**LIS 408
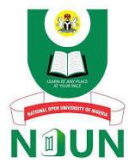INFORMATION POLICY AND ANALYSIS**

Course Team: Scholastica C Ukwoma PhD (Course
Developer/Writer) -
Prof Zakari Mohammed (Course Editor) -
A.B.U. Zaria, Kaduna State

NATIONAL OPEN UNIVERSITY OF NIGERIA

Introduction

Welcome to LIS 408 Information Policy and Analysis, this is a 2- unit course. It is compulsory for fourth year undergraduate students in the department of library and information science. This course is designed to introduce you to the information policy and analysis. Considering the exponential growth of information especially in a digital environment it is important that you understand the concept of information policy and how to access and use information resources to avoid violating copyright. Also, you will learn digital environment; intellectual property; economic regulations; freedom of expression; privacy of information; Freedom of Information Act (FOIB); information security; access management; regulation of public information and information policy and libraries. These will facilitate your academic works and help you to develop for lifelong learning and research.

Course Objectives

By the end of this course, you will be able to
i.   Identify and learn the components of information policy as it affects the study programme
ii.   Ascertain the place of library in implementing information policy.
iii.   Determine the policy issues in using information resources in a digital environment.
iv.   Identify how to use information to avoid infringing copyright laws.
v.   Develop confidence, skills, and the consciousness in accessing and using online information resources both within the study period and to ensure lifelong learning.
vi.   Identify the practical application of information policy in the library.
vii.   Apply the strategies to ensure freedom of information and expression within the academic programme and beyond.

Working through the Course

As part of the requirements to successfully complete this course you are expected to participate in the practical and theoretical aspects of the course. In this course you are expected to read the course units. Do all assignments, read through articles and recommended text and books that will be posted on the platform, participate in group chat and discussion, participate in online facilitation, and prepare your folders which should contain, the procedures you followed in doing your assignments, group chats, the total number of assignments and courses you attended etc. Each unit of the course consist of the introduction, the intended learning outcomes, the main content, summary of the course, conclusion, quiz / assessment, references, and further readings.

In the introduction the unit is introduced, to give a glimpse of the expectations in the study unit. The intended learning outcome captures what you should be able to do at the end of the course. This helps in self-evaluation of your learning at the end of each unit to help you measure if the desired objectives were achieved. To achieve this desired learning outcome, the course has four modules, each module has four units.
Each unit has a summary which captures the essential points in the unit and present you with a guide on how to work through the unit. On the other hand, the conclusion presents the highpoint of the study and the points to take way from the unit.

For your assessment you will be required to carry out two forms of assessments- the first assessment will be at the end of each study unit which will help you for self-assessment to determine if the desired learning outcome was achieved. The second type of assessment will come at the end of the course, it will be done by the university to evaluate your academic performance. It will be a Computer-Based Test (CBT) which serves as a continuous assessment and your final exam. You will be required to write a minimum of three computer-based test and one final exam at the end of the semester.

Study Units
This course consists of 15 units which is divided into four modules. The modules and units are presented below:

Module 1   Definition of Concept
Unit 1   Definition of the concept of Information Policy
Unit 2   Information analysis
Unit 3   Components of information policy
Unit 4   Information policy and libraries

Module 2   Public Policy Issues in the use of Information
Unit 1   Intellectual property
Unit 2   Economic regulations
Unit 3   Freedom of expression
Unit 4   Freedom of Information Act (FOIB)

Module 3   Digital Environment
Unit 1   Definition of the concept of digital Environment and characteristics
Unit 2   Creative common License
Unit 3   Access rights to information in a digital environment
Unit 4   Relevance of copyright law in a digital environment

Module 4   Information Security
Unit 1   Privacy of information
Unit 2   Access management
Unit 3   Regulation of public information

Presentation Schedule
This provides you with information on important dates concerning the course, such as the completion date of the course and your computer-based test. Forum discussions and facilitations. Ensure you submit your assignments on or before due dates as late submission will not be allowed. Plagiarism is an academic theft and have a heavy penalty ensure your work is original to avoid being penalized.

Assessment
This course has two main forms of assessment that will be scored, the continuous assessment and the final examination. The continuous assessment shall be in three-folds. Two Computer Based Assessments. The computer-based assessments will be given in accordance with university academic calendar. The timing must be strictly adhered to. The maximum score for the computer-based assessment shall be 10% each, participation in discussion forums and your portfolio presentation shall be scored maximum of 10% if you meet 75% participation. Hence, the maximum score for continuous assessment shall be 30% which shall constitute part of the final grade. The final examination for LIS 408 will last for a maximum of two hours and it takes 70 percent of the total course grade. There will be examination which will consist of questions that reflect cognitive reasoning. You will be required to upload your portfolio using Google Doc. What are you expected to do in your portfolio? Your portfolio should be note or jottings you made on each study unit and activities. This will include the time you spent on each unit or activity.

How to Get the Most from this Course
To ensure active participation and to get the most in this course, you should have a functional computer or laptop with internet access. This will make your study and learning easy, and you can easily access the course materials wherever you are irrespective of time. The Intended Learning Outcome (ILO) is to guide you in the course. At the end of every course unit ensure you examine yourself to see if you achieved the learning outcome. Make your notes as you work through each unit, join the real time online facilitation as scheduled in the course. In case you missed any schedule for online real time facilitation, each online real time facilitation will be recorded and posted on the platform, go through it at your convenient time. The summary in each unit highlights the salient points. Attempt all the self-assessment exercises and obey the class rules.

Facilitation

The course has online facilitation, which is learner centered, the mode shall be asynchronous and synchronous.

Always contact your facilitator if you

- do not understand any part of the study units or the assignments.
- have difficulty with the self-assessment exercises.
- have any question or problem with an assignment or with your tutor's comments on an assignment.

You also have the technical support team always contact them when you encounter any challenge

Read all the comments and notes of your facilitator, ensure you do all your assignments. Participate in Zoom class and listen to YouTube recorded PowerPoint slides on each lesson attached in you virtual Learning Environment (VLE) and the discussions forums, this gives you the opportunity to socialize with others in the programme. You can discuss any problem encountered during your study. To gain the maximum benefit from course facilitation, prepare a list of questions before the discussion session. You will learn a lot from participating actively in the discussions. Finally, respond to the questionnaire. This will help the university to know your areas of challenges and how to improve on them for the review of the course materials and lectures.

Module 1	**Definition of Concept**
Unit 1	Definition of the concept of Information Policy
Unit 2	Information analysis
Unit 3	Components of information policy
Unit 4	Information policy and libraries

Module 2	**Public Policy Issues in the use of Information**
Unit 1	Intellectual property
Unit 2	Economic regulations
Unit 3	Freedom of expression
Unit 4	Freedom of Information Act (FOIB)

Module 3	**Digital Environment**
Unit 1	Definition of the concept of digital Environment and characteristics
Unit 2	Creative common License
Unit 3	Access rights to information in a digital environment
Unit 4	Relevantof copyright law in a digital environment?

Module 4   Information Security
Unit 1   Privacy of information
Unit 2   Access management
Unit 3   Regulation of public information

'THERE IS A CHINESE PROVERB THAT TEACHERS OPEN THE DOOR, BUT AS A STUDENT YOU MUST ENTER BY YOURSELF'

CONTENTS

MODULE 1 DEFINITION OF CONCEPT

UNIT 1   DEFINITION OF THE CONCEPT OF INFORMATION POLICY

CONTENTS

1.0   INTRODUCTION

Information is necessary for teaching, learning and research, for one to be literate you need to be informed. There is a saying that 'information is power', this highlights the importance of information. Sometimes, you lose this power because you lack the strategies or precautions of how to use this information. In most cases you may be tempted to use the information at our disposal wrongly because you were not properly informed, or you fail to take the necessary precautions to ensure you use information properly. This course is vital not only to our studies but to ensure lifelong learning. This course will also equip you as librarians in training to be conversant with the issues concerning information and its use. The course, discussions, exercises, and self-assessments outlined in this course will help you to know how to use information resources without violating the laws.

2.0   OBJECTIVES

At the end of this unit, you will be able to:

•   Define the concept of information
•   Explain the term information policy
•   Discuss the importance of information policy

3.0   MAIN CONTENT

1.   Definition of information
2.   Definition of information policy
3.   Importance of information policy

3.1   Definition of Information

To understand information policy, it will be important for you to know what information means which will help you to appreciate why there should be information policy. Information refers to some meaningful message transmitted from source to users (Yahaya, Ejigbo, Oladokun, 2019). It is also referred to as processed data. Information can come in different formats, such as print, electronic or oral. It is packaged in these formats to enhance communication from one source to another so that the desired effect will be achieved. Shannon information theory by Claude in 1948 studied the transmission, processing, extraction, and utilization of information. This captures the movement of information from one source to another. Although in some cases there may be distortion in transmitting information from one source to another which alters the original message, in that case it may be difficult to decipher the original message. Information is important for national development, as a result proper management is necessary.

A policy on the order hand is a deliberate plan of action intended to guide decisions and to achieve national outcome(s) (Yahaya et al, 2019). They are rules and guidelines that provide structure to our lives, and contribute to an orderly society (Pasek, 2015). To maintain orderliness in any establishment, or business, policy is important. A policy is a means to an end, it is a plan of action and a statement of ideals proposed or adopted by a government (NIDA, 2011). Therefore, when you combine the two terms *Information* and *Policy,* you have information policy. Which emerged during the last decades of the 20th century as one manifestation of the shift from an industrial to an information society (Braman, 2011).

3.2   Definition of Information Policy

Information policy is a term that have been defined by various authors, although Duff (2004) and Pasek (2015) are of the opinion that information policy is difficult to define. Many authors have defined it based on how they perceived it. Most times the perspective from which information policy is viewed, also determines the definition. Yusufu, (2007) highlighted that information policy is any law, regulation, rule, or practice (written or unwritten), that affects the creation, acquisition, organisation, dissemination, and/or evaluation of information. In its broadest sense, is the set of rules, formal or informal, that directly restricts to shape flow of

information (Yahaya et al, 2019). Duff (2004) stated that the idea of information policy is to some extent rooted in larger claims about the existence and nature of information society. Information policy comprises of laws, regulations, and doctrinal positions and other decision making and practices with society-wide constitutive effects involving information creation, processing, flows, access, and use (Braman, 2011,3). These definitions focus on creation, processing, flow, communication and use of information resources or created works. Information policy affects virtually everything in the world increasingly dominated by information and communication technologies (Jaeger, Gorham, Taylor & Bertot, 2015). According to BCLA as cited in Mutongi and Marume (2016) information policy includes the following areas:

➢   Literacy
➢   Privatization and distribution of government
➢   Information
➢   Freedom of information access
➢   Protection of personal privacy
➢   Intellectual property rights
➢   Retention of archival copies of material
➢   Information Rights

Some of these areas will be discussed in detail in Module 1, unit 3.
The concept of a national information policy became possible only because political leaders around the world came to recognize that, laws and regulations affecting information are matters of "high policy" (Braman, 2011, 2). This saw the establishment of national information policy by individual countries. These laws were meant to guide and regulate issues affecting the creation and use of information resources and services within the country. In Nigeria the national information policy according to Yahaya et al, (2019) specified how libraries in Nigeria will go into cooperative resource sharing either among themselves or with those overseas. In addition to that Adomi (2008) opined that it will help to streamline both the nature and format of information resources that will be made available to Nigerians. On the other hand, a national library policy is a framework for the planned and coordinated development of a country's libraries (NIDA, 2011). It is necessary to define the national library policy since the discussion is on information policy, and you know information has to do with libraries.

An Information policy for Nigeria is most desirable in the face of the emergence of an information society (Yahaya et al,2019). The information society saw information as a necessary factor or component in the economic development. To create and organize information for the development of the citizens and the nation at large was the focus. Therefore, to achieve this a policy is important to avoid conflict of interest and give the creator the opportunity to control the use of their intellectual

property. Although adhering to this information policy may be a challenge in most countries, but in other countries they are fully implemented and adhered to by the citizens. Nevertheless, that does not demean the importance of information policy in the creation and use of information in the society. As a student you are expected to know the policy as it affects both your country and other countries to avoid violation of the law. In the overview given by Pasek (2015) on information policy as an emerging field, the emergence of information and communication technology(ICT), increase in creation and distribution of information, providing open access to data generated from public funding, governments sensitivity to national issues, proliferation of cell phones and social media, unauthorized copying and use of created works etc. Are some of the issues that gave rise to public laws. These laws as promulgated in many countries, are always amended from time to time, to accommodate recent developments and innovations necessary to achieve national development. These laws guide the production and use of information in the society. As you will recall, Library and Information Science (LIS) is a subject field that centers on access and use of information, as developing professionals you are obligated to be aware of the policies guiding the creation and dissemination of information in your country. This will equip you to inform and educate your users on the policies guiding the creation and use of information. Hence this course is relevant to your training and development as LIS professional.

Several papers have suggested the need for LIS to focus more attention on teaching information policy to current students and current practitioners (Jaeger, Gorham, Taylor, Bertot, 2015). This could be as a result of geometric growth in information production and circulation.
Doty (1998: 61) highlighted the reasons why you should study information policy as follows:
➢   To understand social interaction. As scholars, humanists, and social scientists, we can understand important elements of political, intellectual, and ideological life.
➢   To influence policy making.
➢   To forge political and intellectual alliances. Such as academic units: e.g., schools of public policy, public affairs, engineering, communication, and liberal arts,
➢   To contribute to the development of LIS as a discipline. The field knows a great deal about the nature of information, the nature of information-related behavior, the nature of information technology and information systems, and the complex status of information in a capitalist, democratic society.

Researchers, government agencies and individuals produce a lot of information which are vital, most times the information may not be free or in open access, it may be accessed through subscription. Which

requires the users to pay for access before they use them. Even when the information or publications are free you are expected to use them properly by acknowledging the author or creator and using them within the limit specified by the creator/author.

3.3   Importance of Information Policy

The importance of information policy to any nation cannot be overemphasized, to ensure orderliness policy is important. If not, there will be chaos. For instance, as a student there are some policies that guide your academic programme, before you are admitted and registered as a student there are certain policies, you have the maximum number or percentage of attendance to classes before you can be allowed to take any examination. This also is applicable in any sector or organization that want to grow.

❖   Having the knowledge of the national information policy keeps you informed of the dos and don'ts in using information.
❖   It keeps you abreast of recent developments and changes in information creation and use.
❖   As an information scientist you should be well informed to guide your users properly. If you don't know these policies, you will run the risk of misinforming other people. Users will see you as not being competent in your field.
❖   There is a saying that information is power, if you know the information policy of your country and that of other countries, even when someone tries to take undue advantage of you. The person will not succeed because you know your right.

Mutongi and Marume (2016) summarized the benefits of information policy as follows:
•   Understanding the causes and consequences of policy decisions improves your knowledge of information
•   Learning what organisations and nations are doing regarding information
•   Helps to Know how to get the business back on its feet in case of any disaster or setbacks
•   Provides a standard to ensure consistency of information and record handling right from the start of a new employee's career in your organisation.
•   Helps to establish uniformity in the management of information in an organization and enhances networking and collaboration.
•   It becomes possible to integrate all information activities and to mobilize all resources of information to contribute to the totality of the organization's objectives.

- The information policy provides the basis for objective decision-making on resources for information activities and on the management of information.
- A policy of information allows for continuity in development. It reduces the danger of information initiatives being cut short and the resources invested in them wasted.
- It calls for the free flow of information that favors successful innovation.
- The organization can easily change where the need arises, since there is constant monitoring involved in applying information policy.
- The right information is acquired from outside and generated from inside to meet what the organization needs to do with information.
- Everyone who processes and uses information has the opportunity for learning the appropriate knowledge and skills, for cooperating with one another in supplying them to their work and from developing new ways of using or processing information to help the organization achieve its objectives.

4.0   CONCLUSION

From the foregoing knowledge of information policy is important for students, institutions, organizations businesses etc. as it provides the framework and *modius operands* that guides the organization and regulates their activities on information use. It also helps to protect the works of citizens and encourages national development. The onus lies on you as a student to get familiar with the policies to defend yourself and others that may come to you for assistance.

5. 0   SUMMARY

'An unexamined life is not worth living' they say, therefore it is important to have information policy, to ensure proper use of information, without a policy it becomes difficult and chaotic to produce and disseminate information to the user groups. In addition, it will be difficult for the authors, or creators to benefit anything from their publications because piracy will take over hard work. Hence, to encourage hard work policy is important.

SELF ASSESSMENT EXERCISE

Differentiate between information and information policy as it relates to your discipline.

6.0   TUTORED-MARKED ASSIGNMENT

1   Identify the five importance of information policy in your country
2   As a library and information science student do you think knowledge of information policy is relevant to you discipline? Define information policy

7.0   REFERENCES/ FURTHER READING

Adomi, E.E (2008) *Library and information service policies*. Benin City: Osasu printing press.

