

**INFOGRAPHICS AS A SUPPLEMENTARY RESOURCE OF ACADEMIC
ACTIVITIES IN UNIVERSITY OF BENIN**

BY

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SEPTEMBER, 2025.

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**A RESEARCH PROJECT SUBMITTED TO THE DEPARTMENT OF MASS
COMMUNICATION, FACULTY OF ART, UNIVERSITY OF BENIN, BENIN CITY
IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE AWARD OF
BACHELOR OF ART (B.A) DEGREE IN MASS COMMUNICATION**

SEPTEMBER, 2025.

DECLARATION

This Project work is based on a study undertaken by me, in the department of Mass Communication, Faculty of Arts, university of Benin, under the supervision of Prof. E. S. Asemah. All findings and analysis in the study are product of my personal research and where the views of my personal research and where the views of others have been used and expressed, they have been duly acknowledged.

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CERTIFICATION

This is to certify that this research work was duly carried out by Arigbe David in the department of Mass Communication, Faculty of Art, University of Benin, in partial fulfillment of the requirements for the award of Bachelor of Art degree in Mass Communication.

Prof Ezekiel S. Asemah
Project Supervisor

Date

Dr. Daniel .O. Ekhareafo
Head of Department

Date

DEDICATION

This research work is dedicated to GOD Almighty for His never-ending grace, mercies blessings upon my life.

ACKNOWLEDGMENTS

All thanks to Almighty GOD for His provisions, protection, guidance, innumerable mercies and grace he has bestowed upon me and for giving me the inspiration, courage and determination in the pursuance and completion of this project work, may His name be praised forever, Amen. I am deeply grateful to my project supervisor, Prof Ezekiel .S. Asemah, for his invaluable guidance and expertise in correcting my project work. His meticulous attention to detail and patience challenged me to work harder and helped me produce the best research possible. I am also appreciative of his patience, words of encouragement, commendation, and fatherly advice. I pray that God's mercies will never depart from him and his family, and that God will bless and richly reward him, Amen.

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ABSTRACT

This study was carried out to examine the use of infographics as a supplementary resource in enhancing academic activities among students of various departments at the University of Benin's Ekehuan Campus. The research adopted a survey method, employing a structured questionnaire to collect data from 390 undergraduate students across different departments. Relevant literature was reviewed to support the study's conceptual framework and analysis. Findings revealed that a majority of respondents were familiar with the concept of infographics and had utilised them in assignments, projects, and presentations to boost academic performance. Respondents also indicated that the use of infographics during lectures enhanced interactivity and improved their understanding of abstract or complex concepts. Furthermore, the study showed that students believe infographics aid information retention and are especially beneficial to slow learners and individuals with short-term memory challenges. A significant number of respondents supported the integration of infographics into the academic curriculum as a means to improve learning outcomes. Based on these findings, the study concludes that infographics play a crucial role in the contemporary learning environment, serving as effective visual tools for simplifying communication, enhancing comprehension, and fostering student engagement.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

A picture helps give a lucid view of disseminated information by creating an image in the mind of the readers. Previous Studies have shown that 10% of information is retained through hearing, 20% through reading, while 80% is remembered by what we see. Which signifies that majority adequately remember what they see with their eyes than other medium of learning? Info graphics helps to authenticate the fact of a report. It helps to sustain interest through the use of pictures, slide and other graphical elements. There is little attention given to information without picture or image.

According to Smiciklas (2012), infographics are visual tools that combine design and data to share information in a clear and engaging way. They simplify complex data into easy-to-understand visuals, making communication more effective and helping people quickly take in large amounts of information. What makes infographics different from other visual media is their use of various elements like symbols, maps, and videos—to present information clearly and simply.

Harrison & Reinecke (2015) states that with infographics, it is possible to transform complex data into a well-organised, structured and aesthetically pleasing design that can be adjusted according to users' preferences. Furthermore, infographics can be backed by relevant text to enhance the view of the audiences (Bladon & Poulin, 2014). Info graphics

rely on visual elements for its enablement. These elements include; images, charts, graphs and icons to convey information.

With the aid of modern-day technology today, Infographics are now becoming more rapid and popular, because they aid in the interpretation of complex information using simple text and visuals that can create easy retention of information. (Toth, 2013).

The University of Benin (UNIBEN), is one of Nigeria's leading institutions which provides higher learning, provides a diverse academic environment where students engage in various educational activities, including lectures, research, assignments, and presentations. However, many students face challenges and difficulties in understanding complex subjects due to information bombardment. This often leads to low engagement levels and decreased academic performance.

Despite the advantages of infographics, their adoption in academic activities at the University of Benin remains limited. Most students and lecturers still rely on conventional text-heavy learning materials without employing visual learning strategies. The lack of structured implementation of infographics in educational activities raises concerns about how students can benefit from visual learning to enhance comprehension, engagement, and retention of knowledge.

This study seeks to explore the role of infographics as a supplementary academic resource at the University of Benin. It will examine the extent to which students and lecturers utilise infographics, the challenges associated with their adoption, and possible strategies for their effective integration into academic activities.

1.2 Statement of the Problem

In the past in the world as whole, different academic settings under the education framework utilise the traditional text based learning approach including the University of Benin. But presently in today Nigeria, most universities still make use of the traditional text based learning approach, despite the effectiveness and enhancement of infographics in the academic field. Infographics itself, remains limited in most Nigerian universities in which the University of Benin is included.

There is a noticeable gap in the integration of infographics into academic activities. There is limited empirical data on the awareness, accessibility, and effectiveness of infographics in enhancing teaching and learning outcomes within the University of Benin. This study aims to investigate the effectiveness of infographics in supporting and promoting academic activities.

1.3 Objectives of the Study

The objectives of this study are to:

1. Find out UNIBEN student exposure towards infographics utilisation.
2. Examine the effectiveness of infographics in improving student learning and engagement in academic activities.
3. Assess the extent to which students at UNIBEN use infographics as part of their learning methods.
4. Investigate if the use of infographics improves the retention and recall of various concepts taught in class.

1.4 Research Questions

This study will be guided by the following research questions:

1. How exposed are UNIBEN students to infographic utilisation?
2. How effective is infographics in improving student learning and engagement in academic activities?
3. To what extent are UNIBEN student using infographics as part of learning method?
4. How does infographics improves the retention and recall of various concept taught in class?

1.5 Significance of the Study

The significance of this study has to do with the relevance of this study. Hence, the study will be beneficial to the following sets of individuals in the society:

1. It will be beneficial to Authors within the academic and Non – Academic sector, and various Publishing Companies within the country enabling them to keep and ensure adequate usage of well illustrative infographic materials and content are utilise in explanation of concept.
2. It will also be beneficial to student aiding their recalling and remembrance ability to concept taught and also revealing the relevant methods of infographic that can be utilise by student.
3. It will also help lecturers to really know the importance of infographic material utilisation when recommending materials that would aid in impacting and enhancing class activities.

4. Lastly, it would be beneficial to future researcher serving as bedrock when carrying out similar research on related concept.

1.6 Scope of Study

The scope of this study is limited to the students of the University of Benin. The scope of this study is to investigate the effectiveness of infographics as a supplementary resource in academic activities at the University of Benin. The study aims to:

- Analyse the current use of infographics: Investigate how infographics are currently being used in academic activities at the University of Benin.
- Getting UNIBEN students opinion: Gather data on students' perceptions of infographics as a learning tool and their impact on academic performance.
- Evaluate learning outcomes: Compare the learning outcomes of students who use infographics with those who do not.

1.7 Definition of Terms

The following terms are here by defined:

Advantage: A condition or circumstance that puts one in a favourable or superior position.

