Leveraging Office Information Technology and Information Management for Sustainable Development in Tertiary Institution: Evidence from Federal Polytechnic, Bida

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Abstract

This study examines the role of office information technology (IT) and information management in driving sustainable development in tertiary institution evidence of Federal Polytechnic, Bida. It focuses on 120 individuals, including deans, secretaries, deputy registrars, HODs, and directors. A census approach collected comprehensive data through surveys, interviews, observations, literature review, and record analysis. Using a mixed-method approach, primary and secondary data were gathered. Primary data included surveys, interviews, and observations, while secondary data involved reviewing literature, reports, and records on sustainable development initiatives. The research employs a descriptive design to understand office IT and information management practices for sustainable development. It highlights the significance of IT in enhancing efficiency, reducing resource consumption, and promoting a sustainable workplace culture. The study emphasizes information management systems for data capture, organization, and analysis to inform decision-making and implement sustainable practices. Challenges include initial costs, compatibility issues, and change management. The study outlines emerging trends like cloud computing, data analytics, and artificial intelligence integration that can promote sustainable development. By leveraging these technologies and managing information effectively, organizations like Federal

Polytechnic, and Bida can drive sustainable development, reduce environmental impact, and contribute to a sustainable future.

Keywords: Leveraging, Office, Information Technology, Information Management, Sustainable Development.

Introduction

Sustainable development refers to the process of meeting the needs of the present generation without compromising the ability of future generations to meet their own needs (Kouziokas, 2016).

In the global context, there is increasing recognition of the importance of leveraging information technology for sustainable development. The United Nations Educational, Scientific and Cultural Organization (UNESCO) emphasizes the role of information and communication technologies (ICTs) in achieving sustainable development goals (Castro & Luo, 2019). ICTs can facilitate decision-making, improve efficiency, and enhance communication and collaboration, thereby contributing to sustainable development efforts (Castro & Luo, 2019).

In Nigeria, there is a growing interest in leveraging information technology for sustainable development. The study focuses on Federal Polytechnic, Bida, which is a tertiary institution in Niger State. The challenges faced by the institution in promoting sustainable development through the use of office information technology and information management are examined. These challenges may include limited resources, inadequate infrastructure, and resistance to change (Aguboshim et al., 2021).

The study is significant to Federal Polytechnic, Bida as it provides evidence-based insights into the role of office information technology and information management in promoting sustainable development. By understanding the challenges and opportunities associated with leveraging information technology, the institution can develop strategies to enhance its sustainable development efforts. This can include improving infrastructure, providing training and support for staff, and implementing effective information management practices (Aguboshim et al., 2021).

One of the issues addressed in the study is the importance of sustainable ICT in leveraging sustainable research and innovation in tertiary institutions (Aguboshim et al., 2021). The study also highlights the key determinants of sustainable ICT, such as content and functional value, appropriate policies and guidelines, and perceived value and security facilities

(Aguboshim et al., 2019). These factors influence the enablement and impact of sustainable technology in promoting sustainable development.

While there is existing literature on the role of information technology in sustainable development, there is a need for research specifically focused on the context of Federal Polytechnic, Bida. The study aims to fill this gap by providing evidence from the institution and identifying the challenges and opportunities in leveraging office information technology and information management for sustainable development. By conducting this study, the researchers aim to contribute to the understanding of how information technology can be effectively utilized to promote sustainable development in a specific organizational context.

Problem Statement

Despite the potential benefits of leveraging office information technology and information management for sustainable development in tertiary institution, some institutions may face challenges in fully harnessing these resources. Issues such as inadequate infrastructure, lack of IT skills among staff, insufficient data management practices, or organizational barriers might hinder the effective utilization of IT and information management for sustainable development at Federal Polytechnic, Bida.

Purpose of Study

The main purpose of this research is to investigate and assess the role of office information technology and information management in promoting sustainable development at Federal Polytechnic, Bida. Specifically, the study aims to:

1. Evaluate the current state of office information technology infrastructure at Federal Polytechnic, Bida.
2. Assess the level of information management practices employed within the institution (Federal Polytechnic, Bida).
3. Identify challenges and barriers faced by the institution in leveraging IT and information management for sustainable development at Federal Polytechnic, Bida.
4. Propose recommendations and strategies for enhancing the utilization of office information technology and information management to support sustainable development goals Federal Polytechnic, Bida.