Alistair S. D. (2004) "The Past, present, and future of information policy towards a normative theory of the information society". *Information, Communication & Society*, 7(1), 69-87, DOI: 10.1080/1369118042000208906

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UNIT 2   INFORMATION ANALYSIS

CONTENTS

1.0   Introduction
2.0   Objectives
3.0   Main Content
         3.1   Definition of Information Analysis
         3.2   Access to information
         3.3   Importance of Information Analysis
4.0   Conclusion
5.0   Summary
6.0   Tutor-Marked Assignment
7.0   References/Further Reading

1.0   INTRODUCTION

Research is important in solving societal problems and for national development. The influx of information and communication technology resulting to innovations in different fields constituted to the increase in research and development. As an information scientist you may have come across information in different formats which need to be processed to enhance access and visibility. You can appreciate the value or quality of published materials when you access and read through it, considering the volume of information available most times information will be available, but it becomes difficult for you to access them. In the study of Ukwoma and Onyebinama (2020) it was highlighted that awareness of the available information materials leads to increase in use. Therefore, to achieve this objective of creating awareness the materials need to be analysed and packaged in the format that it will be accessible and used. In this study we will discuss information analysis.

2.0   OBJECTIVES

At the end of this unit, you will be able to:

1   Explain what information analysis is
2   State the importance of information analysis
3   State what open access means and differentiate between Green and Gold Open Access

3.0   MAIN CONTENT

3.1   Definition of Information Analysis

Information have been defined in the previous unit, analysis can be seen as breaking complex substance or topics into simple units for better comprehension. Analysis can be performed in any discipline, or organisation even in research you talk of data analysis so that you can make out meaning from the series of data you collected. Based on your analysis you can draw conclusion, the raw data you collected are coded into *zeros*, and *ones* at that stage you cannot make meaning out of it. With analysis you appreciate the beauty of the research you have done. Therefore, explaining information analysis as it affects information access and use, involves the sieving of relevant information from the pool of information resources available. Information and communication technologies has changed the way in which libraries and librarians perform their functions and render services to users (Ukwoma and Onyebinam, 2021). As a result, access to relevant information from the pull of available resources is key. This explains why many establishments are concerned with information analysis. Grinold and Kahn (1992) defined Information analysis as the science of evaluating information content, and refining information to build portfolios. It is important to know the value and relevance of information from different perspectives. Ahituv, Munro, and Wand (1981) stated that Information requirement analysis deals with defining the information needed for managerial purposes. Satyanarayana (2017) highlighted that information analysis is important because of (i) overflow of information; (ii) scattering of information; and (iii) uneven quality of information which required considerable amount of sifting and filtering to retrieve quality information. Calland (2020) opined that we are in the information age, there has been explosion in the amount of information held by governments, companies, non-governmental organizations (NGOs) and other citizens. A lot of factors have contributed to the overflow of information, such as the trend in research and development, social media as a platform for communication records a lot of publication both those relevant and even fake ones. Not every information that is online is useful, so through information analysis relevant ones are sifted. In some countries like the United States of America, they have information centers their sole responsibility is to analyse information from literature and informal sources. Such information is organized into headings and subheadings or other parameters that is deemed necessary to enhance access and retrieval. As you are aware one of the laws of Ranganathan the father of librarianship is to; *Save the time of the User.* To achieve this, organization of the information materials are important, that is why libraries organize their materials using classification schemes.

Serval parameters can be adopted to guide you in information analysis such include the subject areas, the user groups that need the information, the sources of information, the writer of the said information, date of publication etc. You can easily identify relevant information from the pool of resources available. Beckford (2021) identified how to analyse information as follows;

❖ Decide where you can find the information that you need. The information could be in someone's head, so you may have to interview him/her. Or you may have to develop a survey. If this is the case who would complete it?
❖ Gather the information from the sources that you identified.
❖ Quickly skim and scan the information.
❖ Determine accuracy, relevance, and reliability of information.
❖ Distinguish between essential and non-essential information.
❖ Differentiate – is there anything unique about the information?
❖ Identify propaganda and bias.
❖ Recognize omissions and faulty logic.
❖ Recognize interrelationships and themes.
❖ Connect disparate pieces of information.
❖ Pay attention to the source of the information.

These efforts are geared towards making information resources available to satisfy the information needs of users. Any information material that is not accessible is as good as not being available. Many research funders are interested in making research outputs visible to the public, so as students you should ensure you access these materials and put them into use to help in your academic development.

3.2   Access to Information

Information is needed for national development and in different sectors, therefore access to them is important to ensure they are put into use. Calland (2002) highlighted that Information is not just a necessity for people – it is an essential part of good corporate and state governance. There are different access rights available for information, this is to ensure that users have access to information to ensure they improve their living. Many publishers provide open access to published materials, to encourage reading. Although the materials are free, that does not mean that the materials are not of good quality but rather the publication fee has been paid by the authors or some other agencies. Ukwoma and Oyebinama (2020) defined Open Access (OA) as one of the newest channels through which students can gain access to information. Open Access (OA) publishing offers the best guarantee for free access to scientific knowledge for everyone, including peers (van der Heyden, & van Veen 2018).Hanard 2004 as cited in , Dorta-González and Santana-Jiménez (2018)stated that there are two OA modalities: *gold OA* which refers to

articles in fully accessible OA journals; and *green OA* refers to publishing in a traditional journal, in addition to self-archiving the pre- or post-print paper in a repository. Some examples of open access databases are Directory of Open Access Journals, Directory of Open access books. These databases contain free online journals and books that are useful for your research, ensure you make use of them in addition to the ones subscribed to by your institution.

Some of the values open access resources add to the research process as identified by Ukwoma and Onyebinama (2021) include: librarians are placed to become specialists in assessing free online content; benefits institutions to invest more resources in surfing free online content; open access content is likely to just become as important to users as paid-for content in the future; user-generated content (discussion forums and social media) will become more important.

3.3   Importance of Information Analysis

Information analysis is important considering the volume of information available in different format. To ensure students and researchers make good use of available information resources, information analysis is important. As a student you may be overwhelmed with information resources that you find it difficult to separate the relevant information from noise, or you may be bombarded with a lot of information at your fingertips that you find it difficult to make decision. The information you have at your disposal also affects your decision and choice, you should always dispose yourself to have access to relevant and useful information that will always help you to make informed decision and provide solution to problems you may encounter each day. To do this, you need to possess the skills and knowledge required. As librarians in training your professional training is important to put you through all the sources you can access information resources. How to evaluate them based on; currency, objectivity, relevance etc. apart from you professional training you also need the following skills as identified by Beckford (2021) they include

- Analytical thinking and innovation.
- Active learning and learning strategies.
- Technology design and programming.
- Critical thinking and analysis.
- Complex problem-solving.
- Leadership and social influence.
- Emotional intelligence.
- Reasoning, problem-solving, and ideation.
- Systems analysis and evaluation.

Yusufu (2007) opined that information environment is shaped by the information components which include information creating activities; (ii) information products; (iii) information distributors; (iv) information dissemination; and (iv) information users. The author referred to them as the stake holders in information policy.

4.0   CONCLUSION

Information analysis as discussed is important to ensure access and retrieval, having volumes of information without guide or access point to them makes it difficult for the users to have access to them. Therefore, knowledge of your information user is important as it helps you in analysis of the resources available for effective use. In addition, fake news most times are presented as authentic information but as an information scientist you need to analyse such information to know the authenticity, accuracy, and objectivity to help you make informed decisions yourself or to circulate such information to your users. There is a saying that '*All that Glitters is not Gold*' therefore '*look before you leap'* so ensure you do not accept anything that come your way as information without analysis.

5.0   SUMMARY

In this unit you have learnt what information analysis is, access to information and the importance of information analysis. Taking cognizance that information is growing in geometric progression, do not accept everything you get as authentic information. you are in a better position to education yourself and your users on how to decipher relevant information from fake in this era of infodemic and the use of social media in spreading information.

SELF-ASSESSMENT EXERCISE

State five ways you can analyse information

6.0   TUTORED MARKED ASSIGNMENT

Differentiate between gold open access and green open access

7.0   REFERENCES/FURTHER READING

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UNIT 3   COMPONENTS OF INFORMATION POLICY

CONTENTS

1.0   INTRODUCTION

Having an information policy is one aspect. Understanding the different elements or components of the policy is important to ensure that those it is meant for understands their contributions and requirements. It is said that '*ignorant of the law' is not an excuse*. As librarians in training, you need to understand the different components of information policy to get acquainted and be able to explain it to your clients when the need arises. Information policy is an official written document that specifies its format, and different components. In this unit we will discuss the components of information policy and how it affects a library.

2.0   OBJECTIVES

By the end of this course students should be able to:

• Identify and explain the components of information policy as it affects a library
• Identify the stakeholders involved in information policy

3.0   MAIN CONTENT

3.1   Components of Information Policy

In the earlier unit, information policy was defined by Yusufu (2007) as any law, regulation, rule, or practice (written or unwritten), that affects the creation, acquisition, organization, dissemination, and/or evaluation of information. Information policy has components that are shaping the information society. These are: information creating activities; information products; information distributors; information dissemination; and information users (Yahaya etal, 2019)

Information creating activities
Information is the nutriment for the mind. It must be made freely accessible to support and augment learning. This is necessary for fostering intellectual development and nurturing creative minds (Chatterjee & Samanta, 2021)

Information products These are resources in form of eBooks, Kindle, Audio Recordings, Online Course wares, workbooks, Newsletters Bulletins, etc. They are the different formats information is packaged. Information products are package according to one's needs and patterns, the services are designed and created, for instance, 'Periodical' is an information channel to cater for the current information needs of users (Reddy, Krishnamurthy & Asundi, 2018). The webinar and online course wares are in much demand as platforms for learning since the outbreak of COVD-19. Many institutions adopted these platforms as a measure to continue teaching, learning and research to keep to social distance and abide by the COVID-19 restrictions.

Information distributors: These are the providers of information. They generate and collect information resources from different sources and make them available to users to satisfy their information needs. Examples of information providers are libraries, publishers, database providers etc. Library as an information provider makes use of Internet and other online platforms in addition to the physical form. Shonhe (2017) referred to information providers as librarians, knowledge managers and records managers. They also refer to institutions that create and disseminate information for public consumption (e.g. Libraries, archives and records centers). Online platform offers new opportunities for libraries to move from being mainly providers of information on demand for clients, to active dissemination of information through publishing on the Internet (Clyde,1996). Information distributors provide access to information resources, irrespective of the location of users.

Information Dissemination: The format and platforms for disseminating information has been influenced by Information Communication and Technology. Information dissemination entails that information gets to the right user. Producing information without it getting to the users does not make a complete cycle in the flow of information. When information is produced, it is expected that it will be circulated so that it will satisfy the information needs of users. Libraries as information center have the responsibility of disseminating information to users. However, with Information and Communication Technology some of the information can be disseminated through the Online platform, some can be disseminated through Diskette; Flash Drive or any external disk. It is through dissemination that published resources are distributed to the wider public, to gain visibility and impact. Visibility means that the

information resources are available to those that need them. As they are being utilized, dissemination is impossible without "access" (Chatterjee and Samanta, 2021). As published information resources are accessed and cited, their impact is calculated by their H-index. This is a measure of the rate of citations an article receives. This shows that information dissemination is important for access and use.

Information Users: These are important elements in information policy they make use of the information resources. Reddy, Krishnamurthy and Asundi(2018) defined information user as one who makes use of things. Ranganathan (2006) stated that 'Books are (information) for use' there are no other elements or components to make use of books expect library users or patrons showing that they are meant to use the information resources. There information needs vary depending on the type of library. As you may be aware, libraries deal with information provision. Libraries are known to provide the information needs of their users or clientele or patron as used in most institutions. We have different types of libraries namely; Academic library; Public library; School library; National library; and Special library. These libraries have their different users, and their information needs also varies. For instance, in academic library, they deal with students, faculty and researchers. Their information needs differ from that of researchers in Special libraires. The characteristics of these users also vary. Public library is referred to as People's University. The citizens of a country are free to use their information resources irrespective of their age, gender, occupation, or religion. Public libraires provide extension and mobile library services to rural areas. This is not applicable to academic or research library. The users can make use of the library to read their books or other information resource; to borrow books from the library; to make inquiry; reprographic services; and to have access to the Internet etc. These are some of the services offered by library, to library users. These components should be considered when making policies that affect information use, because they are key players in information distribution and communication.

3.2   Stakeholders of Information Policy

Stakeholders could be referred to as those invested in information policy and those that are affected by the policy. Yusufu (2007, p 9) stated that there are varieties of stakeholders in the information policy process. The stakeholders are concerned with information also from legal or political perspectives. Such stakeholders include:

(i)   Business and industry—these are very active in influencing policies that will affect the dissemination of information and are interested in both the discovery of new knowledge and the organization of current knowledge.

(ii)   Government ministries and parastatals which are responsible for information activities of government. Such ministry and parastatals include (a) Federal Ministry of Information, Youth and Culture. (b) Federal Ministry of Education. (c) Federal Ministry of Science and Technology. (d) Federal Ministry of Tourism. (e) Federal Ministry of Transport and Aviation. (f) Federal Ministry of National Planning. (g) National Communication Commission. (h) National Census Commission. (i) Independent Electoral Commission.

These stakeholders and parastatals under them handle information activities in different sectors of the economy. They are directly or indirectly involved in making policies that affect information distribution and use. In addition, they advise relevant governments when there are challenges in implementations of some of the policies.

4.0   CONCLUSION

Policy formulation and implementation is not the duty of one individual, '*two good heads are better than one*' no wonder we have several stakeholders in information policy. Since the policy affects different sector of the economy, so also should those sectors be involved in the policy for its actualization. The stakeholders oversea the activities of different parastatals under them to make it easy to know what should be best for them. Policies are put in place to avoid some negative effects that were being practiced or observed in the society, or to seek some positive benefit (Yusufu, 2007). The stake holders should ensure that the desired objectives were achieved.

5.0   SUMMARY

In this unit you have been able to understand that information policy are the forces that shape the information society, they include the bodies that make the policy and those the policies are meant for. For effective implementation of information policy, the different components should be considered. In addition, there are stakeholders involved in information policy as discussed in the unit, the stakeholders directly or indirectly influence the policy formulation in a country.

SELF-ASSESSMENT EXERCISE

State the stakeholders in information policy

6.0   TUTORED MARKED ASSIGNMENT

1.   List and explain the components of information policy give two examples of each.
2.   List some of the parastatals involved in information policy

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UNIT 4   INFORMATION POLICY AND LIBRARIES

CONTENTS

1.0   INTRODUCTION

In any library its core functions are: selection, acquisition, processing, and dissemination of information to its different user groups. The functions have been expanded because of the presence of Information Technology. A lot of information, for instance is being produced and packaged in different formats, making them accessible to users irrespective of their location. In order to ensure that the use of the information resources is not abused, there is need for information policy to guide the use and dissemination of the information resources. No wonder in a typical library setting, there are different sections and divisions charged with the responsibility of discharging different services such as information resources development; Information and Communication Technology; Public services etc. The sections have their policy as it affects information use and dissemination. The polices are meant to be updated in line with the current trends in the profession. Some of these policies were discussed in detail in this unit.

2.0   OBJECTIVES

By the end of this unit students should be able to:

- Identify the roles of the library in information dissemination
- To explain the collection development policy
- To identify the extent information resources can be used without violating copyright law.
- To state the information communication and technology policy

3.0   MAIN CONTENT

3.1   Information policy and libraries

Information policy as discussed earlier is the set of rules, formal or informal, that directly shapes the flow of information (Yahaya etal, 2019). Information policy is important in library, as libraries are meant to support teaching, learning and research with their information resources in the institutions. In order to ensure that students or users make proper use of the information resources without violating the copyright law, certain laws or measures were put in place as a check. Library acquires, processes, stores, retrieves and disseminates information resources to users. The place of libraries in keeping track of published information resources play important role in issues of information policy. Basir, Yusof and Zin (2012) highlighted that library is a compulsory component in designing the establishment of an information policy since it has the expertise as an information provider. Libraries are the major purchasers of copyright protected works, both analogue and digital, and are made available for patrons to browse, read and use (IFLA, 2001). Library is thus a stakeholder in information policy. They ensure that information resources are properly used for the purposes they are meant for. As it is the practice in many libraries, you can only make few copies of copyrighted resources for educational use. The idea of reprinting other peoples' works for commercial purposes is not allowed. Library only encourages *fair use*, which involves using part of the resources for educational purposes. Kumar (2017) stated that 'Fair use' is a copyright principle based on the belief that the public is entitled to freely use portions of a copyrighted resources for purposes of commentary, criticism, or parody. Considering the growing trend in information resources, many of the information resources are in electronic format, to enhance accessibility and use, this does not negate adhering to the information policy. There are laws that also guide the use of information resources in an electronic environment. The concern for access to teaching and learning materials (TLMs) is closely related to copyright law and how it impacts human wellbeing (Okoro-Chuma, 2018).