Data: It refers to information, facts, statistics, or numbers that are collected, recorded, and stored for analysis, reference, or decision-making purposes.

Infographic: The term infographic is derived from "information" and "graphic." It refers to the use of visual elements, such as pictures, illustrations, pie charts, bar charts, and diagrams, to simplify and effectively convey complex information for educational purposes.

Knowledge: It is the awareness or understanding especially of an act, a fact, or the truth.

Picture: A picture is a visual representation of an object, scene, or person, created through various mediums such as painting, drawing, photography, or digital graphics.

Rapid: To happen in a short time (sudden) or at a great rate, it also means happening or done quickly, promptly, or swiftly.

Recall: The cognitive ability to recall or bring to mind information or events previously encountered or experienced.

Retention: The ability to preserve and recall learned information, concepts, or experiences over time, ensuring their application in various contexts.

Technology: Technology refers to the use of modern tools and equipment, such as computers, smartphones, public address systems, projectors, and other devices, to aid class activities and improve learners' experiences.

Utilisation: Utilisation refers to the process of using something, such as resources, time, or assets, to achieve a specific goal or objective.

CHAPTER TWO

LITERATURE REVIEW

This chapter presents a conceptual review of relevant literature, previous works on the subject matter and theory adopted in this research with the aim of providing current knowledge including substantive findings.

2.1 Historical Review

2.1.1 The History of Infographics: Early Civilisation

Infographics have been in existence even before the word "infographics" came about. The drawing and painting on ancient cave walls is an evidence that infographics has been on for a long time now. The drawings served as proof of language and communication amongst cavemen. Some experts now believe these to be the earliest usages of Infographics. As language evolved, humans employed the combination of images and text in passing their message. Writings on cave walls was discovered in various caves of Brazil, France and China. They are being recorded in history.

Aside cave painting and writing, let's consider maps. Maps are visual representation of a location, and the surrounding landmarks shrunk to a scale. The Babylonian map of the world, is currently the oldest map, as dated back to 700 BC. From 600 BC to 700 A to the early 1600s, history is filled with examples so people saw the need of data visualisation. In needing data visualisations, countless maps, charts, and other models were developed as a result.

2.1.2 The History of Infographics: 18th Century Data Visualisation

The modern-day infographic we all know – a combination of colors and charts – started in the 18th century. Recorded history does not recognise “Infographics” as an official visual tool of communication. So, few recorded usages can tell us when the first infographic was used. But, it is widely accepted that the first instance of a picture in which an object or process is broken down and well explained was by Alexander von Humboldt in 1802. This infographic depicted the various vegetation that grew on Chimborazo.

2.1.3 Charts, Maps, and Infographics

William Playfair, a pioneer in statistical graphs, created bar graphs, pie charts, and line graphs. He published a famous book called *The Commercial and Political Atlas* in 1786. Around the same time, Joseph Priestley created a chart showing the lives of famous people. He believed this visual format was the best way to share a lot of information quickly and accurately. In the ancient times, maps were one of the most widely used types of Infographics in the 16th century. Edmund Halley created the first data-based contour map in 1701 and went on to involved detailed atmospheric conditions in the map.

2.1.4 The History of Infographics: 20th Century Data Visualisation Trends

As there was more availability of data, the importance and significance of data visualisation only improved. In the 19th century, infographics like pie charts and 3D models became popular in mainstream media, not just in academics. Some notable examples include:

- The 1972 Olympics used simple pictograms that became iconic symbols worldwide.

- NASA used infographics on the Pioneer 10 spacecraft to represent humans and Earth to potential extraterrestrials.
- Edward Tufte, known as the father of data visualisation, researched effective ways to use visuals and data. He coined the term "chartjunk" for unnecessary visual elements.
- Peter Sullivan, a British designer, created infographics for The Sunday Times and wrote a book on newspaper graphics.

These examples show how infographics have been used in various ways over time (Kimp, 2021).

2.2 Conceptual Review

2.2.1 Conceptual Review on Infographics

Infographics, a fusion (mixture) of “information” and “graphics,” refer to the visual representation of data or information using different elements such as images, charts, and diagrams. According to Alrwele, (2017) An infographic is a combination of brief informative text and engaging visual elements, such as images, charts, and graphs, that work together to tell a story and convey a message in a clear, concise, and visually appealing way. While Albers, (2015) states that “Understanding an infographic goes beyond just locating specific information within it. True comprehension occurs when the viewer can internalise the content, creating a mental representation of the information that can be recalled and used even when the infographic is no longer visible. Infographics simplify complex data, making it more comprehensible and engaging. They serve as an essential tool for presenting large amounts of information concisely while maintaining clarity and interest (Smiciklas, 2012).

Matrix and Hodson (2014) opine that, infographic aid engaging visuals that communicate using Infographic design elements, such as graphs, charts, and icons, to present information and data in a narrative format, making it easier to visualise and understand complex information. Not only are infographics creative, complex, and audience driven, they simply address standard and engage students in appropriate thinking, important to our digital world. Infographics also goes beyond the traditional essay, but in a fun and engaging format that student will ultimately need experience with as they participate in our fast changing world (Alford Katie, 2019).

Infographics is very important in most aspect. But for the aspect of academics, infographics plays a big role. Infographics allows lecturers, teachers to prepare and plan other learning diversions and also engage learners with Infographic content. According to J Korean Med Sci, (2022) promoting and carrying information in written form is uninteresting and have little impact. But just by employing the use of visual aids makes the message comprehensible. With the emergence of infographics, the visual literacy of student have improved, they have the capacity to stay focus, understand, remember and to comply with information.

An effective infographic helps the brain create mental connections to understand new or complex information by linking it to existing knowledge. By combining data visualisation and graphic design, each field complements the other, with graphic design adding objective data and data visualisation incorporating visual aesthetics (Kassie Waller 2018).

2.3 Opinion Review

2.3.1 Relevance of Infographics Utilisation In The Educational Sector

Just as cartoon (editorials in pictures) is relevant in the publication of newspapers, so is Infographics. Cartoons are very much related to Infographics or if not Infographics. Cartoon is the opinion of the publication expressed in graphics. They are simply editorials in pictures. Just like an editorial, the cartoon is an opinion of the newspaper house on events, but instead of using words, the writer employ the use of graphics. Beside, the fact that cartoons educate, inform and entertain, they draw and attract attention to the newspaper pages (Ezekiel S. Asemah, 2009). It is a is very clear fact, that the use of infographics in the educational settings has facilitated the traditional method we once use to have, now information can be presented to learners in a well place manner that is easy to comprehend, thereby enabling educators to design a myriad of instructional activities, synthesize unit summaries, foster learner engagement with course materials, and ultimately enhance the pedagogical process through more interactive and productive lesson delivery (Vanichvasin, 2013). While Bradshaw & Porter, 2017 buttress by stating that, Infographics enables topic interpretation by exploring the concept through compelling and unique story that includes: introduction, key content, and conclusion sections (Bradshaw & Porter, 2017).

This present generation portrays distinct learning characteristics that differentiate it from preceding generations, particularly in regards to its propensity for finding information and its proficiency in utilising technology (Helsper & Eynon, 2010). In response to the unique learning needs of the current generation, infographics have become a valuable

educational tool, as they facilitate the visual presentation of information, enabling students to understand complex relationships between concepts, visualise events and processes, access subject matter content, and review learned material in a concise and engaging manner. (Meeusah & Tangkijviwat, 2013).

In this sense, positive influence of infographics on students' learning quality has been concluded in some studies in the literature (i.e., Matrix & Hodson; 2014; Schulten, 2012; Vanichvasin, 2013). Likewise, Naparin and Saad (2017), who investigated the application of infographics in education, emphasised the advantage of using infographics over traditional method of teaching in terms of enhancing students' understanding and students' showing high performance in the exams.

