

**VIRTUAL STORAGE AND OFFICE MANAGER'S EFFECTIVENESS IN PUBLIC
UNIVERSITIES IN SOUTH-SOUTH, NIGERIA**

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ABSTRACT

The study ascertained the relationship between virtual storage and office manager's effectiveness in public universities in South-South, Nigeria. The study was anchored on Task–Technology Fit Theory. The study adopted cross-sectional research design. The target population comprised of seven hundred and forty-eight (748) office managers consisting of Deans of Faculties and Heads of Departments (HODs) of eleven (11) public universities in four states in South-South, Nigeria. The states to be covered included Rivers State, Bayelsa State, Delta State, and Akwa-Ibom State (See in Appendix A). The sample size of the study consisted of 261 respondents, determined using the Taro Yamane formula. Considering the disparity in their population distribution, Bowley's Population Proportionate Allocation Formula was adopted in determining the sample distribution for each of the universities. Thus, the study adopted the random sampling techniques. Structured questionnaire was used as the main instrument for the collection of primary data. To establish the validity of the instrument, copies of the questionnaire was submitted to experts in Office and Information Management Department of Ignatius Ajuru University of Education, Port Harcourt. Their comments were used to validate the final copy of the instrument that was administered. Thus, Cronbach alpha was used to ascertain the reliability of the instrument. In line with the sample size, a total of 261 copies of the questionnaire was administered by the researcher, assisted by four trained research assistants (one for each state). However, 238 copies were retrieved representing 91%. Pearson Product-Moment Correlation (PPMC) was used for the analysis through the aid of Statistical Package for Social Sciences (SPSS) Version 25.0. It was found that virtual storage has a significant positive relationship with office manager's effectiveness in public universities in South-South, Nigeria. The study concluded that public universities that deliberately invest in collaborative technologies alongside digital capacity development will be better positioned to sustain administrative efficiency, institutional coordination, and continuous organizational effectiveness in an increasingly technology-oriented environment. The study recommended that public universities should deploy institution-wide cloud-based document management systems that allow authorized personnel to securely create, access, edit, and retrieve official documents in real time, thereby improving collaboration and reducing administrative delays

Keywords: Virtual Storage, Office Manager's Effectiveness, Communication Success, Productivity, and Staff Coordination.

BACKGROUND TO THE STUDY

The effectiveness of office managers is critical to the administrative success of any institution, particularly in tertiary education where information flow, resource coordination, and stakeholder communication are constant and complex. In public universities, office managers serve as pivotal links between policy implementation and day-to-day operational activities, and their effectiveness can shape institutional performance outcomes and service delivery. Office managers' effectiveness encompasses their capacity to achieve organizational goals through efficient management of tasks, people, and information while maintaining high standards of administrative responsiveness and coordination (Zeb-Obipi & Eke, 2021). In the context of public universities in South-South, Nigeria, this effectiveness is influenced by unique institutional structures, resource constraints, and evolving demands for digital and administrative innovation. Office managers' effectiveness can be defined as

the degree to which administrative leaders in office settings achieve desired outcomes in communication, organizational productivity, and staff coordination. In universities, this means ensuring timely circulation of information, solving administrative problems efficiently, and coordinating diverse academic and non-academic functions. Ineffective administration often stems from poor communication channels and limited digital capacity, leading to delays, miscommunication, and reduced institutional performance (Zeb-Obipi & Eke, 2021).

A primary measure of office managers' effectiveness is communication success, which refers to the timely circulation of information and the quality of feedback mechanisms. Communications that are accurate, clear, and timely enhance organizational responsiveness, reduce ambiguity, and improve decision making across units. Research on digital access and organizational communication in tertiary institutions in the South-South region of Nigeria found that digital access significantly improved message quality, timeliness, and collaborative interaction within administrative systems (Michael, 2025). Research has shown that effective communication is foundational to task delegation, staff motivation, and operational coordination. However, in many South-South, Nigeria public universities, office managers struggle with sustaining continuous and coherent communication streams. This challenge is particularly pronounced in scenarios involving interdepartmental collaboration, where the absence of e-collaborative practices results in fragmented communication channels. Consequently, decisions are delayed, directives are misinterpreted, and accountability is weakened. The study aims to illuminate how e-collaborative work practices could mitigate these communication gaps and improve overall office efficiency.