3.2   Copyright

Copyright is part of intellectual property rights that covers literary works. As a student you should be aware of the intellectual property rights, the extent you can use creative works without violating the law especially in this era of information explosion resulting from technological developments. The purpose of copyright act is to enable the creator of the copyrighted work to exploit it commercially besides giving him recognition for his work (Kumar, 2017). Our focus is on copyright since it concerns creative works. As librarians in training, you will be

involved in the management, preservation, and dissemination of creative works, in writing your projects, term papers and to inform library users. Copyrights standards are set by several international treaties which guide all participating countries to adopt or change their copyright based on the limits. Each country sets their own copyright law, they determine who acquires the copyright, and how long the copyright lasts. The rights of the copyright holders vary from country to country. However, the legislature shapes the copyright law, they adopt and modify the status (EILF 2012). In Nigeria, the copyright law is summarized by Funsho as follows (2013)

Type of Work:	Date of Expiration of Copyright
Literary, musical or artistic works other than photographs	Seventy years after the end of the year in which the author dies, in the case of government or a body corporate, seventy years after the end of the year in which the work was first published.
Cinematograph films and photographs	Fifty years after the end of the year in which the work was first published.
Sound recordings	Fifty years after the end of the year in which the recording was first made
Broadcasts	Fifty years after the end of the year in which the broadcast first took place.

Funsho (2013)

Copyright law can be infringed upon when there is a violation without any excuse of any of the exclusive rights for a copyrighted work. Such infringement according to EILF (2012) include:

Direct – When a non-copyright holder engages in any of the activities reserved exclusively for the copyright holder such as producing copies of the book without the permission of the creator.

Indirect/secondary- It happens with direct infringement, but it depends on the intent and abilities of the infringer.

Contributory- A person who collaborates on direct copyright infringement by making his materials available for the work.

Vicarious- When a person should have known that infringement is taking place and to make effort to stop it but fail to do so.

Inducement- A person encouraging others to infringe upon the copyright law even when he/she (the Inducer) is not benefiting from the work

Fair use
Fair use is the circumstance under which a copyrighted publication can be used without seeking for permission or paying for the work. Fair use is a set of guidelines based on four non-exclusive factors. They are; ***The***

Purpose and ***character*** of the use, including whether the use is of commercial nature or for nonprofit educational purposes. ***The Nature*** of the copyrighted work. The ***amount*** and ***substantiality*** of the portion used in relation to the copyrighted work as a whole. The ***effect*** of the use upon the potential market for or ***value*** of the copyrighted work (***Funsho, 2013).***

3.3   Collection Development Policy

The primary function of a written collection development policy is to provide guidance to staff when selecting and deselecting (printed and electronic) resources for the local collection (IFLA, 2001). This guides librarians in the selection of books and stipulates what should be done at each stage throughout the collection development process. Having collection development is important as it helps to set out standard and ensure continuity in the selection and acquisition of information resources. Having a written collection development policy is necessary for selection, planning, public relations and to ensure wider context (IFLA,2001). As a librarian, you are expected to acquire materials that are within the scope to cover the mission and vision of the University.

Selection
Selection may be seen as a critical issue in acquisition of library information resources. This is because it involves selecting the core and right materials from the pull of resources to support teaching, learning and research in any discipline. This requires the expertise of a librarian to make informed decision. As observed in some institutions, the input of Departmental staff is necessary to guide in selection process. In Some cases, selection of information resources may be guided by a reading list generated from the various Departments. This helps the librarian to make informed decision regarding books to be acquired for the Department. With proper selection, the acquisition process becomes easy.

Planning
Policy document helps to determine planning and ensure continuity. In a case of limited financial resources, you can focus on documents that are of immense importance. Having a written document helps to check the achievement of the organizational goals and to ensure the implementation of other library functions such as weeding, lending and reader services.

Public relations
Public relation is important in relating with users and library administration. Formal policy statements can be useful in making the case for the library when dealing with its users, administrators, and funding bodies. (IFLA, 2001). A policy document makes it easy for the library to defend their acquisition in case of any comment or criticism. It also creates awareness or an idea of the type of information resources the user community expects to have in the collection. Policy document also helps make decision on donations to accept information resources, especially when they are not within the subject scope of the library. In most cases donations constitute a challenge to many libraries, as they are confronted with information resources that are not relevant. Thus, on the bases of their policy documents it is easy to make such decisions.

Wider context
There is a saying that '*no library is an Island, and none can claim to be self-sustaining*'. For effective cooperation or consortia, it is important that each library has a focus of the subject area to concentrate in terms of acquisitions. This will help the library build up enough collection from different subject areas. Written collection development is important to ensure wider and global collection of information resources. As stipulated in most collection development policies, the mission and vision of the institution should drive the acquisition of information resources. Hence, the essence of collection development policy in any library.

Components of collection development policy
Any collection development policy should have an introduction which will highlight the mission statement of the library derived from the mission statement of the institution. Other elements include the general statements, narrative statements, subject profiles, collection evaluation methods, collection depth indicators, language codes and policy implantation and revision timetable (IFLA, 2001).

3.4   Information and communication technology policy

National information policy development does not start with information and documentation, but instead starts with technology (Basir, Yusof &Zin, 2012). Information and Communication Technology (ICT) policy focus on the use of technology, how users have access to them, how they

are being used and how secured they are. Rowland (1996) and Hafkin (2002) categorised ICT policy into vertical information policies which address sectoral needs such as education, health, tourism, and industry. Infrastructural information policies deal with the development of national infrastructure they are closely linked with telecommunications. Horizontal information policies deal with aspect of the society such as freedom of information, tariffs, pricing, privacy, and security. The policy makes provision for using ICT for education. You should recall that the use of ICT has permeated into different sectors of the economy. Majority of services are ICT driven. The educational sector should not be left out, for effective service delivery. The ICT is important in education as it provides quicker and easier access to more extensive and current information and can be used to do complex mathematical and statistical calculations (Ibara, 2014). Although technology is a tool, it is important in teaching and learning considering the changes in teaching and learning. In addition, the current global challenge of COVID-19, has forced many institutions to change their mode of teaching and learning. As a result, the role of ICT in the educational sector cannot be played down as many institutions were able to continue their academic programme because they were able to implement and adjust to blended learning. The ICT policy is necessary as it helps many establishments to guide and monitor the use of ICT facilities for improved service delivery.

4.0   CONCLUSION

Information and libraries are inseparable. A library cannot function without selection, acquisition, processing, and dissemination of information resources. For these to be achieved, a lot of functions need to be performed by the library. These functions or services need to be monitored and evaluated from time to time to ensure that the institution achieves its mission and goal. It is therefore important that policies are put in place that will guide these processes.

5.0   SUMMARY

In this unit the concept of information policy and libraries were discussed because library is necessary in the dissemination of information. In order to ensure the sustainability of information processing and dissemination, policy is important both for collection development and acquisition of information and communication technology to avoid abuse.

SELF-ASSESSMENT EXERCISE

In Nigeria we have copyright law, list four different types of work and the dates of expiration of their copyright.

6.0   TUTOR-MARKED ASSIGNMENT

1.   Explain what you understand by collection development policy
2.   Does the library need to have collection development policy? Explain

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MODULE 2 PUBLIC POLICY ISSUES IN THE USE OF INFORMATION

Unit 1   Intellectual property
Unit 2   Economic regulations
Unit 3   Freedom of expression
Unit 4   Freedom of Information Act (FOIB)

UNIT 1   INTELLECTUAL PROPERTY RIGHT (IPR)

CONTENTS

1.0   Introduction
2.0   Objectives
3.0   Main Content
        3.1   Definition of intellectual property.
        3.2   Types of Intellectual Property Rights.
        3.3   The roles of international organizations towards IPR.
        3.4   The importance of IPR.
4.0   Conclusion
5.0   Summary
6.0   Tutor-Marked Assignment
7.0   References/Further Reading

1.0   INTRODUCTION

The IPRs mean the expression of an idea for an invention, the details of which have been worked out and which takes the form of a product or process that can be applied industrially (Sikoyo, Nyukuri and Wakhungu, 2006). There are various IPRs based on the type of information resources or inventions they are granted to. These include patents, trademarks, copyright, rights in performances, designs, plant breeders' rights, utility models, appellations of origins, layout designs and topography (Sikoyo, et al. 2006). The concept of IPRs have generated a lot of literature this is attributed to developments in publishing and access to information caused by Information and Communication Technology. In this unit, we will look at Intellectual property rights, the types, duration of rights, importance, and the roles of international organizations in the protection of intellectual property.

2.0   OBJECTIVES

At the end of this unit, you will be able to:
•   Define the concept of intellectual property.
•   Explain the types of intellectual property.
•   Explain the roles of international organizations towards IPR.
•   List the importance of IPR.

3.0   MAIN CONTENT

1.   The concept of Intellectual Property.
2.   Types of Intellectual Property Rights.
3.   The roles of International Organizations towards IPR.
4.   The Importance of IPR.

3.1   Definition of Intellectual Property

Intellectual Property Right has been defined as ideas, inventions, and creative expressions based on which there is a public willingness to bestow the status of property (Saha and Bhattacharya, 2016). Protecting creators' rights is important in promoting scholarship, hard work and investment so that the creators will benefit from their intellectual works. Intellectual Property Rights (IPRs) refers to the legal rights given to the inventor or creator to protect his invention or creation for a certain period (Singh, 2004). There are durations to intellectual property rights. This is the period when the creator is allowed to benefit from the creation before allowing them to be in the public domain. The IP right can only protect original intellectual works. The IP right plays an important role in the economy especially with the presence of information technology where the materials are in softcopy and can easily be copied. Imagine a situation where an individual developed a creative work or invention and after some time another person has copied and duplicated the work and made some money out of it. Meanwhile, the creator has not benefited anything thus, creativity, hard work will be demoralized. This will affect the development of that nation. With the IPRs it will help in maintaining standard and guide against fake products, since no manufacture or producer will be happy to destroy his/her trade name. When the laws are put in place, you find out that people will work hard to bring in new innovations thereby encourage healthy competitions among the citizens. Savale and Savale (2016) gave some examples of intellectual property rights to include copyright, a distinctive logo design representing a soft drink company and its products, unique design elements of a web site, or a patent on the process to manufacture chewing gum. These are ideas and innovations from people that should be protected, and the creators make benefits from their works.

Many countries have IPRs which they grant to creators and inventors in their countries. The only difference is that the duration may vary among the countries. For you to be granted IPRs, you must register your creative work or invention within the region of the invention and provide the necessary documents as required. This will help them to process your application and make the necessary investigations to ensure you are the creator or inventor of the idea. If your application is found to be genuine and satisfactory, the IPRs will be granted to your work. With the use of

technology some of these services and processes are now easy and faster without another person coming up with similar invention or creative work. Application process may vary in each region and your restriction is valid within the region or territory you got the IPRs. For example, a patent granted in Nigeria is not valid in Europe. As a librarian in training, IPRs is a very useful tool in protecting peoples right, time and money as it affects creative works, designs, logos inventions etc. Thus, in this way IPRs aids the economic development of a country by promoting healthy competition and encouraging industrial development and economic growth in all aspects.

There are stakeholders involved in IPRs. They include the different groups that have interest or involvement in digital information. Any strategy for digital preservation will consider the various needs and perspectives of this group. Such groups include authors; publishers; libraries; archive centers; distributors; information providers; IT suppliers; legal depositors; consortia; universities and research funders.

3.2   Types of Intellectual Properties Rights (IPR)

Intellectual Property Rights (IPRs) have been grouped into different types based on the materials that are involved. As listed in WIPO (2014), IP include patents for inventions, trademarks, industrial designs, geographical indications and copyright.

PATENTS
A patent is the registration required for innovative ideas, exclusive right is granted to the inventor to benefit from the invention for a limited period. For this right to be granted, the invention must be new. Patent protection means that the invention cannot be commercially made, used, distributed or sold without the patent owner's consent (Savale & Savale, 2016). By this right , the inventor decides who will use the invention within the period the protection right last. This protection is supposed to last for twenty years from the time the application was filed. The inventor is free to give permissions to anyone he deems to permit based on agreement. As soon as the license expires, the invention is moved to the public domain which implies that the inventor does not hold the exclusive right again. On the other hand, the inventor is expected to make known information about the invention, since the protection has expired. This will help others to improve on what was discovered earlier and contribute to economic and national development. Patents provide not only protection for the owner but valuable information and inspiration for future generations of researchers and inventors.

TRADEMARKS

A trademark is a distinctive sign that identifies certain goods or services as those produced or provided by a specific person or enterprise (Savale & Savale, 2016). It may be symbols or letters to differentiate it from other trademarks. Many companies have their different trademarks that distinguishes them from each other based on their products.

Source Market Business News
https://marketbusinessnews.com/financial-glossary/trademark-definition-meaning/

This mark is important as it helps to identify goods that belong to each company. In addition, it helps to identify fake products as no company would like to compromise on its trade name or product. Registration of trademark is a proof of its ownership giving statutory right to the proprietor. Trademark rights may be held in perpetuity. The initial term of registration is for 10 years; thereafter it may be renewed from time to time (Savale & Savale, 2016).

COPYRIGHTS AND RELATED RIGHTS

Copyright is a legal term describing rights given to creators for their literary and artistic works. Such works include: literary works such as novels, poems, plays, reference works, newspapers and computer programs; databases; films, musical compositions, and choreography; artistic works such as paintings, drawings, photographs and sculpture; architecture; and advertisements, maps and technical drawings (Savale & Savale, 2016). Copyright provides for both economic and moral rights (WIPO, 2016), protection to creative works usually lasts for the lifetime of the author and 60 years after the death of the author. Within that period, the creator has the protection to make use of the creative work, give permission to any one he wants and make benefits from it. This was discussed in detail in module 1 unit 4.

GEOGRAPHICAL INDICATIONS

A Geographical Indication (GI) is a sign used on goods that have a specific geographical origin and possess qualities or a reputation due to that place of origin (Dittmer & Rehaag, 2021). It points to the specific place where the product originates from, to determine the characteristics of the products. This is mostly peculiar to agricultural products, which most times are influenced by local factors.

INDUSTRIAL DESIGNS

An industrial design refers to the ornamental or aesthetic aspects of an article applied to a wide variety of industrial products and handcrafts including fashion items (Dittmer & Rehaag, 2021). Under the TRIPS Agreement, minimum standards of protection of industrial designs have been provided for (Savale & Savale, 2016).

3.4 Role of International Organization Towards IPR

The role of international organizations towards IPRs cannot be overemphasized. Such organizations include World Trade Organization (WTO), World Intellectual property Organization (WIPO), European Patent Organization (EPO).

They regulate the maintenance of IPRs.

World Trade Organization (WTO)

The main objective of WTO is to improve the welfare of people of member countries. Its main function is to ensure that trade flows as smoothly, predictably & freely as possible. Their functions as summarized by (Savale & Savale, 2016) are as follows;

WTO functions
- To oversee implementing and administering WTO agreements.
- To provide a forum for negotiations.
- To provide a dispute settlement mechanism.
- To administer trade agreements.
- To review national trade policies.
- To assist developing countries in trade policy issues.
- To cooperate with other international organizations.
- Ensure trade flows smoothly.
- Provide developing countries with trade related training programs

World Intellectual Property Organization (WIPO)

The World Intellectual Property Organization (WIPO) was established in 1970. WIPO is dedicated to developing a balanced and accessible international intellectual property (IP) system, which rewards creativity, stimulates innovation and contributes to economic development while

safeguarding the public interest. The WIPO performs the following functions as stated by (Savale & Savale, 2016);

Functions of WIPO

➢ Harmonize national intellectual property legislation and procedures.
➢ Provide services for international applications for industrial property rights.
➢ Exchange intellectual property information.
➢ Provide legal and technical assistance to developing and other countries.
➢ Facilitate the resolution of private intellectual property disputes.
➢ Marshal information technology as a tool for storing, accessing, and using valuable intellectual property information

European Patent Organization (EPO)

The Role and Functions of the EPO as stated by (Savale & Savale, 2016)

➢ European Patent Office, the executive branch of the European Patent Organization
➢ Implementing the European Patent Convention
➢ Overriding principle: patents stimulate innovation and economy
➢ Giving effect to the decisions of the political leadership.

1.5   Importance of Intellectual Property Rights

IPRs play an important role to the development of the society. It provides incentives and renumeration for authors or creators of creative works. This type of motivation encourages health competition among the citizens. It also encourages hard work. Foreign investors are also encouraged to invest in such an economy. Some of the importance of IPRs are:

➢ The IPRs provide incentive to the individuals for new creations, and recognition to the creators and investors. Since the inventors have reward for their time and energy spent in the development of new ideas, it will encourage them to develop more innovations.
➢ Intellectual Property Rights encourages collaboration and teamwork in discovering innovations. Since one can have access to information on how the invention was made, others can easily improve on what was already done to produce better result. No wonder that most institutions' research centers involved in research are so kin in research data management which helps in authenticating the results or findings from a research and help to avoid duplication.
➢ IPRs ensure the availability of the genuine and original products. Intellectual Property rights, such as patent and copyrights are

important means used by firms to help protect their investments in innovation (Shankar-Narayanan, 2010).

➢ IPRs encourages hard work and discovery of new ways of doing things. For example, in most communities; inventors work hard to discover new ways of doing things most times at a low cost to reduce the challenges in the country. This helps to solve some of the global challenges.

➢ IPRs is important in sustaining the economic growth of any country. When peoples' inventions and creative works are protected it will encourage investment and creativity from both citizens and people from other countries. However, if anybody can steal or pirate any innovation, it will deter people from wasting their time and money in investing in such country. So, it is important to sustain the IPRs to enhance economic and industrial growth.