Infographics have evolved as a response to the overwhelming amount of information available in today's digital world. Studies shows that individuals retain more information when it is visually represented compared to textual or auditory presentations (Harrison & Reinecke, 2015). As a result, educators and instructional designers increasingly integrate infographics into learning materials to enhance students' understanding and recall of information and with this, it has yielded so many positive results so far.

2.3.2 Types of Infographics

Infographics come in various formats depending on their purpose and design. The main types include:

Statistical Infographics

Statistical infographics utilise charts, graphs, and percentages to simplify complex numerical data, making it more digestible for audiences. These infographics are widely used across industries, including business, education, and marketing. Organisations rely on them to present financial reports, market research, and performance analytics, while educators use them to illustrate concepts to aid understanding (Lensey Etcubañas, 2025).

A key advantage of statistical infographics is their ability to enhance comprehension and retention. Without statistical infographics, data interpretation becomes cumbersome, increasing the likelihood of misinterpretation. Common formats include: Bar charts (for comparisons), Pie charts (for proportions), scatter plots (for correlations), Line graphs (for trends over time). Marketers, in particular, rely on statistical infographics for campaign performance reports, while analysts use them to present key insights in a visually engaging manner.

Timeline Infographics

Timeline infographics display events, processes, or historical milestones in a chronological order making them ideal for storytelling and project management. They transform lengthy narratives into structured, easy-to-follow visuals. They are different types of Timeline Infographics which include:

Historical Timeline: it traces significant and historical events (e.g., company history, evolution of technology).

Project Timeline: it outlines phases, deadlines, and milestones in business or construction projects.

Process Timeline: the process timeline breaks down workflows (e.g., manufacturing steps, software development lifecycle).

Event Planning Timeline: this helps organise schedules for conferences, weddings, burials or product launches.

Timeline infographics curb the need for lengthy oral explanations by presenting information visually and concisely. They are particularly useful for visualising large datasets, such as historical trends or multi-stage processes.

Process Infographics

Process infographics provide a guide or step-by-step breakdown of procedures, ensuring clarity and efficiency in execution. They are commonly used in: Instructional guides (e.g., product assembly, software tutorials), safety protocols (e.g., emergency procedures, workplace guidelines), employee training (e.g., onboarding workflows, compliance processes).

Unlike plain text instructions, process infographics enhance understanding through visual cues (arrows, icons, flowcharts) and logical sequencing. They not only simplify learning but also improve task completion rates by reducing errors.

Geographic Infographics

Geographic infographics use maps, heatmaps, and location-based visuals to present spatial data. It is also seen as the visual representation of geographical data, concepts, statistics, and trends in a clear and concise manner. They are essential for: demographic analysis (population density, voting patterns), market expansion strategies (regional sales

performance), logistics and transportation (shipping routes, service coverage). By integrating colour coding, symbols, and interactive elements, geographic infographics make complex regional data instantly understandable. For example, a heatmap could show COVID-19 infection rates across countries, while a dot distribution map could highlight global store locations.

Informational Infographics

Informational infographics summarise complex concepts into visually appealing formats. Unlike statistical infographics, they focus more on textual content simplification rather than numerical data. Common uses include: educational materials (e.g., summarising a scientific theory), corporate communications (e.g., explaining a new policy), social media content (e.g., quick tips, FAQs). These infographics combine icons, illustrations, and minimal text to enhance readability. For instance, an infographic on "How Solar Panels Work" might use diagrams and short bullet points instead of lengthy paragraphs.

2.1.2 Role of Infographics in Academic Activities

In the educational setting, infographics serve multiple functions, such as:

Enhancing Comprehension

Infographics breakdown complex information by combining text with visuals (charts, icons, diagrams, etc.), making it easier for students to process and understand. According to Bladon & Poulin (2014), visual aids help learners break down abstract or dense material into manageable parts. How infographics helps in the Comprehension aspect:

Organised Information: Instead of long paragraphs, key points are structured hierarchically.

Visual Cues: Colours, shapes, and arrows guide attention to important details.

Example: A biology student studying the human circulatory system may grasp it faster through an illustrated infographic rather than a textbook description alone.

Increasing Retention and Recall

Toth (2013) found that visual learning enhances memory because the brain processes images faster and retains them longer than text. This is known as the "pictorial superiority effect."

How Infographics helps in the Retention & Recall aspect

Dual Coding Theory (Paivio, 1986): Combining words and images strengthens memory encoding.

Example: Students are more likely to remember statistical trends if presented in a graph rather than a table of numbers.

Research Insight: A study by the University of Minnesota found that visuals improve learning retention by up to 42% compared to text-only materials.

Boosting Engagement

Infographics make learning materials more appealing, reducing boredom and increasing motivation. Students are naturally drawn to visually stimulating content which makes them understand better.

How Infographics helps in the Boosting Engagement aspect

Reduces Cognitive Load: Prevents information overload and bombardment by presenting data concisely.

Appeals to Digital Natives: Younger generations, accustomed to visual media (e.g., Instagram, facebook, TikTok), engage better with graphics.

Example: A history lesson on World War II with an infographic timeline (featuring maps and icons) will likely hold attention better than a plain lecture.

Facilitating Quick Learning

Infographics distill large amounts of information into simplified, scannable formats, allowing learners to grasp concepts faster.

How Infographics helps in facilitating quick learning

Chunking Principle: Breaking information into visual segments aids quick understanding (Miller, 1956).

Example: A programming student can learn coding syntax faster through a color-coded cheat sheet rather than a manual.

Efficiency: Research by Canva shows that 90% of information transmitted to the brain is visual, and visuals are processed 60,000x faster than text.

2.4 Empirical Review on Infographics

The pivotal role of Infographics in aiding the presentation of ambiguous data cannot be underestimated especially in this 21st, where people sought for information having graphics items such as images, illustration among others to aid fast and easy comprehension or understanding to avoid the painstaking effort of reading through over and over again. These studies below shows effectiveness of Infographics in enhancing learning process:

Several studies have been conducted to examine the impact of infographics in various educational settings. Research by Mayer (2009) on multimedia learning suggests that students who engage with visual representations tend to perform better than those who rely solely on text-based learning. With this we can now say that Infographics has enhanced academic activities, according to those who made the utilisation of Infographics.

A study by Dunlap & Lowenthal (2016) explored the effectiveness of infographics in higher education. Their findings revealed that students who studied with infographic-enhanced materials demonstrated a higher retention rate compared to those who used traditional study materials. Similarly, Alhadad (2018) examined the impact of infographics on students' cognitive load and found that well-designed infographics significantly reduced cognitive overload while improving understanding. By merely looking at an image with little text, one can easily grasp the information it is passing and in most cases, it easy to recall.

Another study by Yildirim (2016) explored the use of infographics in a 20-week program with undergraduate students in a computer education and instructional technology department. The students learned about infographics and created their own, and a survey was conducted to gather their perceptions. The results showed that the students found infographics to be an effective and preferred method of learning, considering them more educational than traditional presentation methods.

A study conducted by Ozdamla, Kocakoyuna, Sahina, and Akdaga in 2016 explored the effectiveness of incorporating infographics into an anatomy course for 140

undergraduate students. The researchers examined the potential of infographics as an educational tool, and the students' overall response to their use in the course was favorable.