Another key indicator of office managers' effectiveness is productivity, which can be operationalized through the number of tasks completed and the number of problems solved within a given period. Productivity reflects how effectively managers convert inputs such as time, information, and human resources into outputs that support institutional goals. Findings from studies of digitalization in university personnel management in South-South, Nigeria revealed that the adoption of digital tools has the potential to improve productivity by streamlining processes such as recruitment, training, and performance evaluation (Aleru, 2025). The productivity of administrative staff is also intimately linked to the effectiveness of office managers. When office managers fail to leverage e-collaborative platforms, routine tasks such as scheduling, reporting, and information dissemination become unnecessarily cumbersome. This inefficiency often leads to frustration among staff, reduced motivation, and suboptimal performance. Moreover, public universities face increasing demands for timely reporting and compliance with regulatory requirements, which intensifies the pressure on office managers to perform effectively. By exploring the role of digital collaboration in enhancing productivity, this study seeks to provide empirical evidence that can guide policy and operational reforms within the administrative frameworks of universities in South-South, Nigeria.

Staff coordination is also a central measure of office managers' effectiveness, involving the resolution of internal complaints and the facilitation of a smooth workflow among teams. Effective coordination ensures that departments work synergistically, administrative processes are harmonized, and internal conflicts are addressed promptly, minimizing disruptions to institutional operations. Where coordination falters, inefficiencies and conflicts can undermine organizational performance and staff morale (Zeb-Obipi & Eke, 2021). Staff coordination remains appears to be a critical challenge in the public university setting. Traditional coordination methods, characterised by manual tracking and face-to-face meetings, are often inadequate for complex administrative environments. Office managers who fail to adopt e-collaborative practices struggle to synchronise activities across departments, monitor task completion, and provide timely feedback. This lack of coordination not only affects routine operations but also compromises the execution of strategic initiatives, such as research funding allocation, academic scheduling, and student services management. Investigating the impact of e-collaborative tools on staff coordination will provide insights into how technology can be harnessed to streamline administrative processes and strengthen managerial effectiveness.

Linking these measures to contemporary practice of virtual storage have emerged as influential determinants of office managers' effectiveness in modern organizational environments. Virtual

storage serves as the collective digital memory of a project, encompassing cloud-based platforms where documents and data are centrally hosted, version-controlled, and made accessible to all members at any time; this ensures information consistency and supports asynchronous workflows. Virtual storage solutions such as Google Document usage and OneDrive usage constitute another critical dimension of e-collaborative work practices. These cloud-based storage systems support shared access to documents, version tracking, and collaborative editing, thereby improving transparency and reducing redundancy. Research on cloud computing capability in South-South Nigerian tertiary institutions showed that cloud tools enhance information dissemination, coordinated work systems, and decision-making processes (Nigerian Journal of Management Sciences, 2023).

Despite growing research on digital technologies in Nigerian universities, there remain gaps in understanding how specific virtual storage influence office managers' effectiveness in public universities in South-South, Nigeria. For example, while studies have explored network virtualization and job performance in South-South, Nigeria universities (Nna-Emmanuel, 2024) and the influence of ICT on educators' performance (Uwaneze et al., 2025), there is limited empirical work that integrates multiple virtual storage indicators (e.g., google document usage and one-drive). Moreover, existing research tends to focus on broader ICT influence without isolating the effects of specific virtual storage on office managers' core roles and responsibilities, indicating a knowledge gap that this study seeks to address. Apparently, the success of public universities in South-South, Nigeria depends heavily on efficient administrative systems, with office managers playing a pivotal role in ensuring operational stability. Despite the widespread recognition of technology's potential to enhance administrative efficiency, adoption remains uneven, and many managers continue to rely on traditional methods. This situation presents an urgent need to examine the interface between virtual storage and office manager's effectiveness, highlighting barriers, facilitators, and potential strategies for technology integration. By addressing this gap, the study contributes to the broader discourse on digital transformation in higher education administration within the Nigerian context.