4.0   CONCLUSION

The basics of the IPRs is to protect intellectual creativity, encourage hard work and originality of work. Investment and innovations are important for national and economic development of any nation. Thus, any effort to encourage investors by protecting their rights should be sustained. Intellectual property rights are one of the most important aspects of the creative work. The right ensures incentive to invention, competition, recognition, financial support, and collaboration.

5.0   SUMMARY

In this unit the term 'intellectual property right' was explained and different types were also identified. The importance of IPRs were identified and the roles of international organisations towards intellectual property rights highlighted. This shows that this right is a universal issue as it does not affect only our country. You should endeavor to know more about IPRs as it affects the creators of creative works and other intellectual and industrial works.

SELF-ASSESSMENT EXERCISE

State the roles of international organization in the implementation IPRs

6.0   TUTOR-MARKED ASSIGNMENT

1.   Define Intellectual Property Right
2.   Name and explain the different types of intellectual property right
3.   List and explain the importance of intellectual property right

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UNIT 2   ECONOMIC REGULATIONS

CONTENTS

1.0   Introduction
2.0   Objectives
3.0   Main Content
       3.1   Definition of Economic Regulations.
       3.2   Importance of Economic Regulations.
       3.3   Challenges of Economic Regulations.
4.0   Conclusion
5.0   Summary
6.0   Tutor-Marked Assignment
7.0   References/Further Reading

1.0   INTRODUCTION

Regulation involves putting rules and laws in place by government to check the activities happening in the country and those of the citizens, in most cases there are penalties for offenders. If penalties are not enacted as strategy to check the regulations, the citizens may not observe the law. Even in institutions, there are regulations made that guide the smooth running of the institutions. Regulation is the imposition of rules by government, backed by using penalties specifically to modify the economic behaviour of individuals and firms in the private sector. Various regulatory instruments include, prices, output, rate of return (in the form of profits, margins, or commissions), disclosure of information, standards, and ownership ceilings (Khemani & Shapiro, 1993). Economic regulation aims at creating a system of incentives and penalties to support the outcome of competition in terms of price and quality considering the interest of the consumers. There are regulations mandated by the government, by professional bodies for the interest of the association and their members. Those adopted by professional bodies, or most times individuals are referred to as self-regulation. Self-regulation may be adopted to maintain professional reputation, education, and ethical standards. They act as a vehicle to set prices, restrict entry and ban certain practices (e.g. advertising in order to restrict competition (Khemani & Shapiro, 1993). This course is important in creating the necessary awareness regarding economic regulations. Self-assessments outlined in this course will help you to understand better, issues concerning economic regulations and its importance.

2.0   OBJECTIVES

At the end of this unit, you will be able to:

- Define the concept economic regulation.
- List the importance of economic regulation.
- Discuss the challenges of economic regulation.

3.0   MAIN CONTENT

1.   Definition of economic regulation.
2.   Importance of economic regulation.
3.   Challenges of economic regulation.

3.1   Definition of economic regulation.

According to most literature surveyed, economic regulation can be referred to as the act of creating or influencing markets; or it can mean the institutions for the setting of prices and service standards (Essential Services Commission, 2001). Some authors argued that it is a form of government-imposed restrictions on a firm's decisions regarding price and quantity in the market. Economic regulation is seen as being of less about *correcting* for market failures and more about *enabling* markets to work more effectively (Essential Services Commission, 2001). Economic regulators act as a visible hand to guide service providers not to exploit their consumers. With economic regulation there is discipline of competition and consumers are put into consideration. Although the producers or service providers are meant to make profit from their services, it is not to the detriment of the consumer and the quality should not be compromised either. Economic regulations entail providing an assurance to customers who must bear the price of those decisions that those prices are indeed fair and reasonable. This is an important measure being put in place by governments in most country to ensure that consumers are protected. In Nigeria, we have the Standard Organization of Nigeria (SON) and the Consumer Protection Council (CPC). SON is concerned with making sure that the goods produced or imported into the country are of standard. Their primary aim is to improve the lives of Nigerians through standardization (Olawale, 2021). While CPC is concerned with the complaints of consumers. They educate consumers and ensure that the products are of good quality to safeguard their interest.

3.2   Importance of economic regulation

The importance of regulations cannot be relegated to the background. Some key essentials of economic regulations are outlined as follows (Hahn, 2010)

- Economic regulation is important to curtail the influence of market power and ensure efficiency especially in case of monopoly.
- Consumers need protection from high prices from producers as well as maintain quality for the products they are paying for.
- It is important to prevent unhealthy competition and protect suppliers from unstable output and low-price conditions.
- To encourage hard work and generation of income for the benefit of the individuals and the government.
- To address market failures where true costs and benefits are not reflected correctly in market prices.
- To provide a level playing ground for the suppliers to help reduce barriers and encourage competition and innovation which will enhance economic growth.
- To ensure consumers, workers and investors safety and transparency in information about products, services and fair distribution of net benefits.

3.3   Challenges of economic regulations.

Economic regulation despite its importance in protecting the interest of consumers has the following challenges as highlighted by (Hahn, 2010)

- Although the Federal Government has made regulations, the agencies most times fail to do proper monitoring. As you are aware that an average individual need to be supervised and monitored for you to achieve result. In some cases, the agencies lack adequate data and proper analysis of the situation for the work.
- It is important to compare the effects of economic regulations from time to time (involving discount rates), place values on human life and deal with uncertain outcomes is technically complicated. Hahn (2010) is of the opinion that there has not been much improvement in the practice of regulatory assessment in terms of the rigor and quality of economic analysis and its potential to improve regulatory policy.
- There are understandable and persistent political obstacles to strengthening the role of economic assessments in regulatory decision making (Hahn &Tetlock, 2008)
- There is also the challenge of enforcing the regulations. If offenders were not properly disciplined, many people will

disregard the policy. So, it lies on the agencies to enforce the regulations and ensure that offenders were properly disciplined as a deterrent to others who may wish to flout the regulation.

4.0 CONCLUSION

The concept of economic regulations cannot be over-emphasized. From the moment we wake up until the time we go to sleep regulations influence most of the things we do. The awareness gained from economic regulation is important for students, institutions, organizations and businesses etc. It provides the knowledge that guides the economic sectors and regulates their activities most especially as it affects the final consumers. The key point lies on you as a student to get acquainted with the knowledge shared to assist yourself and others that may come to you for assistance regarding the subject matter.

5.0 SUMMARY

In this unit, you have been able to understand that economic regulation is important to protect the interest of consumers and ensure that producers maintain standard. There is discipline of competition and consumers are put into consideration, even though the producers or service providers are meant to make profit from their services. Economic regulation helps to curb market power and increase efficiency. However, there is the challenge of maintaining the regulation due to insufficient data.

SELF ASSESSMENT EXERCISE
Define economic regulations

6.0 TUTOR-MARKED ASSIGNMENT

1. List and explain the importance of economic regulation
2. What are the challenges that can hinder full actualization of economic regulation

7.0   REFERENCES/FURTHER READING

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UNIT 3   FREEDOM OF EXPRESSION

CONTENTS

1.0   INTRODUCTION

Freedom of expression is a fundamental human right. People are free to express their views and feelings without any molestation or confrontation from the state, unless in a situation where there is restriction on such information by Government. Every individual has the right to express himself or herself. Those who enjoy the right include corporations, media organizations and campaign groups. The right to freedom of expression is also a fundamental right. The right to express oneself encompasses not only speech which is generally accepted or is respectful in tone but also controversial or offensive speech (Law and democracy, 2014) This course is very important in creating the vital knowledge regarding the concept of freedom of expression. The course, discussions, exercises, and self-assessments outlined in this course will help you to grasp the multi-faceted discourse of freedom of expression.

2.0   OBJECTIVES

At the end of this unit, you will be able to:
- Define the concept freedom of expression.
- Discuss the curtailing tools of freedom of expression.
- Outline the importance of freedom of expression.
- Explain the restrictions of economic regulations.

3.0   MAIN CONTENT

1. Definition of freedom of expression.
2. Freedom of Expression curtailing tools.
3. Importance of Freedom of expression.
4. Restrictions of Freedom of expression.

3.1   Definition of Freedom of Expression (FOE)

Freedom of expression is a fundamental human right guaranteed under international law and virtually by every constitutional bill of rights in the world (Law democracy, 2014). Freedom of expression is important to human development, fulfillment, and search for truth fundamental to democracy and good governance. It encourages free debate between the parties involved. Citizens can easily raise concerns with authorities to ensure that new polices and legislations are scrutinized. Freedom of expression encourages the masses to speak their mind and the authorities on the other hand ensure they perform their duties and maintain their integrity since they know that their activities will be scrutinized. When there is no freedom of information it is a threat to democracy. International organizations such as Universal Declaration of Human Rights (UDHR), reorganized the right to freedom of expression. Article 19 of the UDHR states: that everyone has the right of expression such as to hold opinion without any interference or to impart on other people through any media. Freedom of expression is also protected in regional human rights treaties, including the African Charter on Human and People's Rights, the American Convention on Human Rights, and the European Convention on Human Rights (Law democracy, 2014).

3.2   Tools Used in Curtailing Freedom of Expression (FoE)

Traditional censorship
• Arrests and criminal proceedings are frequently used to restrict FoE. Broad definitions of terrorism meant that human rights defenders, with no affiliation to terrorist organizations, are often labelled as threats to national security ((Law democracy, 2014).   In some African and Asian countries, individuals risk detention, investigation and litigation for criminal or civil defamation or sedition. The Tajikistan case study proves illustrative as several leading figures in the Islamic Renaissance Party of Tajikistan (IRPT) have been arrested and tried in secret under the guise of Countering Violent Extremism (CVE). According to the Human Rights Watch (2016), alarm was expressed that governments in some quarters, through acts or omissions, are increasingly relying on violence against these actors to limit FoE.

Technological censorship
Authoritarian governments have learned from the 2011 Tahrir Square protests in Egypt, during which social media was instrumental in the organization of public protests. Shutting down entire services and networks during times of unrest has since become routine.

Prior censorship

Prior censorship is a tool frequently applied to the arts. The approval or disapproval of film scripts, for example, is a way in which expression is censored prior to the act. It was argued that this form of censorship is prohibited under the International Covenant on Civil and Political Rights (ICCPR) and the Universal Declaration of Human Rights (UDHR). However, some states may impose prior restraint on FoE on grounds of national security as states in military situations continually use prior censorship. The broad view was that the abuse of the prescribed exceptions to the ICCPR and UDHR presents a further challenge to FoE.

3.3   Importance of Freedom of Expression

The importance of freedom of expression has been emphasized by (Law and democracy, 2014) they are as follows:
1.   They are essential to democracy, transparency, accountability, and the rule of law.
2.   To ensure human dignity, social progress, and inclusive development, freedom of expression is important.
3.   Having freedom of expression individuals feel free to contribute to public issues and access information from different sources. The citizens having access to information and freedom to express their right concerning access to public authorities is important in sustaining national development.
4.   It imposes both negative and positive obligations on the State. On the negative aspect, the state has the obligation not to interfere with the right to receive or impact information except as permitted by international law. While the positive obligation is essentially to create an environment which supports a free flow of information and ideas in society. It includes elements such as the obligation to put in place a legal framework for accessing public information and to create an environment in which a free and independent media can flourish.
5.   It protects the right to access information from outkside the country, whether in the form of broadcasting, newspapers, the Internet or speaking to someone in another country.

3.4   Restrictions of Freedom of Expression
- **Countering violent extremism**

With the threat of terrorism, countering violent extremism (CVE) has come to dominate the global political agenda, resulting in restrictions of FoE. The European countries are more likely to turn a blind eye to states adopting measures that restrict FoE, apparently in the name of CVE. Tajikistan, for example, has adopted several restrictive measures despite never having had a serious issue with terrorism. Attendees asserted that these measures lack the detail and nuance of the legislation being

imitated. The impact has been media blackouts and suspensions of communication networks. Additionally, with the justification of CVE, Tajikistan has restricted the media, civil society, and political opposition.

- **Preservation of government control**

The Internet has decentralized and democratized access to information and to communication. As governments have instinctively centralized the loss of control over the flow of public information is counter-intuitive. Restrictive policies may reflect a desire to reassert control over public information. The growth of the power of corporations within the digital sphere was also cited as a contributing factor. This rationale is employed by democratic and non-democratic countries alike, as exemplified by David Cameron's speech in the aftermath of the 2015 Charlie Hebdo attacks calling for full access to online communications. Some governments pursue policies that restrict FoE to preserve the integrity and control of government.

- **Protecting morals, religion and against offence**

The desire to protect traditional values and religion against offences also restrict government policies towards FoE. Some state laws are enacted to protect government officials from abuse and insults

4.0   CONCLUSION

The knowledge on freedom of expression is important for students, institutions, organizations, and governments most especially as it provides the necessary awareness regarding the subject matter and also regulates information use. It also helps in a long way to uphold the rights of citizens, most especially the critical stakeholders in freedom of expression. The point lies on you as a student to get abreast with the existing knowledge to uphold the human rights regarding freedom of expression.

5.0   SUMMARY

In this unit we discussed the right of freedom of expression which empowers every citizen to express himself or herself and feel free to comment on the issues concerning democracy. Other issues treated in this unit include tools used to curtail freedom of expression, importance of freedom of expression and the restrictions to freedom of expression.

SELF-ASSESSMENT EXERCISE
There are some restrictions to freedom of expression list and explain four of them

6.0   TUTOR-MARKED ASSIGNMENT

1.   Define freedom of expression as discussed in this unit
2.   List and explain the machineries to be used in curtailing freedom
        of expression
3.   State some of the importance of freedom of expression in the
        country

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UNIT 4   FREEDOM OF INFORMATION ACT

CONTENTS

1.0   Introduction
2.0   Objectives
3.0   Main Content
        3.1   Definition of freedom of information act.
        3.2   History of freedom of information Act (FOIA)
        3.3   Sectional Arrangement of the Act.
        3.5   Importance of freedom of information Act.
        3.6   Challenges of freedom of information Act.
4.0   Conclusion
5.0   Summary
6.0   Tutor-Marked Assignment
7.0   References/Further Reading

1.0   INTRODUCTION

Accessing information withheld by public authorities is a fundamental element of the right to freedom of expression as provided for in the Constitution of the Federal Republic of Nigeria (1999). Freedom of expression act is important for proper functioning of democracy in the country. Access to information as enshrined in the constitution is an important section of the universal guarantee of freedom of information which includes the right to seek and to receive as well as to impart information. The Act applies not only to public institutions but also to private organizations providing public services, performing public functions, or utilizing public funds. The underlying philosophy of freedom of information is that public servants are custodians of a public trust on behalf of a population who have a right to know what they do. Particularly, the act is meant to remove the aura of mystery and exclusion with which public servants stagnate the ordinary operations of government and public institutions. It also addresses the change of the way public records and information are managed (Constitution of the Federal Republic of Nigeria, 1999). This course is very important in creating the vital awareness regarding the Act of freedom of information. The course, discussions, exercises, and self-assessments outlined in this course will help you to grasp the whole idea of freedom of information act (FOIA).

2.0   OBJECTIVES

At the end of this unit, you will be able to:

• Define the concept of freedom of information act.
• Outline the Sectional Arrangement of the a
• Outline the Importance of Freedom of Information Act.
• List the Challenges of Freedom of Information Act.

3.0   MAIN CONTENT

1.   Definition of freedom of information act.
2.   Sectional Arrangement of the Act.
3.   Importance of freedom of information Act.
4.   Challenges of freedom of information Act.

3.1   Definition of Freedom of Information Act (FOIA)

The Freedom of Information Act (FOIA) gives a person or group the right to access information from government agencies and parastatals, private and Public sector organizations providing public service etc. With this act, public records and information are made freely available for people to access. The trend in information use and access is the make them freely accessible and government or public information should also be accessible. For any national development, access to information is necessary. The citizens should know what is happening within the state and be free to contribute or criticize the government in case of any misappropriation. Open access to information is important in any country and there should not be restriction to information. As the saying goes '*information is power*'.

3.2   Sectional Arrangement of the act.

The Freedom of Information Act is arranged under the following headings as listed by IMS (2017)
➢   Rights of access to records.
➢   Information about public institution.
➢   Request for access to records
➢   Time for granting or refusing application
➢   Transfer of application
➢   Extension of time limit for granting or refusing application
➢   Where access is refused.
➢   Fees.
➢   Record keeping and maintenance of records
➢   Destruction or falsification of records
➢   Exemption of international affairs and defense.

➢ Exemption of law enforcement and investigation.
➢ Training of officials on the right to information and on the effective implementation of this Act
➢ Exemption of personal information.
➢ Exemption of third-party information.
➢ Exemption of personal or other privileges conferred by law.
➢ Exemption of course or research material.
➢ Severability.
➢ Denial by a public institution to disclose records.
➢ Judicial review.
➢ Hearing in a summary way.
➢ Access to information by the Court.
➢ Court to take precautions against disclosing information.
➢ Burden of proof.
➢ Order to disclose information.
➢ Exempted materials.
➢ Protection of public officers.
➢ Documents under classification.
➢ Submission of reports.
➢ Complimentary procedures.
➢ Interpretation.
➢ Citation.