Another study by Lyra et al., (2016) has also shown the effects of visualised courses on the education process. In Brazil, a study was conducted on 27 undergraduate students, amongst which 14 had chosen to express their opinions on using infographic learning material and 13 had decided to express their opinions on using graphic and text learning material. With the same content in the two cases, the results show correspondence between the two cases, but with priority for infographics in the enjoyment and pleasure criteria in the questionnaire test. Another priority observation of students who utilise infographic material was keeping their acquired information for a longer period than students who used graphic and text, which indicates that infographics can be more effective in reinforcing and supporting the education process

Al-khawaldeh & Alkhrsha, (2015) conducted a research in Jordanian public universities to find out the problems faced by students in six surveyed domains, the first major problem is instructional methods. The study recommended that a number of educational methods and programs be introduced to enable students to keep up with educational techniques and improve their achievements.

A study by Vanichvasin in 2013 investigated the use of infographics as a means of visual communication and learning among undergraduate students in a knowledge management class. The findings revealed that infographics, when utilised as a visual communication tool, can enhance students' engagement, comprehension, and retention of

information. The study also suggests that infographics are potent tool that can aid the facilitation of effective communication among students, as they cater to the fundamental aspects of communication.

Canning-Wilson (2011) investigated the impact of using visual materials when teaching languages. The results showed that using visual materials when teaching languages enhance students' motivation, success and overall attitude towards learning.

Gultekin (2009) investigated the effect of the use of visual materials during the instruction of psychomotor learning when teaching some of the basic skills in basketball to the fifth and sixth grade primary school students' physical education lessons. The result obtained signify that using visual materials enhanced students' psychomotor learning ability.

Demirci (2008) investigated the effect of the use of computer-aided static and dynamic visual materials on student success in Chemistry teaching. The research showed that using visual aids in Chemistry lessons enhances student achievement, thereby creating positive correlation between visual materials and academic success rate in the subject.

Catak and Tekinarslan (2008) investigated the effect of using reading materials prepared with PowerPoint on the reading ability of the students with mild mental retardation. The results of the study implied that the reading materials prepared with PowerPoint which used visuals mostly had a positive contribution on reading skills of the students with mild mental retardation. The results suggested that these materials aided students in better understanding and interpreting written texts.

A study conducted by Eroglu in (2006) examined the efficacy of utilising multimedia instructional tools, specifically visual and aural materials, in enhancing the learning outcomes of eighth-grade secondary school students in the context of Biotechnology. The findings of this research indicated that the integration of visual and aural materials into the instructional process helped them learn better.

2.5 Theoretical Framework

Theories are ideas or set of ideas that is aimed at explaining a fact. Asemah et al. (2017) states on page MCQuail describes theories as "sets of ideas of varying status and origin that may explain or interpret specific occurrences" a definition also referenced by Asemah et al (2011). The oxford dictionary opines theories as a system of ideas intended to explain something, especially one based on general principles. Theories can also be seen as facts, assumptions that is set at breaking down things and making them meaningful. Before beginning any research, it is important to follow a framework of principles that is grounded in established theories.

Theoretical framework on the other hand is simply defined as the structure that supports a theory of a research study. A theoretical framework is the foundational structure which guides a research study by making available a lens through which the researcher interprets data, formulates hypotheses and aid the explanation of why things are the way they are. With that said, the research will be based on the social judgement theory and Piaget's theory.

2.5.1 Social Judgment Theory

The social judgement theory was developed by Muzafer Sherif and Carl Hovland in 1961. The theory simply explains how audience process messages. When you hear something new, you check it against what you already know or believe. Then you decide whether to accept it or ignore it. Basically you either agree with the new idea or disagree, depending on your own understanding (Asemah et al, 2017). The theory, focuses on people's assess of persuasive information. As the name implies, it is a model of judgement which explains that it declares that the audience judges a message specifically, a listener judges how much the message agrees or disagrees with his/her own attitude. Thus, the way we forge our own thoughts on some issues rely on our anchor point which is the altitude on which we process messages we get and our ego which is at play whenever we are to take a decision on any issue (Asemah et al, 2022).

The key idea of this theory states that, when you hear a new opinion or fact, you don't just accept or reject it immediately, you compare it to what you already believe. Your mind will automatically sorts it into one of these three categories (categories of social judgement theory).

Latitude of acceptance: This are the ideas you agree with because they fit your current beliefs. For example, if you strongly support the use of technology in education, you will likely accept infographics as good learning tool.

Latitude of rejection: This are ideas you disagree with because they contradict or clash your beliefs. For example, if you think the traditional learning method is the best way to learn, then you might reject or discard infographics.

Latitude of non-commitment: This are the ideas you feel neutral about (neither strongly accept nor reject). For example, you might be opened to infographics, if you've never used them.

The impact of infographics as a supplementary resource of academic activities in University of Benin can be better understood by applying this social judgement theory. The social judgement theory provides a framework for analysing how students and faculty perceive, evaluate, and respond to infographics based on their pre-existing attitude and cognitive biases.

2.5.2 Piaget's Theory

This theory was developed in the 1920s and is also known as the cognitive development theory. The theory describes how children's thinking, reasoning and understanding of the world changes as they grow. Infographics are visual tools that combine text, images, and data to simplify complex information. At the University of Benin, integrating infographics as supplementary resources can enhance learning by aligning with Jean Piaget's Cognitive Development Theory, which emphasise active learning and knowledge construction.

Piaget's theory posits that learning occurs through assimilation (integrating new information into existing schemas) and accommodation (modifying schemas to fit new knowledge). His stages of cognitive development sensorimotor, preoperational, concrete operational, and formal operational highlight how learners process information differently at various levels. The theory is made up of four Stages.

2.5.3 Piaget's four Stages of cognitive development (Kendra Cherry, 2024)

Each stage is age-related and represents qualitatively different ways of thinking.

Sensorimotor Stage (0–2 years)

Key Feature Learns through senses and actions.

Milestones

- Object permanence (understanding objects exist even when unseen).
- Goal-directed behavior (e.g., pulling a blanket to reach a toy).

Preoperational Stage (2–7 years)

Key Features

- Egocentrism (difficulty seeing others' perspectives).
- Symbolic thought (language, pretend play).
- Lack of conservation (e.g., thinking a taller glass has more water).

Concrete Operational Stage (7–11 years)

Key Features

- Logical thinking about concrete objects.
- Understands conservation, reversibility, and classification.
- Struggles with abstract/hypothetical ideas.

Formal Operational Stage (12+ years)

Key Features

- Abstract and hypothetical reasoning.
- Deductive logic (e.g., solving "if-then" problems).
- Scientific thinking (e.g., formulating hypotheses).

Infographics align with Piaget's constructivist approach, promoting deeper understanding and engagement. By adopting them as supplementary resources, UNIBEN can promote a more interactive and visually enriched learning environment.

2.6 Summary of Literature Review

The review of literature has established that infographics serve as a powerful educational tool that enhances comprehension, retention, and engagement. Conceptually, infographics simplify complex data and make learning more effective through various visual elements. Empirical studies support the effectiveness of infographics, demonstrating that they improve academic performance and reduce cognitive overload. Theoretical aspects (Social Judgment Theory) suggest that infographics influence students' perception and judgment by presenting information in a visually persuasive manner, helping them anchor, assimilate, or contrast new knowledge based on their pre-existing attitudes. Piaget's theory align with infographics by adapting to learners' cognitive capacities, from sensory exploration to abstract analysis.

Despite their advantages, challenges such as limited adoption, digital literacy gaps, and resource constraints hinder the widespread use of infographics in academic settings. Addressing these challenges through structured implementation strategies can significantly

enhance the use of infographics as a supplementary resource in universities like the University of Benin.

CHAPTER THREE

RESEARCH METHODOLOGY

This chapter is with the contents of research procedure that would be used while conducting this study which includes: sampling procedures as well as criteria for selecting the study area. It also covers the instrument for data collection, data processing, analysis and presentation.