Research Questions

1. What is the current state of office information technology infrastructure at Federal Polytechnic, Bida?
2. How are information management practices implemented within the institution (Federal Polytechnic, Bida)?
3. What are the key challenges and barriers faced by Federal Polytechnic, Bida, in leveraging IT and information management for sustainable development?
4. In what ways can office information technology and information management be improved to better support sustainable development goals at the Federal Polytechnic, Bida.?

Overview of the concepts of office information technology, information management, and sustainable development

Office Information Technology (OIT) refers to the use of technology and computer-based systems to facilitate the management and processing of information within an office or organization ("Conceptual Model of the Education Management Information System for Higher Education Institutions", 2020). It includes hardware, software, networks, and other technological tools that enable the efficient storage, retrieval, and communication of information.

Information management involves the systematic organization, control, and dissemination of information within an organization ("Conceptual Model of the Education Management Information System for Higher Education Institutions", 2020). It encompasses the processes, policies, and technologies used to capture, store, retrieve, and distribute information to support decision-making and achieve organizational goals.

Sustainable development refers to the practice of meeting the needs of the present generation without compromising the ability of future generations to meet their own needs (Shiroyama et al., 2012). It involves balancing economic, social, and environmental considerations to ensure long-term well-being and resource conservation.

Review of relevant studies and research related to IT adoption, information management practices, and sustainable development in educational institutions.

Several studies have explored the adoption of IT and information management practices in educational institutions. Kigozi & Ko (2019) conducted a systematic literature review to identify Total Quality Management (TQM) practices used in education institutions. They found

that top management commitment, continuous improvement, and customer focus were the major TQM practices applied in education institutions. However, there is still a gap in research on TQM practices in primary education.

In the context of sustainable development in educational institutions, Bastas & Liyanage (2018) conducted a Delphi study to explore the integration of ISO 9001 and supply chain integration principles for sustainable development. They developed a theoretical framework that highlighted the principles within ISO 9001 that can be used towards sustainable development. The study emphasized the need for governance mechanisms that enable cooperation among actors for sustainable actions.

Theoretical frameworks and models related to the integration of IT and sustainable development

Shiroyama et al. (2012) proposed an analytical framework of risk-related governance for sustainability, focusing on knowledge integration and multi-actor dimensions. The framework emphasizes the importance of knowledge integration for addressing various dimensions of sustainability and uncertainty. It also highlights the need for multi-actor governance to achieve agreement on sustainable actions among different stakeholders.

Whitelock (2019) developed a multidimensional environmental social governance sustainability framework that integrates sustainability reporting and financial reporting. The framework aims to overcome the shortcomings of current sustainability frameworks and enable companies to define potential initiatives and interventions towards sustainability. It emphasizes the need for integrated sustainability on the company level and informing stakeholders about the company's impact.

Furthermore, Chowdhury et al. (2012) proposed a resilient-sustainable supply chain management (RSSCM) framework that combines stakeholder theory and resource-based view. The framework focuses on achieving sustainability and resilience in supply chains by considering economic, environmental, and social dimensions. It highlights the importance of collaboration and coordination between all players in the construction industry for sustainable design and development.

Research Methodology

Research design was a mixed-methods to examine the role of office Information Technology (IT) and Information Management in driving Sustainable Development in Tertiary Institution evidence of Federal Polytechnic, Bida. The Population of the study was 120 individuals,

including Principal Officers, Deans, Secretaries, Deputy Registrars, HODs, and Directors. A census approach collected comprehensive data through surveys, interviews, observations, literature review, and record analysis. Using a mixed-method approach, primary and secondary data were gathered. Primary data included surveys, interviews, and observations, while secondary data involved reviewing literature, reports, and records on Sustainable Development initiatives. The data collection instrument was made up of five (5) sections close and open ended structured questionnaire to enable the respondents to respond to each section accordingly. To ensure its validity, the research instrument (questionnaire) was validated by three experts in the field of research for face and content validity.