STATEMENT OF THE PROBLEM

The perceived reality gap that prompted this study includes inadequate communication, poor productivity, and inappropriate staff coordination continue to hinder office managers' effectiveness in public universities in South-South, Nigeria. In public universities across South-South, Nigeria, the effectiveness of office managers has increasingly come under scrutiny due to recurring operational inefficiencies and administrative bottlenecks. Instances of inadequate communication between office managers and staff have been observed, often leading to misinterpretation of tasks, delayed project completion, and overall disorganisation. Reports from various administrative units indicate that poor productivity is a recurrent challenge, with office managers frequently unable to ensure that tasks are completed in a timely and efficient manner. Furthermore, inappropriate staff coordination has led to overlapping responsibilities, duplication of efforts, and diminished accountability within university offices. These challenges compromise the smooth functioning of public universities and highlight the need to critically examine the mechanisms through which office managers can enhance their effectiveness. Without addressing these operational weaknesses, public universities risk sustaining a culture of inefficiency that undermines institutional goals, academic delivery, and staff morale.

A critical dimension of this problem lies in the limited adoption of virtual storage by office managers. There appears to be a limited adoption of virtual storage, including google document usage and one-drive in the administrative practices of public universities in South-South, Nigeria. Technology such as virtual storage is increasingly transforming administrative operations worldwide, enabling real-time communication, document sharing, and task monitoring. However, in many public universities in South-South, Nigeria, office managers have not fully leveraged these tools to facilitate coordination and streamline workflow. This failure to integrate digital collaboration tools often results in fragmented communication, delays in decision-making, and reduced responsiveness to staff and student needs.

CONCEPTUAL FRAMEWORK

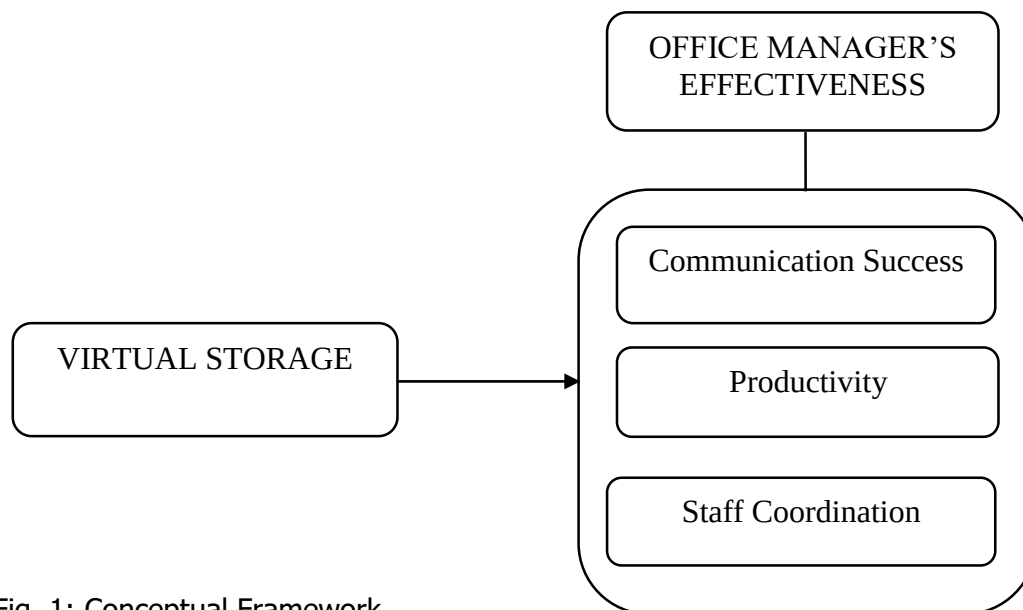


Fig. 1: Conceptual Framework.