3.1 Research Design

Research design is the structuring of the investigation aimed at identifying variable and their relationship to one another. It is used for the purpose of obtaining data to enable the research test hypothesis or answer to research question. However, the research design that would be found useful for this study is the survey method. Survey method is the technique of accumulating masses of tiny details from the great picture, and the use of online questionnaire among various social media platform of the sample size selected, thereby giving adequate opportunity to soliciting information from various discipline.

3.2 Population of Study

Population is defined as the entire number of people that fit a particular criteria and are of interest to the researcher. Asemah et al (2012) points out that the population include all these objects or subjects that make up the study; it is defined as all the members of any well-defined class of people, events, or subjects. Wimmer and Dominick (2011) define population as a group or class of subjects, concepts, or phenomena. While Asika (2014) opine by saying “A population is made up all conceivable subject of observation relating to a particular phenomenon of interest to the researcher”. The population of this study is gotten from the undergraduate students of university of Benin, both from Ugbowo and Ekehuan campus. The population amounts to 77,000 as of the 2021/2022.

3.3 Sample Size

Sample size in this study is very relevant, Asemah et Al (2012) state that sample size is a crucial component of study design. So in this population of study, three hundred and

ninety (390) respondents questionnaires will be used as the sample size for the study. Wimmer & Dominick (2000) posit that a sample subject of a population is usually the representative of the entire population. The sample size is a part of the population.

However, since it is essential to study the entire elements in the population, it is important to draw a sample size from the population in essence, the sample size is the number of respondents the researcher wants to elicit responses from while using the questionnaire: the questionnaire is used in gathering informations about the opinions and behaviour of the audiences (Asemah et Al 2012). The sample size for this study was derived by using the simple percentage sample size determination formula. Since the population of this study is 77,000, a 0.506% will be used in determining the size. Formula

$$N = N \times (\%) \div 100 \text{ (where N represents the population size)}$$

$$N = 77,000 \times 0.506 \div 100$$

$$N = 38,962 \div 100$$

$$N = 390$$

3.4 Sample Technique

This study employed a multi-stage sampling approach to select the participants. The method was used because respondents were chosen in three phases. The University of Benin currently has 14 faculties: Agriculture, Arts, Education, Engineering, Environmental Science, Law, Life Science, Management Science, Pharmacy, Physical Science, Social Science, College of Medicine, College of Dentistry, and Veterinary Medicine. In the first

stage, three faculties Arts, Physical Science, and Education were randomly selected for analysis.

In the second stage, out of the 46 departments across these three faculties, 13 departments were chosen. These included Mass Communication, Theatre Arts, Fine Arts, Early Childhood Education, Fine and Applied Arts, History, Religious Studies, Computer Education, Physical Education, Health Education, Chemistry, Computer Science, and Physics. From these, 7 departments (Mass Communication, Theatre Arts, Fine Arts, Fine and Applied Arts, Physical Education, Computer Education, and Health Education) were further selected as the final sample.

In the third stage, respondents were picked using simple random sampling, ensuring an unbiased selection from the chosen departments.

This structured sampling technique helped maintain fairness and accuracy in participant selection.

3.5 Description of Instrument

The questionnaire is the instrument employed in this study (Asemah, Nwaoboli & Beli, 2022; Asemah, Nwaoboli & Nwoko, 2022). A questionnaire is a list of inquiries created with a certain topic in mind. Data collection is gotten through the questionnaire. The questionnaire is made up of two parts, part A consists of demographic factors, while part B

consists of questions related to the research study. The questionnaire consist of ten (10) questions.

3.6 Validity of Research Instrument

Tejumaiye (2003) posits that the validity of the study is concerned with the question: ‘Does the researcher instrument employed by the study measure what is it supposed to measure? To answer the question, a pretest of the research instrument is carried out. The research instrument which the questionnaire is subject to the validity of study and approval of the research supervisor, who ensured that the questions on the instrument is well align with the research questions. And so, this gave the researcher the confidence that the data gathered is valid and can be important.

3.7 Reliability of Research Instrument

The reliability of this work is shown as the respondents to the questionnaire understand the questions and do not contradict the aim and objectives of the research work. A test retest method may be carried out to ascertain the reliability of the study.

3.8 Method of Data Collection

For the study, the researcher used two types of sources: first-hand (primary) and second-hand (secondary) data. For the primary data, the researcher gave out surveys both in person and online to the participants. The survey had questions about their background (like age and gender) and their interests or habits (psychographics). For the secondary data, the

researcher looked at information from books, past studies, articles, online notes, and library materials.

3.9 Method of Data Analysis

Data analysis can simply be defined as the process in which available, collected data is being examined. Asemah et Al 2012, sees it as the process of inspecting, cleaning, transforming and modelling data, with the aim of getting useful information. After the data collection process, the next stage is to analyse the data.

The data collected for this study was analysed and presented using frequency tables and basic percentages. Frequency tables helped organise the information clearly, making it easier to interpret. Simple percentages were used to analyse the respondents' psychological responses. To ensure clarity, the findings in the frequency tables and percentages were explained in detail.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND DISCUSSION

This chapter presents and analyses the data collected using the questionnaire. A total of 390 copies of questionnaire were distributed online and all were properly filled making the sample size a total of 390 after administration which accounts for 100%. 390

respondents therefore represent questionnaire100% of the sample size being studied. The analysis and presentation are based on data gotten from respondents using the questionnaire which will be analysed below using frequencies, percentages and tables for the presentation of data.

4.1 Data Presentation and Analysis

Table 1: Distribution of Respondents by Gender

Gender	Frequency	Percentage
Male	162	41.5%
Female	228	58.5%
Total	390	100%

Source: Online Survey, 2025.

Table 1 shows that the study is made up of male and female respondents, however, female respondents participated more in the research work.

Table 2: Distribution of Respondents by Age

Age	Frequency	Percentage
16 - 20	99	25.4%
21 - 30	286	73.3%
30 and above	5	1.3%
Total	390	100%

Source: Online Survey, 2025.

Table 2 shows that the study was composed of respondents of various age distribution. It indicates that a greater proportion of the respondents are between the ages of 21 - 30.

Table 3: Distribution of Respondents by Marital Status

Marital Status	Frequency	Percentage
Married	11	2.8%
Single	376	96.4%
Divorced	3	0.8%
Total	390	100%

Source: Online Survey, 2025.

Table 3 shows that the marital status of respondents are; single, married and divorced. However, single respondents were more actively involved in the study amounting to about 90% (376) of the total respondents, while 2.8% (11) were married, while divorced respondent are 0.8% (3).

Table 4: Distribution of Respondents by Religion

Religion	Frequency	Percentage
Christianity	363	93.1%
Islam	23	5.9%
Others	4	1%
Total	390	100%

Source: Online Survey, 2025.

Table 4 shows that the study was composed of respondents from two major religious groups in Nigeria (Christianity and Islam) and other. However, as seen above, respondents who are Christians were more involved in the study.

Table 5: Distribution of Respondents by Department

Department	Frequency	Percentage
Mass Communication	241	61.8%
Theatre Arts	64	16.4%
Music	44	11.3%
Early childhood	41	10.5
Education	0	0%
Total	390	100%

Source: Online Survey, 2025.

Table 5 indicates that the largest group of respondents belongs to the Department of Mass Communication. The second largest group of respondents were from the Theatre Arts department, this is followed by Music and Early childhood and Adulthood Education respectively.

Table 6: Level

Level	Frequency	Percentage
100	17	4.4%
200	47	12.1%
300	113	28.9%

400	213	54.6%
Total	390	100%

Source: Online Survey, 2025.

