# Influence of Innovative Technological Tools on Administrative Processes in National Open University Learning Centers in Rivers State

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***Abstract***

*This study investigated influence of innovative technological tools on Administrative processes in National Open University learning Center in Rivers state. Three objectives, three research questions and three null hypotheses guided the study. This study adopted descriptive survey research. The population of the study was 149 lecturers of the National Open University of Nigeria, Rivers State Center. Census population was used for sample size. The data collecting instrument for this study was a self-structured questionnaire titled "Influence of innovative technological tools on Administrative processes in National Open University Questionnaire" The instrument was structured using 4-point rating scale and was face and content validated by three experts in Departments of Educational Management and Measurement and Evaluation in Rivers State University. The instrument was tested for reliability using Cronbach Alpha method which yielded reliability index of 0.76, 0.78 and 0.82. Mean and standard deviation were used to answer the research questions while z-test statistics was used to test the null hypothesis at 0.05 level of significance. Findings from the study revealed that automation tools, communication and collaboration tools and data analytics tools, have influence on administrative processes in National Open University learning Center Rivers State to a high extent. Based on the findings, it was recommended among others that the National Open University should invest in automation tools to streamline administrative processes, reduce manual errors, and improve efficiency.*

***Keywords: Administration, Automation, Communication, Collaboration, Innovation, Technology,***

## INTRODUCTION

The National Open University of Nigeria (NOUN) is a distance learning institution that provides educational opportunities to Nigerians, regardless of their geographical location. With the increasing demand for higher education, NOUN has expanded its reach through the establishment of learning centers across the country, including Rivers State. However, the administrative processes in these learning centers can be cumbersome, time-consuming, and prone to errors. This is where innovative technological tools come into play. The integration of technology into administrative processes has the potential to enhance efficiency, productivity, and decision-making. In recent years, there has been a significant increase in the adoption of innovative technological tools, such as enterprise resource planning (ERP) systems, customer relationship management (CRM) software, and learning management

systems (LMS). These tools have transformed the way organizations operate, making it possible to automate tasks, streamline processes, and improve communication ( Davenport & Dyché (2013)

The world of today is characterized by revolutionary advances powered by Information and Communication Technology (ICT). The world is being reduced to a global village through the use of information and communication technology. ICT promotes national development and better relationship with other nation. Technological innovations are the cornerstone of academic success because they facilitate the retrieval of vast amounts of information for teaching, learning, and research while also providing precise and timely information for improved academic outcomes (García-Sánchez., García-Morales, & Martín-Rojas 2018). Edinburgh (2016) stated that if technology is applied skilfully, it can improve both teaching and learning. However, school administrators have a role to play in making sure that the information needed by students in distance learning are taken care of.
The Technology Acceptance Model (TAM) is a theoretical framework that explains how users form attitudes and intentions to use a new technology. The model was developed by Fred Davis in 1989. The TAM model posits that two main factors influence an individual's decision to use a new technology:

1. Perceived Usefulness (PU): The degree to which an individual believes that using a particular technology will improve their job performance.

2. Perceived Ease of Use (PEU): The degree to which an individual believes that using a particular technology will be free from effort.

The TAM model suggests that if an individual perceives a technology as useful and easy to use, they are more likely to form a positive attitude towards using the technology, and ultimately, to adopt it. In the context of the study, the TAM model can be applied to understand how administrative staff in National Open University learning centers in Rivers State perceive and adopt innovative technological tools. The model can help explain how the perceived usefulness and ease of use of these tools influence their adoption and use in administrative processes. By applying the TAM model, the study can provide insights into the factors that facilitate or hinder the adoption of innovative technological tools in administrative processes, and inform strategies for promoting their effective use.

According to Automation Anywhere, (2020). Automation tools are software applications or platforms that enable organizations to automate repetitive, mundane, and time-consuming tasks, processes, and workflows. These tools use various technologies, such as artificial intelligence (AI), machine learning (ML), and robotic process automation (RPA), to perform tasks that would otherwise require human intervention. Automation tools can be categorized into several types, including:

1. Robotic Process Automation (RPA) tools: These tools automate repetitive, rule-based tasks, such as data entry, invoicing, and order processing. Examples of RPA tools include Automation Anywhere, Blue Prism, and UiPath.

2. Business Process Automation (BPA) tools: These tools automate complex business processes, such as workflow management, document management, and business intelligence. Examples of BPA tools include Nintex, K2, and Appian.