Source: Otamiri and Odu (2021); Asu-Okang and Ogar (2025)

AIM AND OBJECTIVES OF THE STUDY

The aim of the study was to ascertain the relationship between virtual storage and office manager's effectiveness in public universities in South-South, Nigeria. The objectives were to:

1. determine the relationship between virtual storage and communication success in public universities in South-South, Nigeria.
2. examine the relationship between virtual storage and productivity in public universities in South-South, Nigeria.
3. assess the relationship between virtual storage and staff coordination in public universities in South-South, Nigeria.

HYPOTHESES

In line with the objectives, the following null hypotheses were formulated:

- Ho₁: There is no significant relationship between virtual storage and communication success in public universities in South-South, Nigeria.
- Ho₂: There is no significant relationship between virtual storage and productivity in public universities in South-South, Nigeria.
- Ho₃: There is no significant relationship between virtual storage and staff coordination in public universities in South-South, Nigeria.

CONCEPTUAL REVIEW

Concept of Virtual Storage

Virtual storage refers to cloud-based data storage systems that allow digital files to be stored on remote servers and accessed via the internet rather than through local physical devices (IBM, 2025). These systems rely on virtualization technologies that abstract physical storage infrastructure, enabling users to store, retrieve, and manage data dynamically. In e-collaborative environments, virtual storage provides the technological foundation that allows team members to access shared resources regardless of geographical location, thereby supporting distributed work practices (Sutherland et al., 2024). Virtual storage also enables seamless integration with collaborative platforms such as document editors, communication tools, and project management systems. These integrations centralize information resources and reduce fragmentation across multiple applications,

improving coordination and workflow efficiency in e-collaborative settings (Al-Samarraie, 2020). As a result, collaborators interact with shared data in real time within a unified digital environment. Virtual storage further supports organizational knowledge management by serving as a persistent repository for collective knowledge artifacts. Documents, datasets, and project outputs stored in the cloud remain accessible over time, enabling teams to build upon previous work and preserve institutional memory (Hivenet, 2024). This cumulative knowledge creation strengthens collaborative learning and innovation. Virtual storage defined as remote, Internet-accessible repositories for data and files has become an essential infrastructure component in contemporary e-collaborative work practices. It moves the locus of data from local machines to shared digital environments, allowing geographically dispersed teams to store and retrieve shared resources in real time. By providing centralized access points for documents, datasets, and other collaborative objects, virtual storage systems fundamentally shape how distributed work is coordinated and executed (TechTarget, 2023; Sophia Learning, 2024). However, there are some indicators of virtual storage which include, google document usage and one-drive usage.

i) Google Document Usage: Google Document, commonly referred to as Google Docs, is a cloud-native word processing application in which documents are stored within Google Drive rather than on local devices (IJIRMF, 2025). This design exemplifies virtual storage by ensuring that documents are persistently available online and accessible across multiple devices. The reliance on cloud infrastructure removes the dependency on physical storage media and supports continuous access.

ii) OneDrive Usage: Microsoft OneDrive is a cloud storage service that allows users to store files remotely and synchronize them across multiple devices (IBM, 2025). As an indicator of virtual storage, OneDrive demonstrates how data can be decoupled from physical hardware while remaining continuously accessible. Files stored in OneDrive are maintained on Microsoft's cloud infrastructure, ensuring reliability and redundancy.

Concept of Office Managers' Effectiveness

Office management is broadly defined as the process of planning, organizing, directing, and controlling office activities in order to achieve organizational objectives efficiently and effectively (Koontz, et al., 2020; Obi, 2017). Historically, office management emerged from early administrative practices associated with record keeping and correspondence in public and commercial institutions. During the scientific management era of the early twentieth century, scholars such as Taylor emphasized efficiency in clerical operations, leading to the formalization of office procedures and standardized administrative workflows (Wren & Bedeian, 2020). As organizations expanded in size and complexity, the office evolved into a central administrative unit responsible for information processing, coordination, and organizational communication, thereby necessitating professional office management as a distinct managerial function (Armstrong, 2021).