Table 6 shows that a very high number of the respondents that participated in this research are 400 level students. Second highest participants, are 300 level students, followed by 200 level students and 100 level students respectively

Table 7: Extent of how familiar are respondents with infographics

Variable	Frequency	Percentage
Very high	111	28.5%
High	176	45.2%
Low	65	16.7%
Very low	18	4.5%
Can't tell	20	5.1%
Total	390	100%

Source: Online Survey, 2025.

Table 7 Shows that a high number of the respondents are familiar with infographics with the actual score of 176 (45.2%). While the respondents of very high amount to 111 (28.5%). This shows that the respondents are familiar with infographics.

Table 8: How exposed are respondents to infographics utilisation

Variable	Frequency	Percentage
Very high	113	29%
High	154	39.5%

Low	80	20.5%
Very low	27	6.9%
Can't tell	16	4.1%
Total	390	100%

Source: Online Survey, 2025.

Table 8 shows that a high number of 154 (39.5%) respondents are exposed to infographics utilisation. While that of very high amount to 113 (29%). While the others shared different opinions on their exposure. This shows that the respondents are exposed to infographics utilisation.

Table 9: Respondents utilisation of infographics while carrying out academic work such as project, seminar or assignment

Variable	Frequency	Percentage
Yes	262	67.2%
No	83	21.3%
Maybe	45	11.5%
Total	390	100%

Source: Online Survey, 2025.

Table 9 shows that a high number of respondents have utilise infographics in carrying out academic work. The table indicate the high number of respondents that choose yes with the score of 262 (67.2%) and the number of respondents who choose no which amount to 83 (21.3%). While maybe have the lowest score of 45 (11.5%). This therefore state that respondents utilise infographics while carrying out academic work.

Table 10: Extent to which respondents use infographics items to support the lesson taught in class

Variable	Frequency	Percentage
Always	129	33.1%
Often	80	20.5%
Sometimes	94	24.1%
Rarely	58	14.9%
Never	29	7.4%
Total	390	100%

Source: Online Survey, 2025.

Table 10 indicates that a high number respondents always use infographics items to support lesson taught in class as it has the highest number of selections, sometimes has the second number of respondents, followed by often, rarely respondents are not so much while never has the lowest numbers of respondents. It shows that, infographics items are use to support lesson taught in class.

Table 11: Does infographics aid retention of various concepts in class

Variable	Frequency	Percentage
Strongly agree	180	46.2%
Agree	135	34.6%
Neutral	58	14.9%
Disagree	13	3.2%
Strongly disagree	4	1.1%
Total	390	100%

Source: Online Survey, 2025.

Table 11 shows that a high number of respondents strongly agrees that infographics aid retention of various concept in class. While the number of respondents that agree takes the second place, followed by neutral, disagree is not very much and strongly disagree has the lowest score. This shows that infographics aid retention of various concept in class.

Table 12: Level in which lecturer employ the use of infographics content and materials during lectures

Variable	Frequency	Percentage
Always	115	29.6%
Often	65	16.7%
Sometimes	117	30.1%
Rarely	76	19.5%
Never	17	4.3%
Total	390	100%

Source: Online Survey, 2025.

Table 12 shows that lecturers sometimes employ the use of infographics content and materials during lectures because it has the highest number of respondents. While always

respondents comes second, followed by rarely, often has lesser respondents and never has the lowest respondents.

Table 13: shows the respondent response if lecturers utilise infographics to make learning engaging and interactive

Variable	Frequency	Percentage
Strongly agree	169	43.3%
Agree	156	40%
Neutral	49	12.6%
Disagree	11	2.7%
Strongly disagree	5	1.4%
Total	390	100%

Source: Online Survey, 2025.

Table 13 shows the respondents response if lecturers utilise infographics to make learning engaging and interactive. According to the table a higher number of respondents strongly agree that the use of infographics by lecturers during lecture, makes learning more engaging and interactive, while a high number also agreed, only 12.6% were neutral and 2.7% respondents disagreed, while 1.4% respondent strongly disagreed.

This therefore indicates that lecturers utilise infographics in making learning engaging and interactive.

Table 14: shows the respondent response on how the use of infographics materials in class activities would create easy retention in facilitating easy learning process

Variable	Frequency	Percentage
Strongly agree	67	17.3%
Agree	181	46.4%
Neutral	55	14.2%
Disagree	14	3.6%
Strongly disagree	73	18.8%
Total	390	100%

Source: Online Survey, 2025.

Table 14 shows the percentage of respondents that thinks that the use of infographics materials in class activities would create easy retention in facilitating easy learning process. According to the table, a high number of respondents agree, strongly disagree respondents are 18.8% (73) making it second highest. While strongly agree respondents follows suit with 17.3% (67) and neutral respondents with less number of 55 (14.2%), disagree respondents has the lowest score.

Table 15: Thought of respondent on adequate training on how to use and create infographic material and it being helpful to student

Variable	Frequency	Percentage
Strongly agree	153	39.2%
Agree	181	46.4%
Neutral	37	9.5%
Disagree	14	3.7%
Strongly disagree	5	1.2%
Total	390	100%

Source: Online Survey, 2025.

Table 15 reveals the thought of the respondents on adequate training on how to use and create infographics material and the help it serves to students. The shows that a high number of respondents agrees, 39.2% (153) respondents strongly agrees, not sure respondents takes the third place with the amount of 37 (9.5%), while the disagree respondents amount to 14 (3.7%) and strongly disagree has a low amount of 5 (1.2%). This therefore state that, adequate training on how to use and create infographics material would help and serves students.

Table 16: Would the integration of infographics material into the tertiary institution curriculum be resourceful

Variable	Frequency	Percentage
Strongly agree	163	41.8%
Agree	173	44.3%
Neutral	37	9.5%
Disagree	11	2.9%
Strongly disagree	6	1.5%
Total	390	100%

Source: Online Survey, 2025.

Table 16 show case the thought of the respondent towards the integration of infographics material into tertiary institution curriculum and it's resourcefulness. majority of the respondents agreed, quite a high number of respondents also strongly agreed, not so few were not sure, while few disagreed and very few strongly disagreed. This shows that the integration of infographics material into the tertiary institution curriculum would be resourceful.

4.2 Discussion of Finding

The research aimed to answer four research questions related to Info graphics as a supplementary resource of academic activities in University of Benin.

4.2.1: How exposed are UNIBEN students to infographics utilisation?

In responding to this question, data presented in table 7 and table 8 will be used. In knowing how exposed are UNIBEN students to infographics utilisation, some questions were asked in table 7 and 8 of the questionnaire. Table 7 sought to know the extent of how

respondent are familiar with infographics. The data indicated in table 7 shows that a larger number of 176 (45.2%) respondents are familiar with infographics contents and materials.

More so, data presented in table 8 shows that 154 (39.5%) respondents are exposed to infographics. This is to say that, a much number of students in UNIBEN are exposed to infographics utilisation.

4.2.2 How effective is infographics in improving student learning and engagement in academic activities

Table 9,10, and 11 will be used responding to this question. In trying to know how effective is infographics in improving student learning and engagement in academic activities, a few questions were asked in table 9,10 and 11 of the questionnaire. Table 9 seeks to know if respondents utilises infographics while carrying out academic work.