A total number of 120 copies of the questionnaire was administered to the respondents in the Federal Polytechnic, Bida, 107 copies was returned. After sorting the questionnaires only 97 copies was certified as dully filled and considered usable.

The data collected from the respondents were presented in tables and analyzed in statistical percentage.

Data Presentation and Analysis

The data collected for this research through the use of questionnaire was presented, analyzed and interpreted using the research questions formulated as guide.

Participant Information:

Table 1: Role/Position at Federal Polytechnic, Bida:

S/No.	Role/Position	Frequency
1.	Principal officer	04
2.	Administrators	31
3.	Deans	05
4.	Directors	28
5.	H. O. Ds	29

Source: Field Survey (2023)

The above Table 1 represents the frequency of different roles/positions at Federal Polytechnic, Bida. The Principal Officers: 4 participants (10.26%), Administrators: 31 participants (79.49%), Deans: 5 participants (12.82%), Directors: 28 participants (71.79%), and Heads of Departments (H.O.Ds): 29 participants (74.36%)

These percentages show the distribution of participants among the various roles/positions at the Federal Polytechnic, Bida. The highest percentage of participants are Administrators,

followed by Directors and H.O.Ds. Deans and Principal Officers have the lowest percentages among the roles listed.

Table 2: Years of Experience at the Institution:

S/No	Years	Frequency
1.	1 – 5	03
2.	6 – 10	05
3.	11 – 15	10
4.	16 – 20	25
5.	21 – 25	34
6.	26 – 30	15
7.	30 – Above	05

Source: Field Survey (2023)

The table 2 above shows the Years of Experience at the Institution: 1 – 5 years of experience: 3 participants (3.09%), 6 – 10 years of experience: 5 participants (5.15%), 11 – 15 years of experience: 10 participants (10.31%), 16 – 20 years of experience: 25 participants (25.77%), 21 – 25 years of experience: 34 participants (35.05%), 26 – 30 years of experience: 15 participants (15.46%) and 30 years and above of experience: 5 participants (5.15%)

These percentages provide insight into the distribution of participants based on their years of experience at the institution. The largest group falls within the "21 – 25 years" bracket, followed by the "16 – 20 years" bracket. The groups with the lowest percentages are "1 – 5 years" and "30 years and above," indicating a relatively smaller number of participants with those ranges of experience.

Section 1: Office Information Technology Infrastructure

Table 3: How would you rate the current state of office information technology infrastructure at Federal Polytechnic, Bida? (Scale: Poor, Fair, Good, Excellent)

S/No.	Current State of office information technology infrastructure	Frequency
1.	Poor	57
2.	Fair	38
3.	Good	12

4.	Excellent	0

Source: Field Survey (2023)

The above table 3 rates the current state of Office Information Technology Infrastructure at the Federal Polytechnic Bida as follows: Poor: 57 participants (56.44%), Fair: 38 participants (37.62%), Good: 12 participants (11.88%), Excellent: 0 participants (0%).

These percentages reflect how participants rate the current state of office information technology infrastructure at Federal Polytechnic, Bida. The majority of participants (56.44%) consider it to be "Poor," while a significant portion (37.62%) rate it as "Fair." A smaller percentage of participants (11.88%) view it as "Good," and interestingly, none of the participants rated it as "Excellent." This indicates that there is room for improvement in the IT infrastructure at the institution.

Table 4: Which of the following IT tools and resources are available within your department/unit? (Select all that apply)

S/No	IT Tools and Resources	Frequency
1.	Computers and Laptops	66
2.	Network Connectivity	15
3.	Software Applications (e.g., Microsoft Office Suite, specialized software)	65
4.	Printers	60
5.	Scanners	2
6.	Server Infrastructure	1

Source: Field Survey (2023)

Above Table 4 were the interpretation and analysis of the availability of IT tools and resources within departments/units at Federal Polytechnic, Bida, along with their corresponding percentages: Computers and Laptops: 66 participants (66%), Network Connectivity: 15 participants (15%), Software Applications: 65 participants (65%), Printers: 60 participants (60%), Scanners: 2 participants (2%), and Server Infrastructure: 1 participant (1%)

These percentages provide insight into the availability of various IT tools and resources within different departments or units. The most commonly available resources are Computers and

Laptops, Software Applications, and Printers, with around 60-66% of participants reporting their availability. Network Connectivity is available to a smaller extent (15%), while Scanners and Server Infrastructure are relatively less common (2% and 1% respectively). This indicates a relatively strong presence of essential tools like Computers, Laptops, and Software, but a lower availability of resources like Scanners and Server Infrastructure.

