Part 4: Collecting Sources and Writing Summaries**

Eulerich, M., Masli, A., Pickerd, J. S., & Wood, D. A. (2019). The Impact of Audit Technology on Audit Outcomes: Technology-Based Audit Techniques’ Impact on Internal Auditing. *Available at SSRN 3444119*. https://papers.ssrn.com/sol3/papers.cfm?abstract\_id=3444119

**Source 1 Social Exigence:** The current research holds significant social relevance that stimulated its execution.The adoption of audit technology is relevant in enhancing auditor’s work. Researching the impacts of technology on audits is important in simplifying the auditing of large firms. The complexity of company operations requires audit technology to enhance audit execution. Equally, to promote professional care in audits, it is paramount to adopt appropriate technology. Essentially, to simplify audits and promote professional care, it was crucial for the scholars to carry out the research.

**Source 1 Research Exigence:** There existed a literature gap on the effect of technology-based audit techniques on audits, making this study critical. Researching on this topic provided new information on technology application in audits. The research results enhanced the existing information in the accounting field, with a specific impact on the adoption of technology adoption in accountancy.

**Source 1 Main Findings:** The results of the study indicate that technology-based audit techniques improve and simplify audit performance. Notably, the use of technology in audit helps in identifying the significant risk factors in internal audits.

**Source 1 Relevance:** The positive impact of audit technology on an audit is pertinent to understanding the effectiveness of information systems on the audit process. The positive outcomes of audit technology influence the assessment of efficacy of information systems on audit process.

**Source 1 Implications:** The study implies that the use of technology-based audit techniques enhances the audit process. Audits that are dependent on technology are more effective and simplified.

**Why are you using Source 1?:** I will use this source to lay a basis of understanding the impact of technology on audits. The information will be crucial in articulating the relationship between technology and the audit process. The article espouses the relationship between technology and audits.

Thottoli, M. M., Thomas, K. V., & Ahmed, E. R. (2019). Adoption of Audit Software by Audit Firms: A Qualitative Study. *Journal of Information and Computational Science*, *9*(9-768), 776. http://www.joics.org/gallery/ics-1436.pdf

**Source 2 Social Exigence:** Technology has been evolving significantly, calling for different disciplines to embrace it. Auditing field could benefit significantly from the improving technology, making the current research crucial. The audit software’s use offers could enhance the audit process. Audit firms could leverage on the substantial advantage of adopting audit software, culminating in the need to carry out this research.

**Source 2 Research Exigence:** Scholars have studied the application and benefit of audit software on auditors. However, no researcher has studied the use of audit software in small and large audit firms. This study fills the existing literature gap by providing evidence on the adoption of audit software by large, medium, and large aydit firms.

**Source 2 Main Findings:** The study findings indicate that the use of audit software present various benefits to audit firms. Consequently, there exists a substantial relationship between the use of audit software and the udit process of various audit firms regardless of their size.

**Source 2 Relevance:** The current study provides pertinent information that will guide audit firms of different sizes to evaluate the benefits of audit software in the audit process.

**Source 2 Implications:** The study results infer that audit software adoption by audit firms offers significant benefits that warrant the software’s use.

**\*Why are you using Source 2?:** I will use the current article to derive information on the use of audit software in different-sized audit firms. Other than finding the benefits of audit software to auditors, the current article will provide facts about the use of the audit software by audit firms. The information will help in elucidating the effectiveness of information systems in enhancing the audit process.

Ahmi, A., & Kent, S. (2013). The utilisation of generalized audit software (GAS) by external auditors. *Managerial Auditing Journal*. <https://doi.org/10.1108/02686901311284522>

**Source 3 Social Exigence:** The improving technology has automated the accounting process, making it important to automate the audit process. The information technology discipline has been providing computerized solutions to the accountants, requiring auditors to adopt technology to promote their performance. It is important to study the use of generalized audit software to provide solutions to the external auditors.

**Source 3 Research Exigence:** The existing research in the field addresses the use of generalized audit software by the “big four” audit firms in the United Kingdom. There exists a literature gap on the use of generalized audit software by the small and medium-sized audit firms. The article sought to fill the gap.

**Source 3 Main Findings:** The research results indicate that the use of generalized audit software by audit firms in UK is low. Significant firms are aware of the software’s benefits but are discouraged by the technology’s adoption cost.

**Source 3 Relevance:** The research result offers crucial information for generalized audit software adoption by small and medium-sized audit firms.

**Source 3 Implications:** The study findings imply that many small and medium-sized audit firms in UK do not use generalized audit software, owing to the implementation cost, required learning, and complex adoption process.