The data presented on the table 9 revealed that 262 (67.2%) of respondents use infographics in carrying out academic work, while table 10 state that a reasonable number of 129 (33.1%) respondents use infographics items to support lesson taught in class. This implies that the effectiveness of infographics in improving student learning and engagement in academic activities is on a greater level. Table 11 on the other hand, states that 180 (46.2%) respondents strongly agrees and 135 (34.6%) respondents concur to the fact infographics aid retention. Here's a conclusion based on the finding. Therefore, this state that infographics are effective in improving student learning and engagement in academic activities. Data presented from the tables states that, a significant majority (67.2%) of respondents use infographics in their academic work, infographics are used to support

lessons taught in class, a substantial proportion of respondents (80.8%) agree that infographics aid retention.

These findings suggest that infographics are a valuable tool for enhancing student learning and engagement, and their use can lead to improved academic outcomes.

4.2.3 To what extent are UNIBEN student using infographics as part of learning method

Table , 15 and 16 would be used. To know the extent in which UNIBEN students use infographics as part of learning method, table 15 seeks to know the thoughts of respondents towards the adequate training on how to use and create infographics material and its help to student. So from the responses, a high number of respondents agrees, while a higher number of respondents strongly agrees this start that student may have had a first hand experience in using infographics materials as part of there learning method. Table 16 seeks to know the thoughts of respondents towards the integration of infographics material into the tertiary institution curriculum and if it would be resourceful. The result of the table shows that 173 respondents agree, while 163 respondents strongly agree this are the highest response from the table which states that, the integration of infographics material into the tertiary institution curriculum would be quite resourceful.

This means that UNIBEN students recognise the importance and value of infographics as a learning tool and believe its integration into the curriculum would be beneficial. The massive number of agreement in both tables suggests that students are familiar with infographics and see its potential to enhance their learning experience.

Therefore, it can be inferred that UNIBEN students are using infographics to a significant extent as part of their learning method, and they would benefit from further incorporation of this tool in their academic programs.

4.2.2: How does infographics improves the retention and recall of various concept taught in class?

Table 12, 13, 14 and 15 will be used to provide answer on how infographics improve the retention and recall of various concept taught in class. Table 12 shows how often lecturers employ the use of infographics content and materials during lectures and 30% of respondents agree that, lecturers sometimes employs the use of infographics content and materials during lectures, while 29% of respondents choose always. But however, if lecturers employ the use of infographics content and materials during lectures, students will be able comprehend concepts taught in class. It is very easy to remember what your eyes captures and it is bound to last for a very long time. Aside understanding, infographics materials enhances your retention skills.

Table 13 sought to know if the use of infographics by lecturers makes learning more engaging and interactive and respondents who strongly agree are 43% making it the highest number. On the other hand, 40% of respondents agree while the neutral respondents are 12%. The disagree respondents are 2.7% and strongly disagree with a less percentage of 1%. Majority of the student stand in agreement about infographics and it's business in making learning engaging and interactive. Infographics utilisation is very engaging and interactive, the use of infographics has curbed the statement "class was boring" because when

infographics materials are used in class e.g projector student do not find it hard to be focused, secondly they find it easy to ask questions and also comment on what is being taught.

Table 14 seeks to know if the frequent use of infographics materials in class activities would create easy retention in facilitating easy learning process and from the result, a large percentage of audience (46.4%) agree, and 17% of respondents strongly agrees. This implies that incorporating infographics into teaching practices could be an effective strategy for improving and enhancing student learning outcomes, as it may aid in information retention and understanding. Lecturers and students may consider leveraging infographics to present complex information in a visually engaging and easily digestible format.

Table 15 seeks to know respondents thought on how adequate training on how to use and create infographics material would be helpful to student. The result from the table shows that agree has the highest percentage (46%) and strongly agree has the second highest percentage (39%), not sure comes third with (9.5%). While disagree has a less percentage (3.7%) and strongly disagree with a poor percentage (1.2%). From what the result brings shows that infographics would be very helpful to student, if adequate training on how to use and create infographics material is carried out. In conclusion, incorporating infographics into teaching practices can be an effective strategy for enhancing student learning outcomes, retention, interaction and engagement. By leveraging infographics, educators can present

complex information in a visually appealing and easily digestible format, ultimately improving student understanding and academic performance.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Summary

This study was aimed at examine infographics as a supplementary resource of academic activities in university of Benin. This study was carried out using the survey research method. The survey research for data collection for the study made use of questionnaire as the research instrument to gather data from the respondents. The review of other related literatures were utilised for this study to serve as a guide. During the course of study, data distributed from the questionnaires show the following:

1. Majority of respondents are very familiar with what the concept "infographics" means and have utilised it while carrying out assignments, project and presentation to enhance academic performance.
2. Majority of respondents find the use of infographics during lectures more engaging and interactive, thereby aiding easy understanding of complex concepts and abstract ideas.
3. Majority of the opinions agree that the frequent use of infographics materials in class activities would create easy retention in facilitating easy learning process.
4. A large number of respondents agree that the integration of infographics materials into the tertiary institution curriculum is very resourceful.

5.2 Conclusion

It is very evident that people are interested in content and materials with more graphic in them. Materials and information with less images and graphics usually takes a lot of time for readers to comprehend, because people are always in a haste to read text books, handouts or even visit website without graphics and images to buttress the point or information.

Infographics is playing an important role today, most especially in schools. To slow learners and students with short term memory, infographics have helped in improving their academic performance, because just with a flash back of an image or picture, they can easily remember the entire concept being taught. A picture says a thousand word, therefore it is very important to utilise infographics various academic activities.

5.3 Recommendation

Based on the findings, the study recommend the following:

1. Should always be asked to utilise and seek infographics so as to enhance, facilitate and improve class activities such as presentation, assignment and group work.
2. Infographics design training should be provided for students, in order for them to be able to interpret infographics content.
3. Lecturers should always use infographics during lectures, as it makes learning more engaging and interactive.
4. Educational bodies in different tertiary institutions should incorporate infographics into their teaching curriculum.

5.4 Suggestions for Further Study

1. Future researchers can expand the on the research by including multiple universities across different parts in Nigeria to compare the effectiveness of infographics in various academic environments.
2. Further studies could investigate the specific types of infographics (e.g., statistical, timeline, process-based, comparison infographics) that have the most impact on learning outcomes among university students.
3. A longitudinal study can be conducted to examine the long-term academic impact of using infographics on students' academic performance over several semesters.
4. Future research may also focus on the challenges and limitations associated with the use and integration of infographics in teaching.
5. Further studies could explore the role that digital literacy plays in students ability to effectively interpret and use infographics for academic purposes.

5.5 Contribution to Knowledge

This study advances our understanding by providing empirical evidence on the positive impact of infographics as a supplementary educational tool that enhances students engagement, interaction, comprehension, and academic performance. The study also highlighted the large awareness and utilisation of infographics among students at the University of Benin, thereby laying emphasis on its growing relevance in tertiary education.

The study further contribute to the understanding of how infographics can aid in memory retention, especially for visual learners and students with learning difficulties. The

research has attracted the attention to the need for capacity-building among students and lecturers on infographic design and interpretation.

By recommending the inclusion of infographics in tertiary institution curriculum, the study offers a practical roadmap for educational stakeholders seeking to modernise and improve teaching strategies. With the use of infographics, learning and teaching strategies would be more enhanced, engaging and interactive.

In summary, the study enhances our understanding on what the concept infographics entails, it's significant and resourcefulness to academic activities in the University of Benin.