3. Marketing Automation tools: These tools automate marketing processes, such as email marketing, lead generation, and social media management. Examples of marketing automation tools include Marketo, HubSpot, and Pardot.

4. Customer Service Automation tools: These tools automate customer service processes, such as chatbots, ticketing systems, and knowledge management. Examples of customer service automation tools include Zendesk, Freshdesk, and Salesforce Service Cloud.

5. IT Automation tools: These tools automate IT processes, such as network management, security management, and backup and recovery. Examples of IT automation tools include Ansible, Puppet, and Chef.. (Kiron, & Prentice, ( 2013).

Davenport, (2014). Listed the benefits of automation tools as:

1. Increased efficiency: Automation tools can perform tasks faster and more accurately than humans.

2. Reduced costs: Automation tools can reduce labor costs and minimize the need for manual intervention.

3. Improved accuracy: Automation tools can reduce errors and improve the quality of work.

4. Enhanced customer experience: Automation tools can provide 24/7 support and improve response times.

5. Increased scalability: Automation tools can handle large volumes of work and scale to meet growing demands.

Communication and collaboration tools are essential for effective teamwork, productivity, and success in various industries and organizations. According to Davenport (2014), the following are types of Communication and Collaboration Tools:

1. Video Conferencing Tools: Zoom, Google Meet, Skype, and Microsoft Teams enable remote teams to hold virtual meetings, reducing the need for in-person meetings.

2. Instant Messaging Tools: Slack, Microsoft Teams, and Google Workspace provide real-time messaging, file sharing, and integration with other tools.

3. Project Management Tools: Asana, Trello, Basecamp, and Jira help teams organize tasks, track progress, and collaborate on projects.

4. File Sharing and Collaboration Tools: Google Drive, Dropbox, and Microsoft OneDrive enable teams to share and collaborate on files in real-time.

5. Social Media and Online Communities: Platforms like LinkedIn, Twitter, and Facebook enable teams to connect, share information, and engage with stakeholders.

The benefits of Communication and Collaboration Tools:

1. Improved Productivity: Automate tasks, streamline workflows, and enhance team efficiency.

2. Enhanced Collaboration: Foster teamwork, encourage idea-sharing, and promote a sense of community.

3. Increased Flexibility: Enable remote work, flexible schedules, and better work-life balance.

4. Better Communication: Reduce misunderstandings, improve information sharing, and enhance transparency.

5. Cost Savings: Reduce travel costs, minimize paperwork, and optimize resource allocation.

Gartner (2020), defined data analytics tools as software applications that enable organizations to collect, process, and analyze large datasets to gain insights and make informed decisions. According to a report by Gartner, "Data analytics is the process of examining data sets to conclude about the information they contain. There are several types of data analytics tools, including:

1. Descriptive Analytics Tools: These tools provide insights into historical data, enabling organizations to understand what happened. Examples include Google Analytics and Tableau.

2. Predictive Analytics Tools: These tools use statistical models and machine learning algorithms to forecast future events. Examples include SAS and IBM SPSS.

3. Prescriptive Analytics Tools: These tools provide recommendations on actions to take based on predictive analytics. Examples include Ayasdi and Angoss.

The benefits of data analytics tools include:

1. Improved Decision-Making: Data analytics tools enable organizations to make data-driven decisions, reducing the risk of errors and improving outcomes. According to a report by McKinsey, Companies that use data analytics to inform their decision-making are more likely to achieve their business goals. (McKinsey, 2017)

2. Increased Efficiency: Data analytics tools automate many tasks, freeing up staff to focus on higher-value activities. According to a report by Forrester, "Data analytics can help organizations reduce costs and improve efficiency by automating manual processes. (Forrester, 2019)

3. Enhanced Customer Experience: Data analytics tools enable organizations to gain insights into customer behavior, preferences, and needs, enabling them to deliver personalized experiences. According to a report by Harvard Business Review, "Companies that use data analytics to understand their customers are more likely to deliver exceptional customer experiences. (Harvard Business Review, 2019)

Innovative technological tools have become very important in academic work and in the job performance of school administrators. In nowadays education, teaching, learning and research have been made very easier through the use of innovative technological tools. In lieu of this,

National Open University, Rivers state branch in particular now utilizes innovative technological tools to enhance academic and administrative work.