3.2   Importance of Freedom of Information Act.

According to Ajibade (2016), the importance of FOIA as highlighted by political analyst: are:

1. Freedom of information is a vital tool to ensure democracy and responsible governance.
2. Where there is freedom of information any act of corruption or misconduct by government will be revealed by the citizens. This helps to put government in check by the citizens.
3. The FOIA also guarantees a right of access to information to everyone in the country and as such, it places enormous responsibility on those who hold information.
4. Freedom of information is helpful to various government agencies like the National Human Rights Commission (NHRC), the Independent Corrupt Practices and Other Related Offences Commission (ICPC), the Economic and Financial Crimes Commission (EFCC), the Code of Conduct Bureau and other law enforcement agencies in performance of their duties.
5. Where there is freedom of information justice is ensured, cases in court are dispensed with, as fast as people are willing to give witnesses. Unlike in a situation when people do not have the freedom to freely to express themselves.

3.3   Challenges of Freedom of Information Act.

According to Ajibade et al (2016), the challenges of FOIA include;

1.   There are a lot of exemptions to access to information, this creates room for some mischievous individuals to exploit those situations and use the information resources wrongly.

2.   The judiciary has a major stake for effective implementation of the Freedom of Information Act, since they have the responsibility of determining the information that should be made available to the public. If the judiciary is not active, it affects the implementation.

3.   Some existing laws that have some sections aimed at suppressing the free flow of information in the country are still operational. For example, the Evidence Act, the Public Complaints Commission Act, the National Securities Agencies Act. These laws may affect the FOIA since there are some exemptions or loopholes to use in avoiding the obligations of FOIA.

4.0   CONCLUSION

The foregoing knowledge on freedom of expression act is important for students, institutions, organizations, governments, and the public at large etc. It provides the necessary awareness regarding the subject matter. It also helps in ideal accessing of information and as a vital tool for democracy to thrive. Information held by public authorities is not acquired for the benefit of officials or politicians but for the public (Ajibade, 2016). Everyone is expected to have access to information since it is for public consumption. It can be withheld from circulation if there is a reason or in cases on censorship or when the information is offensive. It is the responsibility of government, public administrators, and citizens to ensure that FOIA is effectively implemented in the country. The freedom of information act is an essential tool for national and socio-economic development in the country. The point lies on you as a student to get acquainted with the Act to uphold the human rights as it pertains to you and others too.

5.0   SUMMARY

In this unit we discussed the Freedom of information act which is an important tool for socio-economic development. The arrangement of the sectional acts was also presented, the importance and challenges of this act as it affects the government and citizens were highlighted.

SELF-ASSESSMENT EXERCISE

State the importance of the Freedom of Information Act to national development.

6.0   TUTOR-MARKED ASSIGNMENT

1   Define Freedom of Information Act
2   List six sections of the Freedom of Information Act

7.0   REFERENCES/FURTHER READING

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MODULE 3   DIGITAL ENVIRONMENT

Unit 1   Definition of the concept of digital Environment and characteristics
Unit 2   Creative Common License
Unit 3   Access rights to information in a digital environment
Unit 4   Relevance of Copyright law in a digital environment

UNIT 1   DEFINITION OF THE CONCEPT OF DIGITAL ENVIRONMENT AND CHARACTERISTICS

CONTENTS
1.0   Introduction
2.0   Objectives
3.0   Main Content
        3.1   The concept of digital Environment
        3.2   Characteristics of digital Environment
        3.3   Resources available in a digital environment
4.0   Conclusion
5.0   Summary
6.0   Tutor-Marked Assignment
7.0   References/Further Reading

1.0   INTRODUCTION

Information and Communication Technology (ICT) has made much in road into different sectors of the economy associated with the digital age. The digital age has witnessed the permeation of digital technology into virtually every area of human endeavor, including education (Chuma-Okoro, 2018). Most manual services now flourish in a digital platform, with many advantages for both the producers and users of information and other services. An economy that is thriving on a digital platform has many advantages, such as time, space, accessibility, and convenience. However, many people that demean its benefits are still technophobia in adapting to these innovative services. All you need to do as a student is to get skilled to enable you key into the system. In this unit, you will understand what a digital environment is, the characteristics and the type of services and resources available in a digital environment.

2.0   OBJECTIVES

At the end of this unit, you are expected to:

1.   Explain what a digital environment is
2.   Identify the characteristics of a digital environment.
3.   Mention the resources available in a digital environment.

3.0   MAIN CONTENT

1.   The concept of digital Environment
2.   Characteristics of digital Environment
3.   Resources available in a digital environment

3.1   The Concept of Digital Environment

A lot of concepts have emerged from the concept *digital,* such as digital economy, digital education, digital environment, digital era, digital divide, digital native, digital migrants etc. They all serve to define electronic technology (Shilnikova, Zaykova, and Pashkova, 2020). Digital technology transforms the manner of production, dissemination and storage of data (Chuma- Okoro, 2018). This contributed to the emergence of digital platforms or digital environment where learners are expected to learn and interact using the technologies. The digital environment includes the entire continuum of computer and network technologies (Syuntyurenko, 2019). The digital environment enables instantaneous and cross-border exchange of information. The NATO (2014) has drastically changed the information seeking patterns of information users of every community (Das & Jadab, 2017). In this unit, digital environment as used referred to access and use of information resources in an online platform as it affects the library. In the library environment, digital technology has transformed many services, such as acquisition, classification dissemination and use of information resources. This has contributed a lot to improve service delivery in library. In a digital environment, the services are technologically driven. It differs from the traditional system where most of the services are manual. The electronic platform makes library services easier and faster unlike the manual services. This makes most libraries to digitize their information resources to make their resources visible in online platform. Students prefer the electronic format of information rather than printed format (Das & Jadab, 2017). The electronic information sources have the advantages of being delivered to the end users at their desktops (Arshad & Ameen, 2018).

3.2   Characteristics of Digital Environment

Digital environment is characterized by the fact that: it is procedural; Digital environments are participatory; Digital environments are spatial; Digital environments are encyclopedic (Murray, 1998). That **Digital Environment is Procedural** implies that in a digital environment the process follows a specified procedure, you should be aware that computer is 'Gabage-in-Gabage-out'. Hence, what you keyed into the system will determine the result you will get. The computer system makes use of

programming language which consist of codes. Using the correct coding will generate a correct result.

Digital Environment is Participatory implies that in a digital platform you are expected to interact with the technology. Most online platforms are user-friendly that you can navigate with ease. In some cases, there are tutorials to guide you in making use of the system. This is not the same with the traditional system where you need the presence of a library staff to instruct you or direct you on what to do.

Digital Environment is Spatial implies that technology is dynamic and interactive; you can multitask it. Murray (1998) stated that computers provide space that people can move through unlike books and videos. Technology is flexible such that you can use it for different purposes. All that is expected is for you to acquire the basic skills to navigate. You can add or edit in some cases. This is unlike books where you do not have the permission to add anything.

Digital Environment is Encyclopedic; When you said that somebody is an encyclopedia, it means the person has abroad knowledge or that the person knows everything. In a digital environment you are exposed to a lot of information and platforms that will teach you some skills and techniques. Most platforms make use of cross-referencing- refereeing you to sites or platforms where you can get more information in your area of study or research. All you need to do in such situation is to click on the embedded link to take you to the appropriate site with ease. This is not applicable with books where you have cross-referencing to search for the books referred to. You may be unlucky the book may not be available on the shelf. Hence, digital environment may be referred to as learner centered, taking cognizance of the fact of the laws of Ranganathan,

'***Books are for use and Save the time of a user***. 'Other characteristics of digital environment is that it provides the platform for multiple use which most times may not be applicable in the traditional system. Digital environment is not space bond. It encourages collaboration and consortium arrangement.

The paradigm shift from the traditional to the digital environment also affects the roles of librarian and the services they perform in library. This was articulated by Witten, Bainbridge, and Nichols (2010) that the digital environment has changed the roles of librarians. There is a paradigm shift in most of the services performed manually, they include;

Librarians' role	Physical content	Digital content
Librarians	Enabling access to content	Restricting access to content
	Managing physical objects produced by others	Publishing content produced by organization
User support	Face-to-face	Computer-based interaction
Acquisition	Purchasing physical objects	Digitize physical content
Serials	Selecting and processing physical journals	Negotiating electronic access to online journal
IT support	Managing an integrated library system from a large systems vendor	Running content management systems Running a website Content updating and uploading of digital content.

Source: Witten, Bainbridge, and Nichols (2010)

In digital environment, the emphasis on library shifted from being situated in a place to being global to enhance visibility and access. Users access the resources irrespective of their location, without restrictions to time or space. These are the innovations that have been witnessed in libraries because of technology and the digitization of library information resources.

3.3   Resources and Services Available in a Digital Environment

Some of library resources and services that have been transformed into digital platform are institutional repositories, Online Public Access Catalog, electronic Databases, etc. There are search engines like Google, MSN, yahoo etc. Access to the information resources in digital environment is no longer restricted to the catalog

Institutional Repository
Institutional repository contains research outputs that emanates from a university, that owns the contents. Materials that ere archived in an institutional repository include theses and dissertation, journal articles, books, book chapters, inaugural lectures, etc. These contents are digitized and uploaded in a website for access and visibility. It covers the different subject areas available in the University programme. It is the pride of any higher institution, University, Institute and Research centers. There are software for building an institutional repository. Some of the software are open source while some are proprietary. For the open-source software, you can download it, install, and customize it to suit your needs. You do not need to pay subscription fee. Examples are Dspace, Greenstone etc. While the proprietary software you are expected to pay subscription fee renewable each year eg. Eprint etc.   In Nigeria, there are thirty institutional repositories as captured in the Directory of Open Access Repository (DOAR, 2021). For more information on the institutions that have repository in the country Click on this link

Directory of open access repository is a quality-assured global directory of Academic Open Access Repositories that enable identification and browsing for repositories (Ukwoma &Ngulube, 2020). In DOAR, the contents are open access, which means that anyone can access and download materials from the DOAR without payment.

Online Public Access Catalogue (OPAC) is an access point to the collections available in a library. It performs the same function as library card catalogue. The difference is that the OPAC is in a digital environment, and it is globally accessible. In creating the OPAC, Library Management Software (LMS) like Koha, Millennium, Alice for windows, may be used. The LMS has different fields/modules that capture the activities in different sections of library, such as Acquisition, Cataloguing, Serials, Circulation, Reports, Administration etc. Each of the modules contain information as is being performed in that section. Acquisition module provides the field that captures the bibliographic details and status of the books ordered by a library, waiting for acquisition function to be completed before it is moved to cataloguing. In cataloguing, subjects and call numbers are assigned to the book for easy access and retrieval. Circulation module provides the fields for user registration, charging and discharging of books. From report module you will ascertain the user statistics, the volume of the collections in library and other information which may be needed. The OPAC is an important tool in any library which helps users to check the availability of information materials in a library.

Electronic Databases
A database is a collection of online information resources such as journals, book chapters, books, conference proceedings etc., in different subject areas. Some are Open Access while some are subscription based- which means that you must pay before you can have access to the resources. In addition, some of these resources are (Internet Protocol) IP based, which means that you can only have access to them within the Internet range of the institution. Some databases require password and username while some are freely available without any authentication. Example of online databases are ScienceDirect, Jstor, ProQuest, Directory of Open Access Journal (DOAJ), etc.

4.0   CONCLUSION

The impact of digital environment to teaching, learning and research cannot be overemphasized. With the trend of technological innovation, more learning platforms will emerge. As a student, you are expected to be familiar with these environments as they will help you to know the current trends and for lifelong learning too. With the situation and the fast rate of

technological development, digital environment will dominate as a more convenient platform for teaching, learning and research.

5.0   SUMMARY

In this unit we were able to explain the concept digital environment, which is enhanced by the transformation of digital technology. The characteristics as well as the resources available in a digital environment were identified and explained.

SELF ASSESSMENT EXERCISE

Explain what you understand by digital environment

6.0   TUTOR-MARKED ASSIGNMENT

List and explain four characteristics of a digital environment
Name three resources available in a digital environment

7.0   REFERENCE/FURTHER READING

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UNIT 2:   CREATIVE COMMON LICENSE

CONTENTS

1.0   Introduction
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3.0   Main Content
   3.1   The concept of Creative common License (CCL)
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   3.3   Benefits of Creative Common License
4.0   Conclusion
5.0   Summary
6.0   Tutor-Marked Assignment
7.0   References/Further Reading

1.0   INTRODUCTION

As we experience changes in teaching and learning methods, so also it affects other services and issues like access and use of the online resources. You may wonder what happens to copyright issue in this era of digital environment and online resources. Will they be scrapped out or what other methods will be used to preserve other people's works? In this unit you will understand how resources can be used in a digital environment without infringing upon or violating copyright. There is the 'Creative Common Licenses' which is user-friendly, straightforward and comprehensive The license is always stated on the front cover of the content, so that you will see it and know immediately the conditions under which the publication is allowed to be used without having to track down copyright owners for formal permission to use intellectual property or worry about what to do if they cannot be found. In addition, many institutions are involved in the project of building their institutional repository. The greatest challenge has been measures to adopt in order not to violate the copy right. Being aware of these systems will help facilitate the project. As a librarian in training, it will also equip you with the knowledge and skills relevant in a digital environment.

2.0   OBJECTIVES

At the end of this unit you should be able to:

* Define creative common license
* Identify the different types of licenses under creative common
* List the benefits of creative common license

3.0   MAIN CONTENT
3.1   Creative Common License

The term Creative Common License (CCL) according to JISC (2009) is a licensing system under which authors or producers of a work offer some of their rights to others to reuse their work under certain specified conditions. The CCL initiative is to promote the digital commons and encourage creators to share their works for general use without the complication of complex legal advice (Kreutzer,2020). It provides easy-to-use notifications that rights-holders can apply to their work to grant permissions to use, share, even to excerpt and adapt their work under clearly understandable conditions (Robinson, 2021). Ding (2019) is of the view that CCL is not a panacea for managing the intellectual property rights of digital scholarship. According to Seibert, Miles, and Geuther (2019) the CCL does not replace copyright. Instead, it gives the creator the ability to dictate how the materials can be used. They work alongside copyright to enable you modify your copyright terms to best suit your needs without violating its terms that constitutes copyright infringement. Creative Common Licenses grant permission for users to build upon other people creative works freely without copyright infringement, if they abide by the conditions the author has specified.

Creative Commons License enables the sharing and use of creativity and knowledge through free legal tools. It was founded in 2001 by Harvard Professor Lawrence Lessig Mewhort(2012). Creative Commons License is a non-profit organization that maintains and provides a free suite of legal tools to enable the sharing of publications and knowledge. It does not require registration with copyright agency. The CCL is simple and easy to use. The website is user-friendly. You can easily select the type of license you want to assign to your work. The paradigm shift in teaching, learning, research, and the use of Open Access has created the opportunity to adopt CCL in most scholarly works. The use of social media as learning tool and the introduction of e-learning platforms to encourage participatory and interactive teaching makes CC license an important tool for scholarship. With these entire innovations Creative Common License seems to be more robust in giving permission to encourage the current teaching methods. For instance, if a creator is aware that he can seek for permission to archive his published work on an Institutional Repository, it will make a lot of difference. Secondly the awareness and use of the Publishers website SHERPA Romeo to know when to archive a work, the version of the work to archive is another relief to the problem of copyright violation. Despite the flexibility and ease to use CC license, Ding (2019) outline four limitation of CCL as follows:

❖   The pitfall of a free license. Since the license is free and most of the copyright statements were not clearly stated, it may result to innocent infringement of other copyright owners' work.

❖   The risk of irrevocability. In case of any breach of the agreement, the license may not be terminated since the license is irrevocable. Unlike in the traditional publishing where a creator of a work can revise the copyright agreement due to the termination dates and revocability. This is not the case with CCL.

❖   The ambiguity of Non-Commercial and Non-Derivative licenses. The copyright attribution of Non-commercial and share alike may create confusion as it may be difficult to state clearly where the work is totally for no-commercial purposes. You may recall that fair use does not include commercial use, although infringement of copyright is not solely on being used for commercial purposes.

❖   The dilemma of Share-Alike and the Open Movement. In share alike, you are expected to distribute your work under the same license with the original work. There are two different 'share alike license' which means that the creators cannot create new derivate work by combining the two Share-Alike with different terms in their license.

Considering the developments and growth in digital publishing, the use of Creative Common License is important to ensure easy sharing and distribution of scholarly publications. It is important to be aware of the limitations as outlined by Ding (2019).This will help you know how to create and explain some of the ambiguities as pointed out in the different licenses.

3.2   Types of Creative Common License

There are six basic licenses under creative common namely
Attribution (BY)
Attribution-Share Alike (BY-SA)
Attribution-Non-Commercial (BY-NC)
Attribution-Non-Commercial-Share Alike (BY-NC-SA)
Attribution-Non-Commercial-No Derivatives (BY-NC-ND)
Attribution-No Derivatives (BY-ND)

The ARC Centre of Excellence for Creative Industries and Innovation (2015) presented explanations to these types of CC license with the symbols and terms. Attribution means that credit must be given to the creator of the work in addition to other terms as specified by the license.