REFERENCES

- Albers, M. J. (2015). *Human-information interaction and technical communication: Concepts and frameworks*. IGI Global.
- Alford, K. (2019). Infographics: The power of visual storytelling. *Journal of Technical Writing and Communication*, 49(2), 123–145.
- Alhadad, S. S. J. (2018). Visualising data to support judgement, inference, and decision making in learning analytics: Insights from cognitive psychology and visualisation science. *Journal of Learning Analytics*, 5(2), 60–85.
- Al-khawaldeh, N. N., & Alkhawaldeh, A. (2015). The impact of infographics on language learning. *International Journal of Education and Research*, 3(12), 1–14.
- Alrwele, N. S. (2017). Effects of infographics on student achievement and students' perceptions of the impacts of infographics. *Journal of Education and Human Development*, 6(3), 104–117.
- Asemah, E. S. (2009). *Mass media in contemporary society*. Jos University Press.
- Asemah, E. S., Nwaoboli, E. P., & Beli, D. (2022). *Communication research: Principles and practice*. Jos University Press.
- Bladon, R., & Poulin, C. (2014). *Infographics: A practical guide for librarians*. Rowman & Littlefield.
- Bradshaw, A. C., & Porter, S. (2017). Infographics: A new tool for the nursing classroom. *Nurse Educator*, 42(2), 57–59.
- Canning-Wilson, C. (2011). Visuals and language learning: Is there a connection? *The Weekly Column*, 48, 1–4.
- Catak, G., & Tekinarslan, E. (2008). The effect of PowerPoint-based reading materials on students with mild mental retardation. *Educational Sciences: Theory and Practice*, 8(1), 177–187.

- Demirci, N. (2008). The effect of computer-aided and traditional instruction on students' achievement in chemistry. *Journal of Science Education and Technology*, 17(1), 32–39.
- Dunlap, J. C., & Lowenthal, P. R. (2016). Getting graphic about infographics: Design lessons learned from popular infographics. *Journal of Visual Literacy*, 35(1), 42–59.
- Eroglu, S. (2006). The effect of multimedia instructional tools on students' learning in biotechnology. *Journal of Educational Technology & Society*, 9(1), 16–25.
- Etcubañas, L. (2025). *Statistical infographics in education: A comprehensive guide*. Academic Press.
- Gultekin, M. (2009). The effect of visual materials on the psychomotor learning of basketball skills. *Educational Research and Reviews*, 4(5), 213–218.
- Harrison, L., & Reinecke, K. (2015). Infographic aesthetics: Designing for the first impression. *Proceedings of the 33rd Annual ACM Conference on Human Factors in Computing Systems*, 1187–1190.
- Helsper, E. J., & Eynon, R. (2010). Digital natives: Where is the evidence? *British Educational Research Journal*, 36(3), 503–520.
- Journal of Korean Medical Science. (2022). The role of infographics in medical education. *Journal of Korean Medical Science*, 37(4), e45.
- Kimp, T. (2021). *The history of infographics: From cave paintings to the digital age*. Visual Press.
- Lyra, K. T., Isotani, S., Reis, R. C., Marques, L. B., Pedro, A. Z., Jaques, P. A., & Bitencourt, I. I. (2016). Infographics or graphics plus text: Which material is best for robust learning? *Proceedings of the 29th International Florida Artificial Intelligence Research Society Conference*, 392–397.
- Matrix, S., & Hodson, J. (2014). Teaching with infographics: Practicing new digital competencies and visual literacies. *Journal of Pedagogic Development*, 4(2), 17–27.

- Mayer, R. E. (2009). *Multimedia learning* (2nd ed.). Cambridge University Press.
- Meeusah, N., & Tangkijviwat, U. (2013). Effects of infographics on students' learning performance. *Procedia - Social and Behavioral Sciences*, 103, 234–242.
- Naparin, H., & Saad, A. B. (2017). Infographics in education: Review on infographics design. *The International Journal of Multimedia & Its Applications*, 9(4/5/6), 15–24.
- Ozdamla, F., Kocakoyuna, S., Sahina, I., & Akdaga, M. (2016). The impact of infographics on education. *Procedia Computer Science*, 102, 370–377.
- Smiciklas, M. (2012). *The power of infographics: Using pictures to communicate and connect with your audiences*. Que Publishing.
- Toth, C. (2013). Revisiting a genre: Teaching infographics in business and professional communication courses. *Business Communication Quarterly*, 76(4), 446–457.
- Vanichvasin, P. (2013). Enhancing the quality of learning through the use of infographics as visual communication tool and learning tool. *Proceedings of the International Conference on ICT and Knowledge Engineering*, 135–139.
- Waller, K. (2018). *Data visualisation: A practical introduction*. Princeton University Press.
- Yildirim, S. (2016). Infographics for educational purposes: Their structure, properties, and reader approaches. *Turkish Online Journal of Educational Technology*, 15(3), 98–110.

QUESTIONNAIRE

Department of Mass Communication
Faculty of Art,
University of Benin,
Edo State.

Dear Sir/Ma,

REQUEST FOR THE COMPLEMENT OF ITEMS IN THE QUESTIONNAIRE

I am an undergraduate student of the department of mass communication, researching on the topic: infographics as a supplementary resource of academic activities in University of Benin.

The research work is basically written for academic purpose in partial fulfillment of the requirement for the award of BA (Bachelor of Arts) in mass communication.

Your response will be highly appreciated as information provided will be treated with most confidentiality.

Thanks in anticipation of your cooperation.

Yours faithfully,

DAVID ARIGBE

(Researcher)

SECTION A: Bio-Data of the Respondents (Demographic Section)

INSTRUCTIONS: Please tick (✓) in any option as best suits your opinion.

1. Sex: Male ☐ Female ☐
2. Age: 16 - 20 ☐ 21 - 30 ☐ 31-- Above ☐
3. Marital status: Married ☐ Single ☐ Divorced ☐
4. Religion: Christianity ☐ Islam ☐ Others ☐
5. Department: Mass communication ☐ Theatre Art ☐ Music ☐ Early Childhood and Adulthood Education ☐
6. Qualification: [level] _____

SECTION B: Psychological Response to the Research Study

Infographics as a supplementary resource of academic activities in University of Benin.

INSTRUCTION: Kindly tick or answer all each question.

7. Extent of how you are familiar with infographics
☐ very high
☐ high
☐ can't tell
☐ low
☐ very low
8. how exposed are you to infographics utilisation
☐ very high
☐ high
☐ can't tell
☐ low
☐ very low
9. have you ever utilised infographics while carrying out academic work such s project, seminar, or assignment
☐ very high

- ☐ high
- ☐ can't tell
- ☐ low
- ☐ very low

10. How often do you use infographics items to support the lesson taught in class?

- ☐ Daily
- ☐ Weekly
- ☐ Bi-weekly
- ☐ Monthly
- ☐ Yearly

11. Does infographics aid retention of various concept in class

- ☐ Strongly agree
- ☐ Agree
- ☐ Can't tell
- ☐ Disagree
- ☐ Strongly disagree

12. Do lecturer employ the use of infographics content and materials during lectures?

- ☐ Very high
- ☐ High
- ☐ Can't tell
- ☐ Low
- ☐ Very low

13. Does the use of infographics by lecturers during lecture makes the learning more engaging and interactive?

- ☐ Strongly agree
- ☐ Agree

- ☐ Can't tell
- ☐ Disagree
- ☐ Strongly disagree

14. Does frequent use of infographics materials in class activities would create easy retention in facilitating easy learning process?

- ☐ Strongly agree
- ☐ Agree
- ☐ Not sure
- ☐ Disagree
- ☐ Strongly disagree

15. Do you think adequate training on how to use and create infographics material would be helpful to student?

- ☐ Strongly agree
- ☐ Agree
- ☐ Not sure
- ☐ Disagree
- ☐ Strongly disagree

16. Do you think the integration of infographics material into the tertiary institution curriculum would be quite resourceful/

- ☐ Strongly agree
- ☐ Agree
- ☐ Not sure
- ☐ Disagree
- ☐ Strongly disagree.