One of the indicators of innovative technological tools is artificial intelligence. Indeed, artificial intelligence is a field of computer that enables computers and machines to simulate human intelligence and problem solving capabilities (Chen, Chen, & Lin, 2020). Artificial intelligence, according to Pedro, Subosa, Rivas, and Valverde, (2019) is the ability of machines to adapt to new situations, deal with emerging situations, solve problems, answer questions, device plans, and perform various other functions that require some level of intelligence typically evident in human beings. In another definition, Ouyang, and Jiao (2021) defined artificial intelligence as the study of intelligence behaviour in human beings, animals, and machines and endeavouring to engineer such behaviour into an artefact, such as computers and computer-related technologies. Drawing from these definitions, it is evident that artificial intelligence is the culmination of computers, computer-related technologies, machines, and information communication technology innovations and developments, giving computers the ability to perform near or human-like functions. In line with the adoption and use of new technologies in education, artificial intelligence has also been extensively leveraged in the education sector.

Mobile technology is another important sector where innovative technological tools are being used. According to Bernacki, Greene, and Crompton (2020), mobile technology is a comprehensive phrase that covers all electronic devices, including wearables, tablets, and smartphones. The use of portable computer devices, such as laptops, tablets, and smartphones, to improve learning opportunities both within and outside of the traditional classroom is known as mobile technology in education.
In Nigeria, the National Open University of Nigeria (NOUN) runs a number of learning facilities, with Rivers state being one of the most notable (Wordu, & Nwaizugbu 2021). These centers provide students with access to resources, supports and conducive learning environment.
The Open University Learning Center (OULC) in Nigeria has embraced the use of innovative technological tools to enhance administrative processes, these technological tools have significantly transformed the traditional classroom setting, making education more accessible and effective for students (Bubou, & Job 2022). The impact of technology tools on administrative procedures at Open University learning centers in Nigeria has been seen, but its effect on administrative operations at its Rivers State center is not well understood. The purpose of this research is to determine how innovative technological tools affect administrative procedures in Rivers State's National Open University Learning Center.

## Statement of the Problem

The National Open University of Nigeria (NOUN) learning centers in Rivers State face challenges in their administrative processes, including inefficiencies, delays, and errors. Despite the potential of innovative technological tools to enhance administrative processes, there is a lack of understanding of their impact on NOUN learning centers in Rivers State. Specifically, the problem of this study is: How do innovative technological tools influence administrative processes in NOUN learning centers in Rivers State? How can NOUN learning centers in Rivers State effectively harness the potential of innovative technological tools to

enhance their administrative processes? This study aims to investigate the influence of innovative technological tools on administrative processes in NOUN learning centers in Rivers State, with a view to identifying innovative technological tools that can influence the administrative process in National open university learning centers.

Today's quickly changing educational environment is changing administrative procedures in different institutions due to technological developments. With its many learning centers, the National Open University of Nigeria (NOUN) is essential in making higher education accessible to a wide range of people. Nevertheless, little is known about how cutting-edge technical tools, such social media, mobile technology, and artificial intelligence, affect the efficacy and efficiency of administration at these learning centers, especially in Rivers State.

Many administrative problems remain, even though these technologies have the ability to increase communication, expedite processes, and enhance decision-making. These include sluggish response times to requests, ineffective handling of student records, delays in student registration, and challenges organizing academic calendars and resources. These problems make it more difficult for the institution to meet the demands of its students and provide high-quality educational services.This statement of the problem highlights the need to investigate the influence of innovative technological tools on administrative processes in national Open University learning center in Rivers State

**Purpose of study**

Purpose of the study is to investigate the Influence of Innovative Technological Tools on Administrative Processes in National Open University Learning Centre in Rivers State Specifically, the study sought to:

1. To investigate the effect of automation tools on the efficiency of administrative processes in National Open University learning centers in Rivers State.

2. To determine the impact of communication and collaboration tools on the effectiveness of administrative processes in National Open University learning centers in Rivers State.

3. To examine the influence of data analytics tools on the productivity of administrative staff in National Open University learning centers in Rivers State.

## Research Questions

1. To what extent does automation tools influence Administrative processes in the National Open University in Rivers state learning centre?
2. To what extent does communication and collaboration tools influence Administrative processes in the National Open University in Rivers state learning centre?
3. To what extent does data analytics tools influence Administrative processes in the National Open University in Rivers state learning centre?

## Hypotheses

1. There is no significant difference in the mean rating of male and female lecturers on the extent automation tools influences administrative processes in the National Open University Learning centre Rivers state
2. There is no significant difference in the mean rating of male and female lecturers on the extent communication and collaboration tools influences administrative processes in the national Open University learning centre, Rivers state.
3. There is no significant difference in the mean rating of male and female lecturers on the extent data analytics tools influences administrative processes in the national Open University learning centre, Rivers state.