➢   Attribution (BY) This means that users can use the work for both commercial and non-commercial purposes. You can copy, adapt, modify, freely distribute, communicate, and license it to others. As a user of a work, with this type of license you have the right to use the work for different purposes, but credit must be attributed the creator of the work.

➢ Attribution-Share Alike (BY-SA): In this copyright statement you can use the work for both commercial and non-commercial purposes. You can copy, adapt, publish, or communicate the work, but you license the work to others on the same terms with the original work. This implies that you give credit to the creator of the work, and you are expected to license your work on the same term with the original work you used.

➢ Attribution-Non-Commercial (BY-NC) The license terms are that it should not be used for commercial purposes. You can copy, adapt, or modify and communicate the work and license to others. The product or outcome from using this work should not be for commercial purposes. So as a user, you are expected to abide by this copyright statement and failure to keep to it means infringement of the license.

➢ Attribution-Non-Commercial-Share Alike (BY-NC-SA). The terms of this license stated that it is not for commercial purposes. You are expected to license your work to others on the same terms as the original work. You can copy, adapt, communicate the work, and distribute it but it should not be used for commercial purposes.

➢ Attribution-Non-Commercial-No Derivatives (BY-NC-ND), The terms of this license stated that it is not for commercial purpose. You are expected to communicate it verbatim and there should be no modification. You are free to copy the work, distribute, publish, or display the work verbatim and license to others, but it should not have been for commercial purposes and no modification on the original work.

➢ Attribution-No Derivatives (BY-ND), the terms stated that it can be used for commercial and noncommercial purposes but credit should be given to the creator of the work. You can copy the work, distribute, or communicate the work but it must be verbatim. There is no adaptation, and you license to others.

Works licensed under No derivation means that you are not expected to make any change unless you obtain permission from the creator of the work. Likewise others, CC license permission must be obtained from the creator of the work if you have need to make changes outside the license terms. The new work obtained from such changes must give credit to the original work. As a librarian in training, you should be aware of these licenses, how to use them to avoid violation of copyright and advice your users appropriately.

1.2   Benefits of Creative Common License

Although Ding (2019) outlined some of the limitations of Creative Common License, there are some benefits of using this license in scholarly communication such as the ease of applying for the CCL which does not require registration. Other benefits of Creative Common License include

- **Simple legally:** They are simple from a legal point of view. It does not require complex legal terms. Any author can easily log in to CCL website and assign the license preferred to the work.
- **Easy sharing and reuse of information and resources:** The higher education sectors have a need to adapt and develop resources to meet different requirements from that intended by their original creators. Since the license terms are simple and it is clearly stated on the home page, researchers/users can use the work and share it with others based on the terms of the original work.
- **Flexibility:** CC licenses are available in three formats, including machine-readable code, which can be processed by search engines also useful for tracking license usage.
- **Improved access:** Digital resources produced by publicly funded organizations are an asset to the research and education community. The wider use of open content licenses would help to improve the situation.
- **Administrative simplicity:** One of the benefits of CC licenses lies in their ability to be clearly and simply administered

Other benefits as outlined by Collins, Milloy, and Stone (2011) include
- ❖ The ownership right is retained by the creator of the work.
- ❖ The six Creative Commons licenses are flexible, the terms were stated to convey exactly the conditions of use. The authors can also modify the terms to suit their needs.
- ❖ They ensure that authors get the credit they deserve for their work
- ❖ Although a Creative Common License is irrevocable, the author can waive the existing conditions and grant additional permission.
- ❖ The author is not prevented from selling the work or making a profit, unless otherwise specified in their contract with the publisher.
- ❖ Creative Commons License does not affect the format of the publication and print copies can still be produced.
- ❖ Depending on the agreement between you and your publisher, royalties - where received - are not affected.

Open Access Scholarly Publishers Association are in strong support of the use of the CC-BY license (2019). This license supports the Open Access Movement to ensure that resources are freely available for researchers.

4.0   CONCLUSION

Creative Common License is an effort to encourage publishing without much stress. Authors can assign copyright to their work without undergoing the process of complex legal terms and payment of fees. Researchers should adhere to these terms and conditions when such works are being used. This will encourage scholarship and authors will benefit from the creative works. Similarly, as a student, you should be aware of these copyright licenses to know how to use such works and teach others. Ignorant of law is not an excuse, therefore ensure you read through the terms and conditions of any license on creative works and stick to the range of the permission granted by the author.

5.0   SUMMARY

In this unit we have been able to explain what Creative Common License means, and why it should be assigned to creative works. The different types of license under CCL were listed and explained. Also, the benefits of using Creative Common License especially in this era of online publishing and open access movement, have been highlighted

SELF-ASSESSMENT EXERCISE

List and explain the benefits of Creative Common License

6.0   TUTOR-MARKED ASSIGNMENT

1.   Explain what you understand by Creative Common License
2.   State and explain the types of Creative Common License

7.0   REFERENCES/FURTHER READING

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**UNIT 3   ACCESS RIGHTS TO INFORMATION IN A
                DIGITAL ENVIRONMENT**

CONTENTS

1.0   INTRODUCTION

Information is important for national development. Many countries make effort to ensure that information is available to its citizens. This also contributes to the geometric growth in information production and dissemination. Although there are information resources that may be produced by researchers but most times, they are not accessible and thus not utilized. Access to information is a prerequisite to its use. This explains why many organizations support researchers in their research work and make such works freely accessible to the user community. The Sustainable Development Goal (SDG) is on 'ensuring access to information'. This is part of the global effort to ensure that the citizens are provided with the information they need. The UNESCO, (2020) stated that access to accurate and timely information helps people make safe choices for themselves and their families. This means that it not just accessing any information, but the right type of information is key. Fake information/news are being spread through Social Media platforms to misinform people instead of informing them. The recent pandemic, COVID-19 showed that access to the right information as highlighted in UNESO, (2020), Chizita & Ukwoma (2021) is key to keeping the citizens abreast of the happenings and their responsibilities. The library as you are aware is a stakeholder in ensuing access to information, digital libraries in South Africa are revolutionizing the academic library landscape by integrating the physical and digital space, to discover wider access and discoverability of scholarship for the benefit of students and researchers (Chizita& Ukwoma, 2021). Libraries are entrusted with the responsibility of acquiring, processing, disseminating and preserving information resources. You will understand the need for access rights, types, and importance of access to information.

2.0   OBJECTIVES

At the end of this unit, you will be expected to:

- Explain what access right means
- List some of the digital rights
- Mention the different types of access right
- Importance of access right

3.0   MAIN CONTENT

3.1   The Concept Access Right to Information

Access right to information have been defined by different authors, Access to information is important. It protects other rights, including democracy, it supports sustainable development (UNESCO,2020). Access to information and knowledge, points to the need for libraries to be proactive and innovative during emergencies (Chizita & Ukwoma, 2021). Similarly, the UNDP (2003) stated that access to information is concerned with promoting and protecting rights to information, communication to voice one's views, to participate in democratic processes that takes place at all levels. This means that an individual that has access to information should equally be free to communicate the information accessed. However, in some cases, this may not be the situation. There may be some limitations and challenges that prevent free communication of information. Since access to information is a fundamental human right, the citizens should also be free to exercise the right. For any national development the citizens need to be informed and have access to the right information which will keep them current of the events and developments within the nation. For instance, in 2020 the whole nation witnessed an outbreak of a pandemic COVID-19. A lot of measures were outlined to check the spread of the virus. Many people conformed to check the spread because they have access to information. Imagine a situation where people do not have access to information, the effect would have been worse than what we experienced. Access to information promotes accountability regarding the highly impactful decisions governments make during emergencies (UNESCO, 2020). Any nation would always like to empower its citizens through information provision as the sayings have it that, '*Information is power*'. Although some people do not have good reading culture, but as information scientist, it is important to develop good reading habit. Read everything you see and make informed decisions based on the information you have, do not allow yourself to be taken by surprise or unaware. Information resources appear in digital and print format. The digital format has created much impact in teaching and learning and many researchers and students prefer resources which are available online.

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3.2   Different Digital Rights

Access to Internet is a digital right, likewise online – shopping, socialising, and sharing information (Hutt,2015). Internet has become a common gateway for getting any information. It is important you know how your data uploaded online is being used. This is usually stated in the agreement form which you are expected to sign. Most companies refer to it as terms and conditions. How many of you have the habit of reading through the terms and conditions as stated by Google, Facebook, WhatsApp and any other online platform or any other company or agency. It is in the terms and conditions that you will know how your data will be used, whom your data will be shared with, the third party etc. So just ticking the accept check box without knowledge of what the agreement is all about is not a good practice. As librarians in training, ensure you take time and know what is involved in the license conditions.

Socialising: The Social Media platforms are meant for you to connect, communicate, and interact with each other. As an adult, you are free to socialise but you should be mindful of the usage. Alot are happening around the globe. Although it is your digital right to have access to the Internet, we should be mindful of what we share or post online as most of these postings are archived. Ensure that the message you post online is acceptable and conveys meaningful information,

Online shopping: Online shopping platform has eased the challenge of buying physically from the store. Many sites such as Jumia is a platform used for online shopping. It is easier and available 24/7.It is not location bound. The advantage is that you will identify the availability and components of the items you wish to buy before you make your payment. The material will be delivered to you as requested. Many people prefer online shopping to the open market because of convenience.

Sharing Information: For development of any country, information is important. That explains why access, dissemination and sharing of information is valued much in institutions of higher learning. Information sharing can take place using various platforms or means. As a citizen, you have the right to share information on the conditions that they do not violate copyright and it does not infringe upon the right of others. As you share the information ensure that the information is authentic and from a verifiable source.

3.3 Different Types of Access Control

These are the different rights given to end users depending on their roles or functions in the workplace. Access control is important because it helps the administrator to monitor who does what and from which workstation. Employees in an establishment have different access rights based on the task they perform. As highlighted by extant literature, there are different types of access control, Cameron, (2020) identified four types:

3.3.1 Discretionary Access Control (DAC). In this type of access, the manger or owner of the establishment or company makes decision on the number of people that would have access to specific location, the type of access to provide and how the access will be used. This type of access is flexible. However, the challenge is that it not secured. The administrator being the sole custodian may give right or access to someone that is not expected to have it. In DAC, you have list of the bona fide users and anytime they sign in, the system check them against their credentials before access is granted.

3.3.2 Mandatory Access Control (MAC)
Mandatory access control is most secured only the owner and the custodians have access to the system. The system administrator does all the setting therefore he/she is always aware of any change because he/she is the one to grant permission. A MAC, system classifies all the users and grant them access to areas based on the system's programming, unlike the DAC that creates access on each individual entry point.

3.3.3 Role-Based Access Control (RBAC)
Role-based access control (RBAC) is gaining popularity. It assigns permission to specific job title thereby reducing the time required to set up user account. Many establishments like banks make use of this type of access control. In addition, most Library Management System (LMS) have this type of access control. For example, KOHA, which is a LMS has different modules like acquisition, Cataloguing, Classification, Serials Reports, etc. Thus, the permission or rights given to users in acquisition is different from those of cataloguers because they perform different functions, and their templates are different. Another similar situation is in the DSPACE which is an Institutional Repository Management software. It has different roles. The submitter has a different role from the editor so also the rights each of them have are different.

3.3.4 Rule-Based Access Control
This is commonly used as add-on to other types of access control. In addition to whatever type of access control you choose, rule-based access control can change the permissions based on a specific set of rules created

by the administrator. In this type of access, rules are set based on any occasion which means after the event it can be changed.

3.3.5 Access rights – access right is important as it helps to differentiate each user from the other and the job description or roles. In any establishment, access right should be well defined as it helps to monitor the staff to know who did what. It prevents incidences of theft. Some staff may have full right while others may not, depending on their work schedule. With access rights the organization needs not bother about keys and security is grantee

3.4   Importance of Access Rights

➢   Access right is important in Information and Communication. It helps you to make informed decision of the correct and wrong information you accept. The advent of digital environment has contributed to the growth in information shared and circulated online. Since we have much information in circulation most times, it is difficult to decipher the authentic information from fake.

➢   When you have access information it helps you in your research assuming you have access restrictions to some online databases that will hinder you from having access to the resources you need for you scientific research.

➢   Access to information keeps the citizens informed on issues as it affects the nation. Information on the nation's budget, misappropriation of fund or any other issues can easily be accessed and used if you have the right.

➢   It helps to create a conducive or democratic issues. When you have access right, you can read through matters concerning the government and management as it affects the country. Democracy allows for the present or the voice of the common masses to be heard.

➢   When you have access right you can easily detect when there is violation of copyright or infringement of copyright especially in a digital environment.

➢   Access right is important in ensuring strong economy and encouraging free trade. Investors prefer to strive in an open and friendly environment. Any nation that is not open to the outside world in terms of their activities stands the chance of losing foreign investors.

4.0   CONCLUSION

Access rights to information is important for national development. It is the right of every citizen to have access to information as Freedom of Information Act supports it. You should be conscious of the fact that although information is free, you must make proper use of it. Know what

you post online as the digital environment has made the world a global village. What is appealing to you today may not be valuable to you again tomorrow. So ensure you make the right choice.

5.0   SUMMARY

In this unit, we discussed access right to information in a digital environment. It is your right to have access to information, how to use it and for what purpose. The digital rights as discussed in this unit is to make learning and socialization easier. Many of you use it wrongly. This lecture will help you to make proper decision on how you exercise your access to information rights.

SELF-ASSESSMENT EXERCISE

List and explain the importance of access right

6.0   TUTOR-MARKED ASSIGNMENT

1.   Define access right to information in a digital environment
2.   Name the digital rights discussed in this unit

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UNIT 4 RELEVANCE OF COPYRIGHT LAW IN A DIGITAL ENVIRONMENT

CONTENTS

1.0 Introduction
2.0 Objectives
3.0 Main Content
 3.1 Copyright law in a Digital environment
 3.2 Digital Rights Protection Technology
 3.3 Challenges to copyright law in a digital environment
4.0 Conclusion
5.0 Summary
6.0 Tutor-Marked Assignment
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1.0 INTRODUCTION

Copyright law as discussed in module 1, unit 4 shows that the purpose of copyright act is to enable the creator of the copyrighted work to exploit it commercially besides giving him recognition for his work (Kumar, 2017). This implies that although technology has made in road into the different sectors of the economy, the issue of protecting creators to benefit from their innovations should not be overlooked. Originality of work should be encouraged irrespective of the format or platform being used especially in education. The trend in teaching, learning and research has been influenced by Information and Communication Technology. This makes digital environment an interactive platform for learning. As these innovations take place learners should adjust their learning modes the resources and polices used should be in line with the trends.

2.0 OBJECTIVES

At the end of this unit, you should be able to:

- List the importance of copyright law in a digital environment
- Name the digital rights protection technology
- State the challenges of copyright law in a digital environment

3.0 MAIN CONTENT

3.1 Copyright law in a Digital environment

Copyright is meant to protect creators so that they can benefit from their works. When copyright was made, creative works were mainly in print format. However, technological developments have made a lot of

transformations in different sectors of the economy with associated benefits and challenges to copyright management. As many information resources are available in softcopies it makes it easier for copying and infringement of copy right. Technological developments have contributed a lot to copyright development especially in tracking the violators, locating the creators and inventors of the creative works and innovation when one needs to obtain permission. This led to the discovery of changes to copyright protection especially in a digital environment, to enhance resource sharing and collaborative works. In the previous module, you were meant to understand what Creative Common License means and the different types that can be applied in a creative work. The Internet is an open platform model, the authors freely disseminate their works without the intervention of traditional publishers (Rafiqi & Bhat, 2013).

Information dissemination is faster on the Internet as the materials could be copied and shared several times. That creators and inventors' rights are considered a priority there are a lot of licensing coming up which requires harmonization for proper guidance. The WIPO (2021) has developed relevant activities showcasing different licensing practices and their connection to a variety of business models. The trend in scholarship is Open Access to information resources to enhance collaboration. Services like digitization is introduced in libraries and institutions to enhance access and visibility of information resources. This is an issue that have been applied with caution putting into consideration the implication of copyright protection in digitizing creators' works. Different right protections have been put in place to ensure user centered services and consumers are of utmost priority. The issue of copyright is not overlooked in a digital environment. Instead as changes keep coming the bodies in charge of copyright regulations like WIPO, tend to adjust the regulations to align with the developments. Atanosava (2019) is of the view that overprotection of copyright could threaten democratic traditions and impact on social justice by restricting access to information and knowledge. If copyright protection is too strong, competition, innovation and creativity is restricted. Fair use or fair dealing should thus be encouraged to promote scholarship. Access to information is the drive of many governments' institutions and organisations. The more the citizens are informed the better for the country, and the more researchers have access to information resources the more the country experiences increase in research, creativity, and innovations. As librarians in training, you should be conversant with the trend in scholarship and the measures to take to ensure that you move with the trend. In the next subsection, you will understand some of the digital rights protections to check copyright infringement.