The concept of office management has continued to evolve alongside changes in organizational structure, technology, and managerial philosophy. Modern office management extends beyond clerical supervision to encompass human resource coordination, information systems management, workflow optimization, and support for strategic decision-making (Daft, 2022). Contemporary scholars view the office as an administrative hub where managerial coordination and organizational integration occur (Robbins & Coulter, 2023). Consequently, office management is now recognized as a critical contributor to organizational effectiveness, particularly in knowledge-driven and service-oriented institutions where administrative efficiency directly influences productivity and service quality (Mullins, 2019). Some measures of office managers' effectiveness include, communication success, productivity, and staff coordination.

Measures of Office Managers' Effectiveness

Communication Success

Communication success in organizations refers to the degree to which communication processes achieve their intended outcomes, including clarity, understanding, mutual engagement, and alignment with organizational goals (Hargie & Tourish in Hargie, 2016; Musheke & Phiri, 2021). Communication success is not merely the transmission of messages but the attainment of shared meaning among participants that supports organizational functions such as coordination, planning, and performance. In contemporary management literature, this concept intersects with communication effectiveness, defined as the ability to successfully transmit information and achieve understanding, persuasion, or goal accomplishment across formal and informal communication channels within the workplace context. Communication success thus functions as a behavioural and performance metric reflecting how well messages facilitate intended managerial and organizational actions.

Productivity

Productivity in organizational research is typically conceptualized as a relationship between output and input, representing how effectively resources are converted into meaningful results. The foundational economic conception stresses that productivity involves maximizing outputs while minimizing inputs such as time, labor, or capital (Eichler, 2025). In workplace settings, output can include deliverables relevant to the organizational mission, while inputs encompass managerial effort, staff time, and operational costs. This output–input framing is essential to understanding productivity as more than sheer activity volume; rather, it encapsulates how much valuable work is performed relative to resources expended, which is central to managerial performance evaluation (Eichler, 2025).

Staff Coordination

Staff coordination refers to the deliberate managerial process of aligning individual and group activities so that organisational tasks are performed in a unified and mutually reinforcing manner. In office settings, coordination ensures that employees' roles, responsibilities, and outputs are harmonised toward the achievement of shared organisational objectives. Management scholars emphasise that coordination is central to transforming individual effort into collective performance, particularly where tasks are interdependent and sequential (Okhuysen & Bechky, 2009). For office managers, staff coordination reflects their ability to integrate human resources, communication systems, and workflows into a coherent operational structure, making it a critical indicator of managerial effectiveness.

THEORETICAL REVIEW

The study was mainly anchored on Task–Technology Fit Theory. Task–Technology Fit Theory was propounded by Dale L. Goodhue and Ronald L. Thompson in 1995. The theory emphasizes that technology improves individual performance only when the capabilities of the technology match the requirements of the task. The main idea of TTF is that effective performance occurs when there is a good fit between the nature of the task, the features of the technology, and the abilities of the user. In electronic collaboration, technologies such as shared calendars, cloud storage, workflow management systems, and collaborative dashboards must align with office managers' administrative tasks to improve effectiveness. Current job applications of TTF include:

- i. Evaluation of electronic workflow systems in university administration.
- ii. Studies on ICT tools supporting administrative coordination and records management.
- iii. Adoption of collaborative office technologies in public sector organizations.

Justifying this Task–Technology Fit Theory to this study was predicated on the ground that office managers perform diverse administrative tasks that require different electronic tools. The theory explains why some e-collaborative tools enhance effectiveness while others fail. It directly links

technology characteristics, task requirements, and managerial performance, which aligns closely with the objectives of the study.