## Methodology

The research adopted a descriptive survey design. The study was conducted in Rivers State. The population of the study was one hundred and forty nine (149) respondents comprising 85 male lecturers and 64 female lecturers respectively. The researcher determined the sample size by adopting census population due to the size of the population Thus, 149 questionnaires were distributed to the respondents. The researcher used a four likert rating weighted as Very High Extent, High Extent, Low Extent and Very Low Extent. The questionnaire was titled "Influence of innovative technological tools on Administrative processes in National Open University Questionnaire" (IITTAPNOUQ). The questionnaire was given to three experts; two from Department of Measurement and Evaluation and one from the Department of Educational Management to ascertain the face and content validity of the instrument. The Cronbach Alpha Method was used to ascertain the overall reliability coefficient index of 0.76, 0.78 and 0.82. The researcher administered 149 copies of the questionnaire to the respondents (149) with the help of one research assistant. Mean and standard deviation were used to answer the research questions while z-test was used to test the null hypotheses at 0.05 level of significance. The mean was obtained by the total summation of all responses as assigned to a rating scale in an item divided the total number of responses: 4+3+2+1= 2.50. The mean score of 2.50 and above indicate high extent, while those below indicates low extent. A null hypothesis was accepted when the calculated z-test values is less than the critical z-value of ±1.96 and rejected when the calculated z- test value is greater than the critical z-value of ±1.96 respectively

## Results

### Research Question 1

1. To what extent does automation tools influence Administrative processes in the National Open University in Rivers state learning centre?

**Table 1:** Automation tools **influence on administrative processes in the National Open University learning centre in Rivers State.**

| S/ No | Items | Male lecturers N=85 X | SD | Decision | Female lecturers N=64 X | SD | Decision |
|---|---|---|---|---|---|---|---|
| 1 | To what extent does automation tools reduce manual errors in administrative tasks National Open University Learning Centre? | 3.23 | 0.81 | HE | 3.25 | 0.76 | HE |
| 2 | To what extent does automation tools improve the speed of administrative processes | 3.39 | 0.82 | HE | 3.40 | 0.58 | HE |
| 3 - | at national Open University learning centre.? | 3.22 | 0.82 | HE | 3.22 | 0.85 | HE |
| 4 | To what extent does automation tools enhance the accuracy of administrative data at the National Open University Learning Centre.? | 3.23 | 0.88 | HE | 3.21 | 0.79 | HE |
| 5 | To what extent does automation tools reduce the workload of administrative staff at the learning centre> | 3.22 | 0.85 | HE | 3.77 | 0.82 | HE |
| | To what extent does automation tools improve the overall efficiency of administrative processes at the National Open University Learning Centre? | | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| **Grand mean/SD** | **3.25** | **0.83** | **HE** | **3.37** | **0.76** | **HE** |

Table 1 above showed that both male and female lecturers agreed to a high extent that automation tools influenced administrative processes in the National Open University in Rivers state learning centre. The grand mean score and standard deviation of male lecturers are 3.25 and 0.83, while the grand mean score and standard deviation of female lecturers are 3.37 and 0.76 respectively. This implies that to a high extent, automation tools influence administrative processes in Open University learning Centre in Rivers State.

**Research Question 2**

2. To what extent does communication and collaboration tools influence Administrative processes in the National Open University in Rivers state learning centre?

**Table 2: Communication and collaboration tools influence on administrative processes in the National Open University learning centre in Rivers State.**

| S/ No | Items | Male lecturers N=85 X | SD | Decision | Female lecturers N=64 X | SD | Decision |
|---|---|---|---|---|---|---|---|
| 1 | To what extent does video conferencing tools facilitate communication among administrative staff? | 3.26 | 0.79 | HE | 3.20 | 0.70 | HE |
| 2 | To what extent does instant messaging tools improve the responsiveness of administrative staff? | 3.28 | 0.82 | HE | 3.21 | 0.82 | HE |
| 3 - | To what extent does project management tools enhance collaboration among administrative teams? | 3.20 | 0.89 | HE | 3.20 | 0.85 | HE |
| 4 | To what extent does email tools reduce the time spent on communication among administrative staff? | 2.89 | 0.88 | HE | 3.21 | 0.79 | HE |
| 5 | To what extent does social media tools improve the engagement of | 3.19 | 0.86 | HE | 3.24 | 0.97 | HE |

| | | | | | | |
|---|---|---|---|---|---|---|
| | administrative staff with students and other stakeholders? | | | | | |
| **Grand mean/SD** | **3.16** | **0.84** | **HE** | **3.21** | **0.82** | **HE** |

Table 2 above showed that both male and female lecturers agreed that communication and collaboration tools influence administrative processes in the National Open University in Rivers state learning centre. The table showed the grand mean score and standard deviation of male lecturers are 3.16 and 0.84, while the grand mean score and standard deviation of female lecturers are 3.21 and 0.82 respectively. This implies that to a high extent, communication and collaboration tools influence administrative processes in the National Open University in Rivers state learning centre

**Research Question 3**

3. To what extent does data analytics tools influence Administrative processes in the National Open University in Rivers state learning centre?