1.2   Digital Rights Protection Technology

Digital rights as the name implies means the measures or strategies put in place to checkmate copyright infringement in an online environment. Although they may not constitute permeant prevention, they help to track the use of the online resources and the violators. Digital rights management technologies protect copyrights by identifying content, controlling access, protecting the integrity of the work, and ensuring payment for access (Dittmer &Rehaag, 2020). Saraswat, and Chaturvedi (2017) stated new provisions that deals with technology protection measures and rights management information as safeguards for the protection of works and materials.

Some of the strategies as identified by Nafis (2015) are Access Control and Copy Control; Encryption schemes and Digital water marks. Others are Digital signature, Digital water mark technology, Cryptography, electronic marking. These right protection technologies are employed by many organizations when digitizing their contents.

Access Control and Copy Control: Access and copy Control software enable the creators to keep a check on the free and illegal exploitation of their work and copy controls are snippets of software that try to stop public from making a reproduction of work once they have obtained a copy (Nafis, 2015). For you to have access to a work, you must pay or have permission to do so. There are some pages or sites that when you log on to them, they will prompt you to register before you can have access, or some may require payment.

Digital water mark technology It is a piece of information added to content that establishes the identity and ownership of an individual piece of content (Dittmer &Rehaag, 2020). This technique is employed by many organizations when digitizing their content for upload. In most institutions, they inscribe their name and logo in the digitized content or any content they want to make available online. With the institution's name and logo, you can trace the creator of the work to help prevent unlawful duplication of the work by pirates.

Digital Signature: Digital signature is a sort of Cryptography, used for converting the information is encryption and decryption. Such information cannot be accessed without access key (Murty, Veeraiah& Rao, 2011). A digital signature is an equivalent of ink signature on a paper document, but in its case it's very secured. Its usage helps to check two important things;
1.   It helps to check that the documents have not been modified by someone else.
2.   It helps to confirm that the claimed author is the original creator.

Encryption: It involves digital scrambling of the bits that make up content to prevent the content from being seen clearly until it is decrypted. Only authorized users have the keys to decrypt the work (Nafis,2015). According to online sources, it also involves the process of encoding information. This process converts the original representation of the information, known as plaintext, into an alternative form known as ciphertext. In real terms, only authorized parties can decipher a ciphertext back to plaintext and access the original information. Encryption scrambles plain text into a type of secret code that hackers, cybercriminals, and other online snoops can't read, even if they intercept it before it reaches its intended recipients. There are two main types of encryption systems: symmetric encryption and asymmetric encryption, below is there difference;

- Symmetric encryption uses a single password to encrypt and decrypt data.
- Asymmetric encryption uses two keys for encryption and decryption. A public key, which is shared among users, encrypts the data. A private key, which is not shared, decrypts the data. (Norton, 2022).

Cryptography: The cryptography is providing better mechanisms for information security. It is to provide the public and private keys for recovery of the original information (Murty, Veeraiah & Rao, 2011). It is closely related to the disciplines of cryptology and cryptanalysis. It involves techniques such as microdots, merging words with images and other ways to hide information in storage or transit. In today's computer-centric world, cryptography is most often associated with scrambling plaintext (ordinary text, sometimes referred to as *cleartext*) into ciphertext (a process called encryption), then back again (known as decryption)

Modern cryptography has the following four objectives:
1. Confidentiality. The information cannot be understood by anyone for whom it was unintended.
2. Integrity. The information cannot be altered in storage or transit between sender and intended receiver without the alteration being detected.
3. Non-repudiation. The creator/sender of the information cannot deny at a later stage their intentions in the creation or transmission of the information.
4. Authentication. The sender and receiver can confirm each other's identity and the origin/destination of the information (Richards, 2021).

Electronic marking: This involves making electronic marks and tags on digital objects to be uploaded online. The marks are made to discourage pirating the digital objects. This is usually used for digital objects. E-marking, also known as onscreen marking, is designed as a solution that alleviates the strain on markers' time posed by marking and associated costs, whilst not compensating at the expense of the learner experience. Aside being a secured process, automation, accessibility, logistics, plagiarism, and feedback are other benefits (Inspera; benefits of e-marking)

Finger printing According to Satonkar and Kawathekar, (2013) it is a type of watermark that identifies the recipient of a digital object as well as its owner. This means that you can easily identify the creator and the person that bought it. A digital fingerprint is an exclusive pattern of ones and zeros that identifies content (Dittmer &Rehaag, 2020). These are strategies put in place to check copyright infringement. Thus as you experience change in the scholarly communication so also do some of these strategies need to be adjusted to suit the mission and vision of making access to knowledge easy and user centered.

1.3   Challenges of Copyright Law in a Digital Environment

Where there is no law there will be anarchy. There should be law to ensure creators benefit from the creative works and ensure originality. Although the emphasis is on open access to resources which many international bodies are sponsoring, Joshi (2019) highlighted that copyright &Internet, multimedia work, software and social media are challenges to copyright in a digital environment.

Ease of reproduction: With the digital nature of copyrighted materials, it is easy to reproduce them into different copies. When it is in print version, it becomes laborious and tasking to copy the work. Sometimes there might be distortion in the process of copying the work. However, with digital copy it is easy to copy verbatim.

Ease of dissemination: Digital copy is easy to dissemination unlike, print copies. You can share the document on different platforms, and many people can also copy the work and distribute it on their walls and pages.

Ease of Storage: The publications in digital copy can be stored using different storage devices. Large quantities of file can be stored using a small potable device.

4.0   CONCLUSION

Protection of copyright is necessary to ensure creators benefit from their intellectual works. In as much as digital environment helps in reaching out to users to making teaching and learning interesting and interactive, efforts have been put in place to create a balance with the current trends and to encourage originality of research works. As a student, you should be aware and familiar with these strategies to help you navigate in the world of learning.

5.0   SUMMARY

In this unit you have been able to understand the relevance of copyright in a digital environment, digital rights protection technology that can be employed in the protection of digital documents to avoid illegal copying. The challenges of copyright in a digital environment were also highlighted.

SELF-ASSESSMENT EXERCISE
List and explain the digital rights protection technology

6.0   TUTOR-MARKED ASSIGNMENT
Discuss the challenges to copyright in a digital environment.

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MODULE 4 INFORMATION SECURITY
Unit 1   Privacy of information
Unit 2   Access management
Unit 3   Regulation of public information

UNIT 1   PRIVACY OF INFORMATION

CONTENTS

1.0   Introduction
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        3.3   Importance of Privacy of Information.
        3.4   Challenges of Privacy of Information.
4.0   Conclusion
5.0   Summary
6.0   Tutor-Marked Assignment
7.0   References/Further Reading

1.0   INTRODUCTION

It is important to maintain privacy of information especially personal information, health records of patients, records of people that committed criminal offence, political records etc. These records maybe considered as being sensitive information and it should not be made public. Nevertheless, technology has affected the mode and speed of sharing information, thereby making it difficult to maintain information privacy. Measures are being also put in place to maintain information privacy such as encryption, data masking etc. This is to ensure that the information is accessed by the right person. This course is very important in creating the necessary enlightenment with regards to privacy of your information. The course, discussions, exercises, and self-assessments outlined in this course will help you to know how to handle everything concerning information privacy without violating the existing laws.

2.0   OBJECTIVES

At the end of this unit, you will be able to:

1   Define the concept of privacy.
2   Explain the term information privacy.
3   Discuss the importance of information privacy.
4   Explain the challenges of information privacy.

3.0   MAIN CONTENT

1.   Definition of privacy.
2.   Definition of information privacy.
3.   Importance of information privacy.
4.   Challenges of information privacy.

3.1   Definition of Privacy

The definition of privacy may be difficult because it looks vague, dynamic and changes with time. It is determined by political and technological features of the environment (Moor, 1999). Privacy may have variety of definitions since it deals with information, records and data which cut across many disciplines. The concept is mainly concerned with the confidentiality and personal nature of information. The matter of its definition is also closely related to the issue of whether privacy should be seen as a right or merely in terms of one or more interests an individual may have (Tavani, 2008 as cited in Pelteret & Ophoff, 2016)). Privacy as a fundamental civil right must be protected in a democratic society (Fischer and Hübne, 1998).
Four views of privacy are;
(1)   Accessibility privacy is freedom from intrusion into physical space.
(2)   Decisional privacy which deals with freedom from interference with one's choice.
(3)   Psychological privacy has to do with the mental privacy of an individual, which means freedom from interfering in someone's mental and psychological wellbeing.
(4)   Informational privacy is freedom from access to one's personal information (Tavani, 2007, 2008 as cited in Pelteret & Ophoff, 2016)).

3.2   Definition of Information Privacy

Information privacy as stated earlier, has been deliberated upon over the years. Information privacy is important because as an individual you have the freedom of what to do and how to share your personal information or whom to share it with. The interpretation of the concept of privacy has to do with human rights though from different perspective and in different context (Skinner, Han, & Chang, 2006). This could be said to be the reason why Clarke (1999) identified four dimensions of privacy these are: privacy of a person, personal behavior privacy, personal communication privacy, and personal data privacy. With the developments and trends in Information and Communication Technology, information resources are digitized and stored. As you are aware, most of this information make use of binary digits in storing and retrieving them because of the language of

technology. Personal information privacy and data privacy could be grouped together as information privacy. Specifically, with the advent of advanced Information and Communication Technologies, data can be collected, aggregated and analyzed at a faster pace and in larger volume than ever (Malhotra, Kim, and Agarwal,2004).

Information privacy is of growing concern to stakeholders including business leaders, privacy activists, scholars, government regulators, and individual consumers (Smith, Dinev, Xu, 2011). Information privacy is a concern to many industries, business, institutions. It is not only personal information that is at risk. Many establishments are involved because with communication technologies a lot is being shared through various media without first examining the implications of such information. Data can be put into secondary use (Bélanger, Hiller, & Smith, 2002), which means deviation from the original purpose the data is meant to be used. There are four dimensions of information privacy as identified by Smith *et al.* (1996). These include collection, unauthorized secondary use, improper access, and errors. Another taxonomy include information collection, information processing, information dissemination, and invasion (Solove, 2006). Clarke (2001) defined information privacy specifically as the interest an individual has in controlling, or at least significantly influencing, the handling of data about themselves. Personal and sensitive information should be protected and circulated only to those they are meant for. In the global world, there are lots of violations to personal and business information. The social media is another threat to information privacy as this is used in circulating people's information without permission. This should not be the case, in as much as there is freedom of access to information you should also take precaution on what to circulate and how to circulate them.

In library and information science you may wonder why we need information privacy since most of the information resources are not necessarily personal data, but they are meant to be used for teaching and research. Library resources consist of the ideas of intellectuals and should be used for the purposes they are meant for and under the conditions specified by the creator. As a result, they should have protection to avoid infringement. Unauthorized use of information resources is not permitted in any library. Thus, in acquiring resources for the library the users are put into consideration as regards the kind of information to acquire. The mission and vision of the university, the type of institution and subject coverage, serves as a guide to acquisition of resources in library.

3.3   Importance of Information Privacy

Information privacy is important to help protect your human right as not all information should be made public. Individuals should have control over how their information is shared with other people and who has access to their information. The privacy of personal information is an important area of focus in today's electronic world (Pelteret&Ophoff, 2016). Other importance of information privacy as highlighted by (Matomo, 2014) include:

- Privacy gives us the power to choose our thoughts and feelings and who we share them with.
- Privacy protects our information we do not want to share publicly (such as health or personal finances).
- Privacy helps to protect our physical safety (if our real time location data is private).
- Privacy helps to protect us as individuals and our businesses, against entities we depend on or that are more powerful than us.

3.4   Challenges of Information Privacy

Information Security and Data Protection are dynamic fields that are constantly challenged and influenced by advances in digital age technologies and innovation in business practices. The ICT development reflects to the rules for data protection organization it changes the understanding for the definition of personal data, management of cross-border data transfer, user's privacy in the digital age, rights of the users and obligations of the data controllers.

These challenges are classified into the following categories;(Romansky & Noninska, 2020)

➢   Social computing (SoC) challenges
➢   Cloud computing (CC) challenges
➢   Internet of things (IoT) challenges
➢   Big data (BD) and Big data analytics (BDA) challenges

4.0   CONCLUSION

There is need to protect peoples right. Privacy of information is the fundamental human right of every individual. As a citizen, your privacy should be respected, as it affects your personal data, health information or finances. Scammers can only invade your privacy when they have clue to your personal information. Hence, ensure you do not share your personal and sensitive information on social media. Businesses dealing with sensitive information need privacy of information. Technology is a tool to facilitate information dissemination and sharing. You should use it properly and know that you are not the only person online.

Information privacy is an important and complex issue that affects the lives of everyone in our information-oriented society. As society and technology progresses inevitably, it is going to become more complex and as such require on-going thought, research, and intellectual engagement (Pelteret & Ophoff, 2016). Through, an on-going consideration of the nature and implementation of information privacy, we shall seek to find the right balance between the demands of the individual and the society in which they live (Pelteret & Ophoff, 2016). You should always protect your personal information and enlighten others on the need to protect theirs.

5.0   SUMMARY

The concept of privacy and information privacy were explained, we further discussed the importance of information privacy and the challenges in information privacy. Privacy of information is important and necessary especially with the rate of development and innovations. It is not all information that should be pushed to the public domain without the consent of the individual involved.

SELF ASSESSMENT EXERCISE
1.   Explain the challenges associated with information privacy

6.0   TUTOR-MARKED ASSIGNMENT

1.   Define information privacy
2.   List and explain the importance of information privacy

7.0   REFERENCES/FURTHER READING

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UNIT 2   ACCESS MANAGEMENT

CONTENTS

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4.0   Conclusion
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1.0   INTRODUCTION

Access management is the process of managing or controlling who has access to information and how. This is to control unauthorized access to information resources. In some organizations, they employ various strategies for access management. Similarly, Identity and Access Management is the process which manages who has access to what information over time (Dhamdhere & Karande, 2010). Some organisations make use of access management software while others prefer to use students, customers or users' credentials in access management. Assuming it is in an institution, before the students gain access into the institution he/she must have a card which is already coded in the universities system with the students' credentials. With that, you can swipe for identification to enable you gain access. This way it will help to check unauthorized access into the institution. This is applicable to access online information resources.Vendors make use of different authentication methods.Some prefer keying in password to enable access while some information resources are Internet Protocol (IP) based, which means they are linked to the Internet Protocol range of the institution. For you to access such information resources that are IP based, you should be within that IP range. The course, discussions, exercises, and self-assessments outlined in this course will help you to know how to handle everything concerning identity and access management.

2.0   OBJECTIVES

At the end of this unit, you will be able to:

•   Define the concept of access management.
•   List the functions of identity and access management.
•   Mention the challenges of identity and access management.

3.0   MAIN CONTENT

1.   Definition of access management.
2.   Functions of identity and access management.
3.   Challenges of identity and access management

3.1   Definition of Access management.

It is the process of managing who has access to what information over time. As stated in the University of Exeter policy, access management is an integral part of good information security practices. Having a robust policy and processes in place helps protect the University's Information Technology (IT) network and data sets from potential cyber-attacks and reputational damage. It is proper to have Access Management Policy which provides a framework for an organization to operate. In IT users, we have the standard, power and privileged access. Standard access users do not have access to sensitive information. However, power access has some additional permission which is higher than standard access while privileged access has full access to the information in the system (Mange Engine 360, n d). The use of technology in different sectors have made access management an important function to many organisations. In order to set up an access control management, there should be mechanisms put in place to capture the identity of the users. Activity of Identity Access Management (IAM) involves creation of identities for user and system.

Two very important components of Identity Access Management are identity and access. Although in most companies there are automated machines to manage them (Dhamdhere & Karande, 2010). With the technology and network system in place, you can easily control access unlike if the system is not networked. Some access management software as identified by Lutkevich (2020) include reporting and monitoring applications, password management tools, provisioning tools, identity repositories, security policy enforcement tools.

In library, there are different methods of managing access to control who comes into the library and how library information resources leave the library. There is the Radio Frequency Identification (RFID) technology. This system makes use of chips and barcodes to read the cards and books in the library. Most libraries use this technology because it helps not only in access management but in managing other library functions. For instance, as a user that comes into the library, your details should be recorded on the system and a card generated and issued to you. With the card, you can gain access to the library you can also borrow library books and it will be credited to your account. In order to borrow a book, you collect the book to borrow, use the self-service machine, swipe your card to login into your account, then swipe the barcode on the book, for

machine to read the chips and credits it to your account, you deactivate the book to enable you take it out of the library. If the book was not properly borrowed at the point of exit from the library the machine triggers an alarm to show that you are moving out of the library with information resources not properly borrowed.

The Identity and Access Management components can be classified into four (4) major categories: authentication, authorization, user management and central user repository (Enterprise Directory) (Dhamdhere & Karande, 2010).

➢   **Authentication**

As the name implies, users are expected to provide their credentials for the system to allow you access. For instance, if you want to use an online information resource, the first step is for you to enter your authentication details (username and password) to gain access. If you enter the correct login details the system will recognize your institution because your details were captured in the system. Most authentication module provide a single sign-on so that you do not need to sign in again till your session is timed out. Some may require two steps sign depending on the configuration. Other institutions also make use of authentication like using the ATM card such that, you cannot perform any operation in your account unless you enter your pin number. So, authentication is applicable to many establishments, staff clock in and out with their cards so that the system keeps record of it. need no paper to sign in or out. These are measures put in place in a digital environment to control access in an organization.