METHODOLOGY

The study adopted cross-sectional research design. The target population comprised of seven hundred and forty-eight (748) office managers consisting of Deans of Faculties and Heads of Departments (HODs) of eleven (11) public universities in four states in South-South, Nigeria. The states to be covered included Rivers State, Bayelsa State, Delta State, and Akwa Ibom State (See in Appendix A). The sample size of the study consisted of 261 respondents, determined using the Taro Yamane formula. Considering the disparity in their population distribution, Bowley's (1960) Population Proportionate Allocation Formula was adopted in determining the sample distribution for each of the universities. Thus, the study adopted the random sampling techniques. Structured questionnaire was used as the main instrument for the collection of primary data. To establish the validity of the instrument, copies of the questionnaire was submitted to experts in Office and Information Management Department of Ignatius Ajuru University of Education, Port Harcourt. Their comments were used to validate the final copy of the instrument that was administered. Thus, Cronbach alpha was used to ascertain the reliability of the instrument. In line with the sample size, a total of 261 copies of the questionnaire was administered by the researcher, assisted by four trained research assistants (one for each state). However, 238 copies were retrieved representing 91%. Pearson Product-Moment Correlation (PPMC) was used for the analysis through the aid of Statistical Package for Social Sciences (SPSS) Version 25.0. The decision rule for hypothesis testing was as follows: the null hypothesis was rejected if the calculated significance value (p-value) is less than the 0.05 level of significance; otherwise, the null hypothesis was not rejected. The strength of relationship was interpreted using the following scheme: No Relationship = 0; Low or Weak Relationship = 0.1–0.2; Moderate or Relatively Strong Relationship = 0.3–0.5; High or Strong Relationship = 0.6–0.7; Very High or Strong Relationship = 0.8–0.9; and Perfect Relationship = 1.

RESULTS

- Ho₁: There is no significant relationship between virtual storage and communication success in public universities in South-South, Nigeria.
- Ho₂: There is no significant relationship between virtual storage and productivity in public universities in South-South, Nigeria.
- Ho₃: There is no significant relationship between virtual storage and staff coordination in public universities in South-South, Nigeria.

Table 1: Correlations between Virtual Storage and Office Managers' Effectiveness

			Virtual Storage	Communication Success	Productivity	Staff Coordination
Pearson's r	Virtual Storage	Correlation Coefficient	1.000	0.641**	0.758**	0.572**
		Sig. (2-tailed)	.	.000	.000	.000
		N	238	238	238	238
	Communication Success	Correlation Coefficient	0.641**	1.000	0.572**	0.944**
		Sig. (2-tailed)	.000	.	.000	.000
		N	238	238	238	238
	Productivity	Correlation Coefficient	0.758**	0.571**	1.000	0.825**
		Sig. (2-tailed)	.000	.000	.	.000
		N	238	238	238	238
	Staff Coordination	Correlation Coefficient	0.572**	0.944**	0.825**	1.000

Sig. (2-tailed)	.000	.000	.000	.
N	238	238	238	238

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

Source: SPSS Output, 2026

Column two of table 1 above shows r value of 0.641 at a significance level of 0.00 which is less than the chosen alpha level of 0.05 for the hypothesis relating virtual storage and communication success. Since the significance value is less than the alpha level of 0.05, the null hypothesis (H_{01}) which states that there is no significant relationship between virtual storage and communication success in public universities in South-South, Nigeria, was rejected. This implies that there is a strong positive relationship between virtual storage and communication success in public universities in South-South, Nigeria.

Column three of table 1 above shows r value of 0.758 at a significance level of 0.00 which is less than the chosen alpha level of 0.05 for the hypothesis relating virtual storage and productivity. Since the significance value is less than the alpha level of 0.05, the null hypothesis (H_{02}) which states that there is no significant relationship between virtual storage and productivity in public universities in South-South, Nigeria, was rejected. This implies that there is a strong positive relationship between virtual storage and productivity in public universities in South-South, Nigeria.

Column four of table 1 above shows r value of 0.572 at a significance level of 0.00 which is less than the chosen alpha level of 0.05 for the hypothesis relating virtual storage and staff coordination. Since the significance value is less than the alpha level of 0.05, the null hypothesis (H_{03}) which states that there is no significant relationship between virtual storage and staff coordination in public universities in South-South, Nigeria, was rejected. This suggests that there is a relatively strong positive relationship between virtual storage and staff coordination in public universities in South-South, Nigeria.