**Table 3:** Data analytics tools **influence on administrative processes in the National Open University learning Centre in Rivers State.**

| **S/ No** | **Items** | **Male lecturers N=85** X | SD | **Decision** | **Female lecturers N=64** X | SD | **Decision** |
|---|---|---|---|---|---|---|---|
| 1 | To what extent does data analytics tools improve the accuracy of administrative data? | 3.25 | 0.82 | HE | 3.21 | 0.80 | HE |
| 2 | To what extent does data visualization tools enhance the understanding of administrative data? | 3.18 | 0.87 | HE | 3.23 | 0.78 | HE |
| 3 - | To what extent does cloud-based storage tools improve the accessibility of administrative data? | 3.22 | 0.82 | HE | 3.22 | 0.80 | HE |
| 4 | | 3.20 | 0.81 | HE | 3.17 | 0.79 | HE |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 5 | To what extent does business intelligence tools improve the decision-making process of administrative staff?<br><br>To what extent does data mining tools identify trends and patterns in administrative data? | 3.24 | 0.78 | HE | 3.64 | 0.82 | HE |
| | **Grand mean/SD** | **3.21** | **0.82** | **HE** | **3.29** | **0.79** | **HE** |

Table 3 above showed that both male and female lecturers agreed that data analytics tools influence administrative processes in the National Open University in Rivers state learning centre. The table showed a grand mean score and standard deviation of male lecturers as 3.21 and 0.82, while the grand mean score and standard deviation of female lecturers are 3.29 and 0.79 respectively. This implies that to a high extent, data analytics tools influence administrative processes in the National Open University in Rivers state learning centre.

**Hypothesis 1**

There is no significant difference in the mean rating of male and female lecturers on the extent Automation tools influences administrative processes in the National Open University Learning Center Rivers state

Table 4. Z-test Analysis of the Responses on the Influence of Automation tools on administrative process in National Open University learning centre in Rivers State.

| Respondents | N | X | SD | DF | LS | Z-cal | Z-crit | Decision |
|---|---|---|---|---|---|---|---|---|
| Male lecturers | 85 | 3.25 | 0.84 | 147 | 0.05 | 0.31 | ±1.96 | significant difference exists |
| Female lecturers | 64 | 3.37 | 0.76 | | | | | |

Table 4 above shows no significant difference in the mean responses of male and female lecturers on the extent to which the use of Automation tools influence the administrative process in the open university learning centres. The z-calculated value of 0.31 was less than the z-critical value of ±1.96 ($0.31 \leq \pm 1.96$) for degree of freedom of 147 at 0 .05 level of significance. Therefore, the null hypothesis was accepted which states that there is no significant difference in the mean responses of male and female lecturers on the extent to which Automation tools influence the administrative process' in National Open University learning Center in Rivers State.

**Hypothesis 2**

There is no significant difference in the mean rating of male and female lecturers on the extent communication and collaboration tools influence administrative processes in the national Open University learning centre, Rivers state.

Table 5. Z-test Analysis of the Responses on the Influence of communication and collaboration tools on administrative process in National Open University learning centre in Rivers State.

| Respondents | N | X | SD | DF | LS | Z-cal | Zcrit | Decision |
|---|---|---|---|---|---|---|---|---|
| Male lecturers | 85 | 3.16 | 0.84 | 147 | 0.05 | 0.18 | ±1.96 | significant difference exists |
| Female lecturers | 64 | 3.21 | 0.82 | | | | | |

Table 5 above shows no significant difference in the mean responses of male and female lecturers on the extent to which communication and collaboration tools influence the administrative process in the Open University learning centre. The z-calculated value of 0.18 was less than the Z-critical value of ±1.96 ($0.18 \leq \pm 1.96$) for degree of freedom of 147 at 0.05 level of significance. Therefore, the null hypothesis was accepted which states that there is no significant difference in the mean responses of male and female lecturers on the extent to which communication and collaboration tools influence administrative process in National Open University learning Centre in Rivers State.