**\*Why are you using Source 3?:** The current article offers critical information on the factors that derail audit software adoption by the small and medium-sized audit firms. The information will be crucial in evaluating the effectiveness of information system in promoting enhancing the audit process.

Mansour, E. M. (2016). Factors affecting the adoption of computer assisted audit techniques in audit process: Findings from Jordan. *Business and Economic Research*, *6*(1), 248-271. http://dx.doi.org/10.5296/ber.v6i1.8996

**Source 4 Social Exigence:** The adoption of information technology in organizations is enormous, calling for audit firms to align their operations to the changing technologies. Information systems are providing solutions to various aspects of business operations. Information system’s adoption in businesses offers crucial benefits, making it pertinent to diverse business activities. Offering solutions to auditors through information systems’ implementation will promote transparency in firms.

**Source 4 Research Exigence:** Scholars have provided evidence regarding benefits of adopting technology in auditing. However, there exists no information about the factors influencing Computer Aided Audit Technique (CAATs) adoption in Jordan.

**Source 4 Main Findings:** The results indicate that auditor’s performance prospect and firm’s conditions influence the adoption of CAATs by Jordanian auditors.

**Source 4 Relevance:** The study provided crucial information that explains the factors that influence auditor's adoption of various auditing technologies. The information is crucial for organizations’ planning for audit technology adoption.

**Source 4 Implications:** The results imply that Jordanian organizations can promote auditor’s CAATs adoption by providing appropriate infrastructure to support the technology and decreasing the expectations for CAATs use.

**\*Why are you using Source 4?:** The article’s content is important in articulating the link between audit technologies and its adoption rate by auditors.

**4b) Scholarly Sources 5 through 8 (Annotation)**

Rikhardsson, P., & Dull, R. (2016). An exploratory study of the adoption, application and impacts of continuous auditing technologies in small businesses. *International Journal of Accounting Information Systems*, *20*, 26-37. <https://doi.org/10.1016/j.accinf.2016.01.003>

The article seeks to evaluate the impact of small businesses’ implementation and use of continuous audit technology. There exist many sellers of continuous audit technologies, owing to the technology’s high implementation rate in small firms. However, there exists no information regarding the effect of continuous audit technology on small firms. The study assesses the factors influencing the use of continuous audit technology and its effects in small organizations. The results of the study show that small organizations adopt continuous audit technology to enhance efficient resources’ use and offer quality data. Equally, the results indicate that the technology is implemented by the Information Technology department rather than the auditing section. The results imply that small business needs to adopt continuous audit technology to enhance the audit process in addition to the existing reasons for implementation. Consequently, the implementation needs to be in liaison with the auditing department rather than by the information technology department alone.

The information provided by the current article will be crucial in my research. The factors that influence the continuous technology adoption provide relevant facts to evaluate the effectiveness of information systems in enhancing the audit process. The literature will help in supporting the results of my research, with the study requiring evidence to answer the research question. The research that I will be undertaking seeks to answer whether adoption of information systems in the auditing improves the audit process.

Issa, H., Sun, T., & Vasarhelyi, M. A. (2016). Research ideas for artificial intelligence in auditing: The formalization of audit and workforce supplementation. *Journal of Emerging Technologies in Accounting*, *13*(2), 1-20. <https://doi.org/10.2308/jeta-10511>

 Artificial intelligence is diversifying significant business operations. Many enterprises are depending on this technology to enhance profitability and efficiency. The auditing sector can benefit hugely from the artificial intelligence strengths. Artificial intelligent devices could help in enhancing effective audit process. The research seeks to identify the application of artificial intelligence in the auditing field. Different researchers have identified various technologies applicable in the audit process. However, no researcher has studied the possible approaches of artificial intelligence application in the auditing field. The results of the current study posit diverse approaches are applicable in ensuring better and efficient auditing. Internal auditors can rely on the meta-controls to detect any deviations from the normal operations. Deep learning is also relevant in information categorization, calling for audit standards to accommodate artificial intelligence. The results imply that the international auditing standards governing bodies need to incorporate means of regulating artificial intelligence adoption by auditors and audit firms.

 The article provides relevant information that will help in answering my study question. The evidence in this study provides crucial facts that indicate how auditing information systems could benefit from adoption of artificial intelligence. Artificial intelligence presents a clear pathway to assess the effectiveness of the existing and future information systems in improving the audit process.