DISCUSSION OF FINDINGS

The findings of the study were discussed under the following headings:

The test of hypotheses one, two and three revealed that there is a strong positive relationship between virtual storage and communication success in public universities in South-South, Nigeria; there is a strong positive relationship between virtual storage and productivity in public universities in South-South, Nigeria; and there is a relatively strong positive relationship between virtual storage and staff coordination in public universities in South-South, Nigeria. The outcome of this study indicates that the use of cloud-based document management platforms for storing, accessing, and sharing official files is closely associated with enhanced administrative outcomes among office managers in public universities in South-South, Nigeria, particularly in promoting effective communication, higher work output, and improved coordination among personnel. The increasing migration from paper-based documentation to cloud storage systems such as Google Drive, Google Docs, and Microsoft OneDrive has transformed office administration by enabling authorized staff to access institutional documents simultaneously, collaborate in real time, and maintain continuity of work regardless of physical location. These capabilities significantly reduce delays associated with document retrieval, improve information accessibility, and facilitate coordinated execution of administrative responsibilities. This finding aligns with Mosunmola (2025), who found that electronic record management significantly enhances office managers' effectiveness through efficient storage, retrieval, and utilization of organizational records. Similarly, Chike and Amadi (2023) reported that modern office technologies substantially improve secretarial productivity by streamlining office operations and facilitating efficient information management, while Abideen, et al. (2024) established that contemporary office technologies improve administrative performance by strengthening communication systems and enhancing overall organizational efficiency. These studies collectively provide strong empirical support for the present finding by demonstrating that digital storage technologies are valuable instruments for improving workplace effectiveness.

The present finding further demonstrates that virtual storage technologies promote seamless communication because they eliminate the delays traditionally associated with physical movement of documents between offices, departments, and university campuses. Office managers can create shared folders, edit institutional documents collaboratively, monitor revisions, and distribute updated files instantly without interrupting administrative workflows. Consequently, staff members remain adequately informed, institutional decisions are implemented more quickly, and communication gaps are substantially minimized. Such an environment encourages greater organizational responsiveness and supports continuous workflow even when employees operate from different locations. This observation agrees with the findings of Amaewhule and Nwiyor (2025), who reported that digital workplace practices significantly improve office managers' job functions by facilitating efficient communication and coordinated work processes. Likewise, Don-Baridam and Akpan (2021) found that virtual collaboration technologies enhance team effectiveness through continuous interaction, improved information exchange, and stronger organizational coordination. Supporting these findings, Mayomi and Lois (2019) established that electronic human resource management systems improve communication, administrative coordination, and information accessibility among university administrators. The consistency between these studies and the current result indicates that virtual document storage platforms constitute essential communication infrastructure capable of improving productivity and institutional coordination in public universities.

Another important implication of the present finding is that cloud-based storage platforms significantly strengthen teamwork by allowing multiple employees to contribute simultaneously to the preparation, review, and updating of institutional documents. Unlike conventional filing systems that restrict document access to a single individual at a time, virtual storage systems encourage collaborative editing, version control, transparency, and collective responsibility for official assignments. This collaborative environment improves the speed and quality of administrative work while minimizing duplication of effort and document inconsistencies. The finding is consistent with Daerefamama and Ifejika (2025), whose study revealed that collaboration and integrity significantly improve staff work ethics and institutional effectiveness within public universities. Similarly, Anokere and Nwaelehia (2024) found that collaborative competencies enhance employee performance because teamwork facilitates knowledge sharing, mutual support, and coordinated accomplishment of organizational objectives. In addition, Anireh and Amadi (2020) demonstrated that digital collaboration platforms strengthen research and professional interactions by promoting effective information sharing and sustained communication among personnel in higher education institutions. These empirical findings reinforce the current result by illustrating that cloud-based storage systems support collaborative administration, improve staff coordination, and contribute substantially to organizational productivity.