Section 2: Information Management Practices

Table 5: How would you describe the information management practices within your department/unit? (Scale: Inadequate, Satisfactory, Strong, Very Strong)

S/No.	Scale	Frequency
1.	Inadequate	71
2.	Satisfactory	20
3.	Strong	16
4.	Very strong	00

Source: Field Survey (2023)

Above were the interpretation and analysis of the information management practices within departments/units at Federal Polytechnic, Bida, along with their corresponding percentages: Inadequate: 71 participants (69.61%), Satisfactory: 20 participants (19.61%), Strong: 16 participants (15.69%) and Very Strong: 0 participants (0%).

These percentages reflect how participants describe the information management practices within their respective departments or units. The majority of participants (69.61%) find the practices to be "Inadequate," indicating a need for improvement. A smaller portion (19.61%) consider the practices to be "Satisfactory," and even fewer (15.69%) perceive them as "Strong." Interestingly, no participants rated the practices as "Very Strong." This suggests that there is significant room for enhancement in information management practices across the institution.

Table 6: Are there established protocols for data capture, storage, and retrieval within your department/unit? (Yes/No)

S/No.	Option	Frequency

1.	Yes	41
2.	No	45

Source: Field Survey (2023)

Table 6, were the interpretation and analysis of the presence of established protocols for data capture, storage, and retrieval within departments/units at Federal Polytechnic, Bida, along with their corresponding percentages: Yes: 41 participants (47.13%) and No: 45 participants (52.87%).

These percentages reflect whether participants' departments or units have established protocols for data capture, storage, and retrieval. About 47.13% of participants indicated that such protocols are in place ("Yes"), while the remaining 52.87% reported that they do not have established protocols ("No"). This indicates that while there are some departments with protocols, there is still a considerable number of departments without these established procedures for managing data.

Table 7: How often do you use digital information management systems (e.g., databases, document management software) to organize and access information? (Scale: Rarely, Occasionally, Often, Always)

S/No.	Scale	Frequency
1.	Rarely	75
2.	Occasionally	25
3.	Often	06
4.	Always	01

Source: Field Survey (2023)

Above table shows the interpretation and analysis of the frequency of using digital information management systems for organizing and accessing information within departments/units at Federal Polytechnic, Bida, along with their corresponding percentages: Rarely: 75 participants (73.53%), Occasionally: 25 participants (24.51%), Often: 6 participants (5.88%), and Always: 1 participant (0.98%)

These percentages represent the frequency with which participants use digital information management systems to organize and access information. The majority of participants

(73.53%) indicated that they use these systems "Rarely," suggesting that there might be room for increased adoption. A smaller portion (24.51%) reported using them "Occasionally," while only a few (5.88%) use them "Often." Interestingly, very few participants (0.98%) reported using these systems "Always." This highlights an opportunity for encouraging more regular use of digital information management systems within the institution.

Section 3: Challenges and Barriers

a. **In your opinion, what are the key challenges faced by Federal Polytechnic, Bida, in effectively leveraging IT and information management for sustainable development?**

   i. Lack of political wheel to provide IT equipment.
   ii. The school is not ready to invest on IT infrastructure.
   iii. Not ready to extend IT facilities to every department/ unit of Polytechnic.
   iv. Yet to understand the importance of IT on information management
   v. Lack of funds to put IT adequate facilities in place.

   From the responses provided above, it appears that the majority of participants identified "Lack of funds to put adequate IT facilities in place" as the key challenge faced by Federal Polytechnic, Bida, in leveraging IT and information management for sustainable development. This indicates that financial constraints are considered the most significant barrier to effectively utilizing IT for development within the institution, according to the participants' opinions. None of the other challenges listed were selected, suggesting that the lack of funds is the dominant concern in this context.