➢   **Authorization**

The system can only authorize you to perform any function if you succeed in the authentication. Authorization is the module that determines whether a user is permitted to access a particular information resource. It is performed by checking the resource access request, against authorization policies that are stored in an IAM policy store (Dhamdhere & Karande, 2010). If a user gets access to the system, the next step is to get authorization to access a specific service, files, documents etc. specific permission is given to the user depending on the role of the user in the organization or institution. Authorization processes are determined by business rules and may be automated in the onboarding process or require some degree of manual intervention. For instance, giving every human-associated network ID an email account during onboarding is an example of an automated authorization process (The Institute of Internal Auditors, 2021).

➢   **User Management**

User management involves password management role/group management and user/group provisioning (Dhamdhere & Karande, 2010). In user management, the administrative functions and privileges are defined. Users' accounts are created and managed depending on the duration or period the users must stay within an organization. This process helps to ensure security of anorganisations data and system. Any user who has left the services of the organisation is automatically signed out. In the management of users' access, some institutions prefer to create a central system while in some cases each unit has an administrator that manages their account. In any case, the essence is to provide support and feedback to the end users. There are some cases the users may be referred to self-service. An example is password reset, user registration etc. In such situation, they can perform functions from their end without the assistance of the administrator. This way, the administrator will be in a better position to provide other services instead of attending to users' query. User management requires an integrated workflow capability to approve some user actions such as user account provisioning and de-provisioning (Dhamdhere & Karande, 2010).

➢   **Central User Repository**

Central User Repository stores and delivers identity information to other services and provide services to verify credentials submitted by clients. It presents an aggregate or logical view of identities of an enterprise(Dhamdhere & Karande, 2010). In any networked system there is always a Central Repository that controls the system. When users submit their registration details, it is processed at the Central Repository and the user is notified if the registration was successful or not.

3.1   Functions of Identity and Access Management

All aspects of identity management infrastructure are stored in identity management system. With this information, the system provides authorization, authentication, user registration and enrolment, password management, auditing, user self-service, central administration, and delegated administration (Dhamdhere & Karande, 2010). Other functions as highlighted by the authors includes:

Stores information
Information about applications; (e.g. business applications, Web applications), databases (e.g. Oracle, DB2), devices e.g. mobile phones, card keys); facilities (e.g. warehouses, office buildings); groups such as workgroups, operating systems like windows, linus; people e.g customers, employees; policy e.g access control policy and roles like titles, job functions are stored in the identity management system.

Authentication and authorization

Authentication and authorization are both for internal and external users done by the identity management system. The request for access to information resources is initiated by the user, the system authenticates the user by requesting for the registration details of the user like password, username, biometric date etc. If this is successful, the system will authorize access based on the user's right. Hence, subsequent authentication and authorization requests, from the user is managed by the access control system.

External user registration and enrolment

It allows external users to register their account and enroll for access to information resources. However, in a situation where the authentication of the user fails, the user can register an account. When the use succeeds in account creation, and gets authenticated. The user enrolls for access privileges in order to request for resources. The enrolment process may be manual. Registering in the Identity Management System and enrollment for access is important for a user to be granted access to the resources.

Internal user enrolment

Internal users can enroll for access privileges in the identity management system. This is different from the case of external user that needs to register. Internal users already have their identity captured within the management system. This process for internal users is identical to that of external users.

Auditing

It is easy to audit the system to get the users and privilege information. With the identity management system, it is easy to query the system to verify the level of user privileges. This data is authentic for auditing purposes. Unlike a situation where it is done manually, there will be a lot of errors and omissions. With the aid of the identity management system, auditors can access accurate data about users and their rights and privileges.

Central administration

In an place where there is the identity management system a multiple identities or data could managed centrally by the administrator of the system. This makes the work of administrators easy since they can manage both the content within the system and also the structural architecture of the system. This helps in the efficient management of the whole system.

3.3   Challenges in Identity and Access Management

The information technology unit of most organisation is always confronted with the challenge of access management especially in a big establishment. It ranges from collating users' credentials, responding to user's requests, password authentication, etc. In a situation where the workforce is more of digital migrants, the challenge is more unlike in the case it is the digital natives. The challenges of access management as written by (Dhamdhere&Karande, 2010) are summarized as follows:

❖   An increasingly distributed workforce: With the increase in workforce especially where an organisation has many branches, it becomes a challenge to the IT department to maintain a consistent experience for employees connecting to corporate resources without sacrificing security. In most, cases, it is expensive to pay for the maintenance of the system. This is a major challenge threatening the stability of the identity and access management. Solution is, a comprehensive, centrally managed IAM solution returns the visibility and control needed for a distributed workforce to an enterprise IT team.

❖   **Distributed applications** with the growth of cloud-based and Software as a Service (SaaS) applications, users now have the power to log in to critical business apps like Salesforce, Office365, Concur, and more anytime, from any place, using any device. When you have distributed applications, it is a big challenge to maintain and manage users' identity for those applications. Most times it results in password management problem in such situation where the IT team are faced with a lot of queries from users.

❖   **Productive provisioning** If the system is not centralized, the IT team may be challenged to provide access manually. This method will be time consuming especially when the workforce is much. If that happens, it takes time for the employees to be enrolled into the system and start work. This invariably will affect the output in such organisation. However, with a centralized system, users' access will be easily controlled, those that have left the services would be removed from the system without much stress. In the provision of library information resources and services, it provides a challenge to the librarian in providing Selective Dissemination of Information services with records of staff who are out of the system.

❖   **Bring your own device (BYOD)** In an establishment, it is certain that many employees will like to work with their personal systems and connect them to the cooperate network for professional and personal reasons. The challenge with this system is the ability of IT to react quickly enough to protect such organization's business assets—without disrupting employee productivity and while offering freedom of choice.

❖ **Password problems** The challenge of employees remembering series of passwords and usernames to many of their account because they are cloud based. This may cut cross domains and use of numerous different authentication and attribute-sharing standards and protocols. Some applications require changing of password monthly or bimonthly. In that case, there is the challenge of managing employee's password especially in a big organization. Although this is done to ensure security of organizations system, most times it is challenging to manage.

❖ **Regulatory compliance:** With an automated system the process of determining access rights and privileges for any employee is easy. It is easy to track management approvals for expanded access; to identify who accessed what and when they did it. This can go a long way to ease the burden of regulatory compliance and ensure a smooth audit process.

4.0 CONCLUSION

Access management is important in any organization or for any system to function effectively. This helps to check unauthorized access to and ensure security of the organizations data. Depending on the nature of access an organization may prefer to provide to their resources, the Central Repository unit. It has the obligation of monitoring what happens to the data, how the system is being used and provide feedback when necessary. The library of the 21st century has stepped up to the challenge of providing access to resources and to students. As discussed in the unit, you will discover there are technologies in place to help in access management.

5.0 SUMMARY

Access management is important as a measure to guide against unauthorised access to information. In order to ensure privacy of information as discussed in the earlier unit, access management is necessary. In this unit, you were able to understand what access management means. The functions of identity and access management and how it affects access to information, use and the challenges of identity and access management.

SELF-ASSESSMENT EXERCISE
Define Access Management

6.0   TUTOR-MARKED ASSIGNMENT

1.   Name the functions of Identity and Access Management
2.   List the challenges associated with Identity and Access Management

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UNIT 3   REGULATION OF PUBLIC INFORMATION

CONTENTS

1.0   INTRODUCTION

Public information means information that is available for public use irrespective of the source. It can be available in different formats. That information is classified as public information does not mean that it should not be used properly. Credit should be given to the creator and the source should be cited at the end of the work. The right to access information held by public authorities, or the right to information, is recognised under International Law as a Fundamental Human Right (Apeloko, 2021). Most organizations and agencies have their goals towards making public information accessible. In the Sustainable Development Goals (SDG), it is stated in one of the SDG goals. Hence, there should be access to information produced globally, but measures should be put in place to monitor and regulate the use of these information. The UNESCO is the designated UN agency for monitoring and reporting on this target regarding guarantees for, and implementation of, the right to information across the world. In this course, you will understand why it is important to regulate public information and the challenges in doing that. This will help you to know how to handle everything concerning public information.

2.0   OBJECTIVES

At the end of this unit, you will be able to:

•   Define the concept of regulation.
•   Explain the term regulation agencies.
•   Discuss the importance of regulation of public information.
•   Explain the challenges of regulation of public information.

3.0   MAIN CONTENT

1.   Definition of the concept of regulation.
2.   Definition of regulation agencies.
3.   Importance of regulation of public information.

3.1   The Concept Regulations

Regulation could be seen as putting a check, or control over the use of facility, resources, or workplace. Regulation is important as a measure to ensure order and sanity. If there is there no regulation, there is bound to be laws springing up from different perspectives. The concept of regulation could be defined with reference to state made laws, (Laffont 1994). Society analyst and scholars of globalisation, point to the proliferation of regulatory institutions beyond the state. They see it from the perspective of e.g., civil-to-civil, civil-to-government, civil-to-business, and business-to-business regulation. Legal scholars are of the opinion that it is a legal instrument, sociologist and criminologist from social control pay their attention to shaming and issues of restorative justices (Braithwaite, 1989; Braithwaite, 2002).

Regulation for an institutional economist comprises of elements of market which is seen as being the constituents of property rights (North 1990). In the European parlance, and for most of the 20th century, regulation was synonymous with government intervention and, indeed, with all the efforts of the state, by whatever means, to control and guide economy and society (Levi-Faur,2010).

Regulation may be seen as a risky business or risk maximization because it is prone to failure and cost that may exceed the benefits (Hutter 2001; Hood, Rothstein & Baldwin 2001; Fischer 2007). Regulations as rules are made, when such rules are made, enforced and monitored to ensure that it is properly kept (Hood, Rothstein, & Baldwin 2001). For instance, in your institution there are rules and regulations made by the university to guide staff and students for smooth running of the university. As a student you are expected to write an entrance examination which qualifies you to be admitted into the university. Upon being admitted, you pay your school fees and register your courses, failure to do so, you will not be regarded as a student. Even before you write your examination, you are expected to attain a percentage of class attendance. So, these are some of the school regulations put in place to guide you as a student for successful completion of your programme. If these regulations are not put in place and enforced by the university, there will be anarchy in the system.

3.2   The Concept of Regulatory Agencies

Regulatory agencies have become a highly popular form of regulatory governance since the 1990s. They are non-departmental public organization mainly involved with rule making, which may also be responsible for fact-finding, monitoring, adjudication, and enforcement (Levi-Faur, 2010). Regulatory agencies are important in any system as they help to enforce and monitor these regulations. When an establishment comes up with regulations, they set up bodies or committees to ensure that the regulations are kept by the subjects. These regulatory bodies may be autonomous depending on the level of power and rights the establishment confers on them.

In Nigeria we have regulatory agencies, such as the National Information Technology Development Agency NITDA). It is an agency statutorily mandated by the NITDA Act of 2007 to develop regulations for electronic governance and monitor the use of electronic data interchange and other forms of electronic communication transactions (NITDA, 2019). It is charged with the responsibility of safeguarding people's right to data privacy, safe conduct of personal data, and ensure that Nigerian businesses thrives in international trade by equitable legal regulatory framework on data protection (NITDA,2019). Some other regulatory agencies as outlined by Mfonobong (2020); Obunadike (2020); Olawale (2021) and Wikipedia (2022) includes;

Budget office Federal Ministry of Finance; This agency was established to provide budget functions. They implement budget and fiscal policies of the government of the federation. In the budget office the staff are responsible for the analysis, processing and production of the budget recommendation. They also produce other financial documents. Such as official Statements that accompany the issuance of General Obligation Bonds and other debt.

The Bureau of Public Enterprises (BPE) this serves as the secretariat of the National Council on Privatisation Policies (NCP) is on privatization and commercialisation, preparation of public enterprises approved by the NCP for privatisation and commercialization. This office is concerned with the responsibility of implementing the policies on privatization and commercialisation

Central Bank of Nigeria (CBN) ; the CBN is charged with the responsibility of control and administration of the monetary and financial policies of the federal Government. It also monitors the activities of other financial institutions. The CBN issues legal tender currency; ensures thorough financial system in the country and maintains external reserves to protect international values of legal tender currency.

Corporate Affairs Commission (CAC) The Corporate Affairs Commission was established by the Companies and Allied Matters Act, promulgated in 1990 to regulate the formation and management of companies in Nigeria**.** This body is charged with the responsibility of registering and regulating of business, companies and other allied organization.

Debt Management Office Nigeria (DMO): They centrally coordinate the management of Nigeria's debt which was hitherto being done by a myriad of establishments in an uncoordinated fashion. The DMO carries out the government's debt management policy of minimising financing costs over the long term, taking account of risk. The minimise the cost of offsetting the government's net cash flows over time, while operating in a risk appetite approved by ministers.

Department of Petroleum Resources (DPR) The Department of Petroleum Resources (DPR) has the statutory responsibility of ensuring compliance to petroleum laws, regulations and guidelines in the Oil and Gas Industry. This department under the federal ministry of petroleum resources

Economic and Financial Crimes Commission (EFCC) Economic and Financial Crimes Commission is a government agency responsible for preponderance of economic and financial crimes like Advance Fee Fraud (419), Money Laundering, etc. this agency investigates financial crimes that took place in the country. It is their responsibility to investigate and ensure justice to any cases of laundering or financial crime reported to them,

The Economic Community of West African States (ECOWAS). Was established to promote economic integration in all fields of activity of the constituting countries. This is a regional political and economic union of fifteen countries in west Africa.

Federal Aviation Authority of Nigeria (FAAN) Its statutory duties, according to the policy guidelines is provided by the Federal Government of Nigeria, through the Federal Ministry of Transportation. It is guided by these in all of its business dealings and agreements with contractors and various third parties with which it does business. Federal Airport Authority of Nigeria is a service organization statutorily charged to manage all Commercial Airports in Nigeria and provide service to both passenger and cargo airlines.

National Orientation Agency (NOA) is responsible to consistently raise awareness, provide timely and credible feedback; positively change attitudes, values and behaviours; and sufficiently mobilize citizens to act in ways that promote peace, harmony and national development. The National Orientation Agency of Nigeria is the body tasked with communicating government policy, staying abreast of public opinion, and promoting patriotism, national unity, and development of Nigerian society. The motto on its website states: "Do the right thing: transform Nigeria

The National Broadcasting Commission (NBC)is the broadcast regulator of all broadcasts in the Federal Republic of Nigeria. The commission in its advisory capacity to the federal government regularly adopts scientific research methods to gather data, analyze trends in line with the dynamism of the industry and advise government accordingly. It is also the responsibility of the commission to receive, process and consider applications for the establishment, ownership or operation of radio and television   stations including cable   television   service, direct satellite broadcast and any other medium of broadcasting; radio and television stations owned, established or operated by the federal, state and local government; and stations run under private ownership (Wikipedia, 2022).

The Nigerian Communications Commission (NCC) is the independent regulatory authority for the telecommunications industry in the Federal Republic of Nigeria. The NCC was created under Decree number 75 by the Federal Military Government of Nigeria. The NCC was charged with the responsibility of regulating the supply of telecommunications services and facilities, promoting competition, and setting performance standards for telephone services in Nigeria. The Decree has been abrogated and replaced with the Nigerian Communications Act (NCA) 2003 (Mfonobong, 2020).

3.3   Importance of Regulation of Public Information
1   An unexamined life is not worth living, to ensure standard it is important that public information is regulated. If not, there will be a lot of disorder.
2   To protect investors, regulations are made to protect businesses, customers etc, from risk. Adhering to the regulations will help companies to benefit from their business as this will encourage investors.
3   There are many businesses springing up today. If there is no agency to regulate their activities, it may get to a point where there will be unhealthy competition and domination from big companies over small ones. However, with regulation, their

activities can be monitored and when there is need, erring ones will be called to order.

4   Through regulation it will help businesses to make profit from their business and employers will also have cordial relationship with their employees. The issue of intimidation and exploitation will be reduced.

5   To protect consumers against monopoly.

6   To monitor the performance of services providers.

4.0   CONCLUSION

Regulation of public information and businesses by different regulatory agencies is important for nation development. In order to ensure standard, there should be mechanisms to help achieve it. Thus, government sets up different agencies to check the activities of the parastatals under them. Although in some cases, there might not be 100 percent adherence to the law, the businesses do comply. The agencies on their own part should intensify their efforts such that where there are lapses, they are to encourage investors and economic development.

5.0   SUMMARY

In this unit we discussed regulation of public information. The different agencies that regulate public information and their functions were highlighted. The unit also presented some of the importance of regulation of public information especially in this era where technology has made the world a global village.

SELF-ASSESSMENT EXERCISE

Do we need regulation of public information? if yes, state the importance of regulation of public information.

6.0   TUTOR-MARKED ASSIGNMENT

1.   What do you understand by regulation of public information?
2.   List seven public regulatory agencies and their functions

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