Dai, J., & Vasarhelyi, M. A. (2016). Imagineering Audit 4.0. *Journal of Emerging Technologies in Accounting*, *13*(1), 1-15. <https://doi.org/10.2308/jeta-10494>

 Emerging technologies, including cloud computing are influencing the auditing approach. Consequently, it remains critical for the information system developers to match the auditing software with the cloud computing. The ease of sharing audit papers and other auditing information through cloud-based systems is revolutionizing the entire audit process. Scholars have presented facts on how to adopt different technologies, notably in the accounting field. However, there exists no literature on the integration of cloud computing in auditing. The current article fills that literature gap by espousing the strategies for adopting industry 4.0 technologies in the audit process. The results of the research show that industry 4.0 technologies will significantly influence the audit process, with its embedded products allowing real-time data transmission and analysis. The results imply that firms need to adjust to accommodate changing technologies, with industry 4.0 technologies expected to modify the approaches to auditing.

 The article will be important for my study because it offers an evaluation of how cloud-based information systems will be integrated to the audit process. The information will be relevant in showing the relationship of the changing technologies and the auditing strategies, culminating exposition of the effectiveness of new information systems in improving the audit process. Consequently, the article will provide critical information to support my study results, resulting in the answering of my research question.

Abou‐El‐Sood, H., Kotb, A., & Allam, A. (2015). Exploring auditors' perceptions of the usage and importance of audit information technology. *International Journal of Auditing*, *19*(3), 252-266. <https://doi.org/10.1111/ijau.12039>

Audit technology represents a critical aspect in the audit world. The management information systems offer such technology, making it pertinent to the audit process. The current article seeks to evaluate the existing audit technologies, the dynamics influencing the technology use, and the significance of the audit technologies to the audit process. Large and small firms rely on audit technologies, making the current study critical. Scholars offer evidence regarding the use, relevance, and influence of audit technologies in firms with significant years of audit experience. Conversely, there exists no research on firms with few years of audit experience, making the current study crucial in filling that literature gap. The results of this article indicate that auditors attach importance of audit technology to assess risk in technical procedures. Equally, the results posit that the importance of audit technology use is more significance in firms that possess less audit experience. The study findings imply that organizations need to assess the prospects and problems of audit technology adoption.

The current article provides critical information for use in my research. The information involving the reason for technology adoption in firms will be crucial in indicating the relationship between audit technology use and its effectiveness in enhancing the audit process. Similarly, the article’s findings will provide relevant information to support the results of my research across firms that have been using audit technology for long and the ones that have adopted the approach recently.

**4d) References list**

Abou‐El‐Sood, H., Kotb, A., & Allam, A. (2015). Exploring auditors' perceptions of the usage and importance of audit information technology. *International Journal of Auditing*, *19*(3), 252-266. <https://doi.org/10.1111/ijau.12039>

Ahmi, A., & Kent, S. (2013). The utilisation of generalized audit software (GAS) by external auditors. *Managerial Auditing Journal*. <https://doi.org/10.1108/02686901311284522>

Dai, J., & Vasarhelyi, M. A. (2016). Imagineering Audit 4.0. *Journal of Emerging Technologies in Accounting*, *13*(1), 1-15. <https://doi.org/10.2308/jeta-10494>

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Issa, H., Sun, T., & Vasarhelyi, M. A. (2016). Research ideas for artificial intelligence in auditing: The formalization of audit and workforce supplementation. *Journal of Emerging Technologies in Accounting*, *13*(2), 1-20. <https://doi.org/10.2308/jeta-10511>

Mansour, E. M. (2016). Factors affecting the adoption of computer assisted audit techniques in audit process: Findings from Jordan. *Business and Economic Research*, *6*(1), 248-271. <http://dx.doi.org/10.5296/ber.v6i1.8996>

Rikhardsson, P., & Dull, R. (2016). An exploratory study of the adoption, application and impacts of continuous auditing technologies in small businesses. *International Journal of Accounting Information Systems*, *20*, 26-37. <https://doi.org/10.1016/j.accinf.2016.01.003>

Thottoli, M. M., Thomas, K. V., & Ahmed, E. R. (2019). Adoption of Audit Software by Audit Firms: A Qualitative Study. *Journal of Information and Computational Science*, *9*(9-768), 776. http://www.joics.org/gallery/ics-1436.pdf

**Part 5: Noticing and Organizing**

**5a) General observations and analysis**

The existing literature indicates that audit technology is critical in improving the audit process. Technology simplifies the approach to auditing, with internal auditors applying audit software to identify high risk operations. Equally, external auditors rely on the audit technology to share audit materials and analyze information. The current technology offers solutions to the audit process, with future technology expected to provide better solutions. However, there exists a challenge to audit technology adoption, exemplified by the high cost of the technology and its infrastructure. Essentially, the articles underline that audit technology improves and simplifies the audit process.

**5b) 3 Key Concepts:**

* The use of technology in auditing
* Application of information systems in the audit process
* Audit technology acceptance in the audit process