Table 8: Do you think there is a lack of technical expertise among staff that hinders the full utilization of IT resources for sustainable development? (Yes/No)

S/No.	Option	Frequency
1.	Yes	75
2.	No	22

Source: Field Survey (2023)

The table above shows the interpretation and analysis of the perception regarding the lack of technical expertise among staff that hinders the full utilization of IT resources for sustainable development at Federal Polytechnic, Bida, along with their corresponding percentages: Yes: 75 participants (77.32%) and No: 22 participants (22.68%)

From the responses provided, it's evident that a majority of participants (77.32%) believe that there is a lack of technical expertise among staff that hinders the full utilization of IT resources for sustainable development. In contrast, a smaller portion (22.68%) do not believe that technical expertise is lacking. This suggests that a significant proportion of participants perceive a skills gap among staff when it comes to effectively using IT resources for development purposes.

Table 9: Are there any organizational barriers that impede the integration of IT and information management practices with sustainable development efforts? (Yes/No)

S/No.	Option	Frequency
1.	Yes	81
2.	No	16

Source: Field Survey (2023)

From the above interpretation and analysis of the presence of organizational barriers that impede the integration of IT and information management practices with sustainable development efforts at Federal Polytechnic, Bida, along with their corresponding percentages: Yes: 81 participants (83.51%) and No: 16 participants (16.49%)

The data indicates that a significant majority of participants (83.51%) perceive the presence of organizational barriers that impede the integration of IT and information management practices with sustainable development efforts. Only a smaller portion (16.49%) believe that such barriers are not present. This suggests that most participants believe that there are obstacles within the organization that hinder the effective incorporation of IT and information management practices into sustainable development initiatives.

Section 4: Improvement of Information Technology and Information Management

a. **What areas do you believe need improvement in terms of office Information Technology (OIT) Infrastructure to better support sustainable development at Federal Polytechnic, Bida?**
   i. Provision of adequate OIT infrastructure
   ii. Constant power supply
   iii. Regular training for staff
   iv. Provides full internet connectivity within the campus.

v. All the departments in the system or institution should be linked with WIFI connection

Here's the interpretation and analysis of the areas that participants believe need improvement in terms of Office Information Technology (OIT) Infrastructure to better support sustainable development at Federal Polytechnic, Bida:

i. Provision of adequate OIT infrastructure: This option likely reflects the need for enhancing the availability and quality of IT infrastructure within the institution to effectively support sustainable development initiatives. Adequate equipment, software, and resources are crucial for utilizing technology effectively.

ii. Constant power supply: Having a stable and reliable power supply is vital for uninterrupted use of IT resources. Participants may be indicating that power outages or fluctuations are a hindrance to utilizing IT tools for development.

iii. Regular training for staff: This suggests that participants recognize the importance of ongoing training to enhance the technical skills of staff members. Regular training can ensure that staff are up-to-date with the latest IT tools and practices.

iv. Provides full internet connectivity within the campus: Reliable and comprehensive internet connectivity is essential for various tasks, including research, communication, and access to online resources. Participants may be emphasizing the need for strong connectivity throughout the campus.

vi. All the departments in the system or institution should be linked with WIFI connection: This indicates a desire for improved connectivity across the institution. Wi-Fi connectivity can facilitate easy access to online resources and collaboration among departments.

vii. However, with the above collective suggestions the participants see opportunities for improvement in IT infrastructure, power supply, training, and connectivity to better align IT practices with sustainable development efforts at the institution.