The finding also suggests that virtual storage platforms contribute directly to administrative efficiency by improving document security, reducing time spent searching for files, and ensuring uninterrupted access to institutional information. Office managers can retrieve archived documents within seconds, monitor changes made by authorized users, recover previous versions of files when necessary, and maintain reliable backup systems that protect valuable institutional records from accidental loss. These capabilities significantly improve the quality of administrative decision-making because accurate information remains readily available whenever required. This interpretation corroborates the findings of Edho (2025), who established that digital technologies improve timeliness and sustain productivity within university registries through efficient information management and streamlined administrative processes. Likewise, Francis (2025) reported that online reporting systems improve efficiency by accelerating report preparation, submission, and institutional communication. Supporting these findings, Ige, et al. (2022) emphasized that employers increasingly require office managers to possess digital competencies capable of supporting effective document management, communication, and administrative coordination in technology-driven workplaces. Collectively, these studies strengthen the present finding by

confirming that cloud storage technologies significantly improve administrative effectiveness through faster information processing and more efficient workflow management.

Furthermore, the strong relationship established in this study reflects the strategic importance of virtual storage technologies in supporting flexible work arrangements and sustaining productivity across diverse administrative contexts. Public universities frequently manage extensive documentation relating to admissions, examinations, staff records, finance, procurement, and governance, making efficient storage and retrieval systems indispensable for effective administration. Cloud storage platforms allow office managers to coordinate these responsibilities without being constrained by physical office spaces, thereby supporting continuity of operations during emergencies, remote work situations, or institutional disruptions. This interpretation is consistent with Kowalski and Slebarska (2022), who found that remote working technologies significantly improve work effectiveness by facilitating uninterrupted collaboration and sustained employee performance. Similarly, Azih, et al. (2025) reported that emerging digital technologies strengthen communication, collaborative participation, and effective organizational engagement through interactive virtual platforms. These findings provide additional evidence that cloud-based document management systems constitute valuable organizational resources capable of enhancing communication success, improving teamwork, and sustaining high levels of administrative productivity.

CONCLUSION

Base on the findings, the study concluded that there is a significant positive relationship between virtual storage and office managers' effectiveness in public universities in South-South, Nigeria. Consequently, public universities that deliberately invest in collaborative technologies alongside digital capacity development will be better positioned to sustain administrative efficiency, institutional coordination, and continuous organizational effectiveness in an increasingly technology-oriented environment.

RECOMMENDATIONS

Based on the findings, the following recommendations were made:

1. Public universities should deploy institution-wide cloud-based document management systems that allow authorized personnel to securely create, access, edit, and retrieve official documents in real time, thereby improving collaboration and reducing administrative delays.
2. University management should establish comprehensive policies on cloud storage governance, including access control, document version management, cybersecurity standards, and routine data backup to protect institutional information and promote operational efficiency.
3. Information technology units should provide continuous technical support and practical capacity-building programmes that enable office managers to effectively utilize cloud storage applications for collaborative document management, workflow integration, and seamless staff coordination.

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APPENDIX A

Table 3.1: Study Population

S/N	Public Universities in South-South, Nigeria	Deans	Heads	Total
1.	University of Port Harcourt, Choba, Port Harcourt	16	90	106
2.	Rivers State University, Port Harcourt	16	99	115
3.	Ignatius Ajuru University of Education, Rumuolumeni, Port Harcourt.	7	50	57
4.	Bayelsa Medical University	5	20	25
5.	University of Africa, Toru-Orua, Bayelsa State	6	30	36
6.	Federal University, Otueke	8	40	48
7.	Niger Delta University, Amasoma	10	60	70
8.	Akwa Ibom State University, Ikot Akpaden, Akwa Ibom State	9	55	64
9.	University of Uyo, Uyo, Akwa Ibom State	14	85	99
10.	Federal University of Petroleum Resources, Effurun	6	35	41
11.	Delta State University (DELSU)	12	75	87
	Total	109	639	748

Source: Establishment Units of the Universities.