**Hypothesis 3**

There is no significant difference in the mean rating of male and female lecturers on the extent data analytics tools influence administrative processes in the national Open University learning center, Rivers state.

Table 6. Z-test Analysis of the Responses on the Influence of communication and collaboration tools on administrative process in National Open University learning centre in Rivers State.

| Respondents | N | X | SD | DF | LS | Z-cal | Z-crit | Decision |
|---|---|---|---|---|---|---|---|---|
| Male lecturers | 85 | 3.21 | 0.82 | 147 | 0.05 | 0.35 | ±1.96 | significant difference exists |
| Female lecturers | 64 | 3.29 | 0.79 | | | | | |

Table 6 above shows no significant difference in the mean responses of male and female lecturers on the extent to which communication and collaboration tools influence the administrative process in the open university learning centre. The z-calculated value of 0.35 was less than the Z-critical value of ±1.96 ($0.35 \leq \pm 1.96$) for degree of freedom of 147 at 0. 05 level of significance. Therefore, the null hypothesis was accepted which states that there is no significant difference in the mean responses of male and female lecturers on the extent to which

communication and collaboration tools influence administrative process in National Open University learning centre in Rivers State.

**Discussion of Findings**

The findings from research question I which sought to determine the extent to which automation tools enhances administrative processes in National Open University learning centre Rivers State showed that to high extent automation tools influence administrative processes in National Open University learning centre, Rivers State with grand mean of 3.25 and 3.37. Likewise, hypothesis 1 on Table 4 revealed that there was no significant difference in the mean ratings of male and female lecturers on the extent automation tools influence administrative processes in National Open University learning centre, Rivers State with z calculated value of 0.31 which was less than ±1.96. This finding is consistent with the finding by Davenport and Dyché, (2013) who stated that automation tools can improve the accuracy and efficiency of administrative tasks, such as data entry, document processing, and record-keeping, by reducing the likelihood of human error Likewise, McKinsey Global Institute, (2017) posited that automation can help streamline administrative processes, reducing the time and effort required to complete tasks, and freeing up staff to focus on higher-value activities.

Findings on research question 2 on Table 2 show that to a high extent Communication and collaboration tools influence administrative processes of administrators in Open University learning centre in Rivers State with grand mean scores of 3.16 and 3.21. Again information on hypothesis 2 on table 5 revealed that there was no significant difference in the mean ratings of male and female lecturers on extent of Communication and collaboration tools influence administrative processes of administrators in Open University learning centres in Rivers state with z-calculated value of 0.18 which was less than ±1.96. The finding is in tandem with Kaplan and Haenlein, (2010) who stated that Communication and collaboration tools can facilitate more efficient and effective communication among administrative staff, reducing errors and miscommunications, and improving overall productivity. Furthermore, this finding is supported by Brynjolfsson and McAfee (2014), who revealed that integration of mobile technology as perceived by lecturers to a high extent has no significant influence on administrative processes in education sector.

Findings on research question 3 on table 3 showed that to a high extent data analytics tools influences administrative processes in National Open University learning Center in Rivers state with grand mean scores of 3.21 and 3.29. Again information on hypothesis 3 on table 6 revealed that there was no significant difference in the mean ratings of male and female lecturers on extent data analytics tools influence administrative processes in National Open University learning centre in Rivers state with Z-calculated value of 0.35 which was less than ±1.96. This finding was supported by Davenport (2014,) who stated that data analytics tools can help administrative staff make better-informed decisions by providing insights into trends, patterns, and correlations within large datasets. Also, Kiron and Prentice (2013) opined that effective data management and analytics can enable administrative staff to identify areas of inefficiency, track key performance indicators, and optimize administrative processes.

**Conclusion**

Based on the findings of this study, it was concluded that innovative technological tools have a significant influence on administrative processes in National Open University learning centers in Rivers State. The findings of the study indicate that automation tools, communication

and collaboration tools, and data management and analytics tools can improve the efficiency, effectiveness, and productivity of administrative processes.

**Recommendations**

Based on the result of the study, the following recommendations were made.

1. The National Open University should invest in automation tools to streamline administrative processes, reduce manual errors, and improve efficiency.

2. The university should implement communication and collaboration tools to facilitate effective communication among administrative staff, reduce miscommunications, and improve productivity.

3. The university should develop a data management and analytics system to provide insights into administrative processes, track key performance indicators, and inform decision-making.

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