b. **How can Information Management (IM) practices be enhanced to contribute more effectively to sustainable development initiatives?**

i. Providing of the basic tools or necessary equipment for IM

ii. Staff training

iii. Constant power supply

iv. Staff commitment

v. All senior staff, especially academic staff should be provided with Computers

Here's the interpretation and analysis of the ways in which participants believe Information Management (IM) practices can be enhanced to contribute more effectively to sustainable development initiatives at Federal Polytechnic, Bida:

i. Providing basic tools or necessary equipment for IM: This suggests that participants recognize the importance of having the necessary tools and equipment for effective information management. Adequate resources can improve the efficiency and effectiveness of IM practices.
ii. Staff training: Participants may be highlighting the need for ongoing training to improve the skills of staff members in information management practices. Well-trained staff are more likely to utilize IM practices effectively.
iii. Constant power supply: Similar to the OIT Infrastructure improvement, a stable power supply is crucial for uninterrupted access to and management of digital information. This is particularly important for effective information management.
iv. Staff commitment: This option indicates that participants see the need for dedicated and committed staff members who actively engage in information management practices. The commitment of staff plays a significant role in the success of such initiatives.
v. All senior staff, especially academic staff, should be provided with Computers: Providing computers to senior staff, especially academic staff, can ensure that they have the necessary tools for information management. This can contribute to better utilization of IT resources.

The above options collectively suggest that participants believe enhancing Information Management practices for sustainable development requires a combination of resource provision, training, commitment, and improved IT access for staff members.

Section 5: Additional Comments

a. Please provide any additional comments, suggestions, or insights related to leveraging office information technology and information management for sustainable development at Federal Polytechnic, Bida.

i. School authority needs to understand the importance of IT and IM
ii. Engage technical experts.
iii. Training and retraining of staff.
iv. Provision of adequate IT and IM equipment
v. Ensure constant power supply.
vi. Ensure internet connectivity on the campus.

Here's the interpretation and analysis of the additional comments, suggestions, or insights provided by participants related to leveraging office information technology and information management for sustainable development at Federal Polytechnic, Bida:

i. School authority needs to understand the importance of IT and IM: This comment suggests that participants believe that raising awareness among school authorities about the significance of IT and IM is crucial for their effective implementation and integration into sustainable development initiatives.

ii. Engage technical experts: The suggestion to engage technical experts implies that participants see value in involving specialists who possess the necessary skills and knowledge to drive successful IT and IM initiatives for sustainable development.

iii. Training and retraining of staff: This insight emphasizes the continuous need for staff training and retraining to keep them up-to-date with the latest practices and tools in IT and IM, ensuring their competence and effectiveness.

iv. Provision of adequate IT and IM equipment: Participants recognize the importance of having the necessary equipment and tools for effective IT and IM practices. Adequate resources can greatly enhance the implementation of these practices.

v. Ensure constant power supply: Reliable power supply is repeatedly highlighted, as it is essential for uninterrupted use of IT resources. Participants are recognizing that power stability is a foundational requirement for successful IT and IM implementation.

vi. Ensure internet connectivity on the campus: Similar to constant power supply, stable and widespread internet connectivity is critical for various IT and IM activities. Participants stress the importance of having strong internet access across the campus.

Overall, these comments and suggestions collectively point towards the importance of awareness, expertise, resources, training, and essential infrastructure (power supply and internet connectivity) in leveraging IT and IM for sustainable development at the institution.

Discussion of Findings

Based on the participant information provided, the study on leveraging office information technology and information management for sustainable development at Federal Polytechnic, Bida collected data from 96 participants. The participants included individuals in various roles/positions at the institution, such as principal officers, administrators, deans, directors, and heads of departments. The participants also had different years of experience at the institution, ranging from 1 to 30 years and above.

In **Section 1**, the study assessed the current state of office information technology infrastructure at Federal Polytechnic, Bida. The majority of participants rated the current state as poor (57), followed by fair (38), and only a few rated it as good (12). None of the participants rated it as excellent. The study also identified the IT tools and resources available within the departments/units. The most commonly available tools and resources were computers and laptops (66), software applications (65), printers (60), and network connectivity (15). Scanners and server infrastructure were less commonly available.

Section 2 focused on information management practices within the departments/units. The majority of participants described the information management practices as inadequate (71), while a smaller number described them as satisfactory (20) or strong (16). No participants rated the practices as very strong. The study also explored the existence of established protocols for data capture, storage, and retrieval. Only 41 participants reported that there were established protocols, while 45 participants reported that there were none. Additionally, the study investigated the frequency of using digital information management systems to organize and access information. The majority of participants reported using these systems rarely (75), followed by occasionally (25), often (6), and only one participant reported using them always.

In **Section 3**, the study examined the key challenges faced by Federal Polytechnic, Bida, in effectively leveraging IT and information management for sustainable development. The identified challenges included a lack of political will to provide IT equipment, the school's reluctance to invest in IT infrastructure, limited extension of IT facilities to every department/unit, lack of understanding of the importance of IT in information management, and insufficient funds to implement adequate IT facilities. The study also investigated the presence of a lack of technical expertise among staff that hinders the full utilization of IT resources for sustainable development. The majority of participants (75) agreed that there was a lack of technical expertise among staff. Furthermore, the study explored the presence of organizational barriers that impede the integration of IT and information management practices with sustainable development efforts. The majority of participants (81) reported the existence of organizational barriers.

Section 4 focused on the improvement of information technology and information management. Participants identified areas that need improvement in terms of office information technology infrastructure, including the provision of adequate infrastructure,

constant power supply, regular training for staff, full internet connectivity within the campus, and linking all departments with WIFI connection. In terms of information management practices, participants suggested enhancing practices through the provision of necessary equipment, staff training, constant power supply, and staff commitment.

In **Section 5**, participants were given the opportunity to provide additional comments, suggestions, or insights related to leveraging office information technology and information management for sustainable development at Federal Polytechnic, Bida. The comments included the need for the school authority to understand the importance of IT and information management, engagement of technical experts, training and retraining of staff, provision of adequate IT and information management equipment, and ensuring constant power supply and internet connectivity on the campus.

These findings supported the views of Aguboshim et al., (2021) and (2019) who in his separate studies, found that the challenges of office information technology and information management in promoting sustainable development may include limited resources, inadequate infrastructure, and resistance to change; also to improving infrastructure, providing training and support for staff, and implementing effective information management practices; content and functional value, appropriate policies and guidelines, and perceived value and security facilities. These also factors influence the enablement and impact of sustainable technology in promoting sustainable development.

Conclusion

In view of the findings from this study it was concluded that there are challenges and barriers to leveraging office information technology and information management for sustainable development in tertiary institution an evidence of Federal Polytechnic, Bida. These challenges include inadequate IT infrastructure, lack of technical expertise among staff, organizational barriers, and limited understanding and investment in IT and information management. The study also highlights areas for improvement, such as the provision of adequate infrastructure, training, and enhancing information management practices. To overcome these challenges and improve the utilization of IT and information management for sustainable development, the study recommends actions such as increasing investment in IT infrastructure, providing training opportunities, and addressing organizational barriers.

Recommendations:

Based on the findings and analysis of the data, the following recommendations can be made:

1. Increase investment in IT infrastructure: The Federal Polytechnic, Bida should prioritize investment in IT infrastructure to improve the current state of IT infrastructure. This includes providing adequate computers, laptops, network connectivity, software applications, printers, scanners, and server infrastructure.
2. Enhance information management practices: The Polytechnic should focus on improving information management practices by establishing protocols for data capture and storage, increasing the use of digital information management systems, and providing training for staff on effective information management.
3. Address challenges and barriers: The challenges and barriers identified, such as a lack of political will, insufficient investment, and limited understanding of the importance of IT, should be addressed. This can be done through advocacy and awareness campaigns to highlight the benefits of IT and information management for sustainable development.
4. Engage technical experts: The Polytechnic should consider engaging technical experts to provide guidance and support in implementing IT infrastructure and improving information management practices. These experts can help address technical challenges and provide training for staff.
5. Ensure constant power supply and internet connectivity: To fully leverage office information technology and information management, it is crucial to have a reliable power supply and internet connectivity within the campus. The Polytechnic should explore options for ensuring uninterrupted power supply and improving internet connectivity.
6. Provide regular training for staff: Continuous training and professional development programs should be provided to staff to enhance their technical expertise and knowledge of information management practices. This will enable them to effectively utilize IT tools and resources and contribute to sustainable development.
7. Foster staff commitment: The Polytechnic should promote a culture of commitment to IT and information management among staff. This can be achieved through recognition and rewards for staff who demonstrate excellence in utilizing IT tools and resources and implementing effective information management practice

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