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Advantages of an open source model for folklore in the digital realm: "An investigation into folklore and traditional narratives on digital platforms, followed by recommendations for the digitisation of folklore in Africa"

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Advantages of an Open Source Model for Folklore in the Digital Realm

"An Investigation into Folklore and Traditional Narratives on Digital Platforms, followed by recommendations for the Digitisation of Folklore in Africa"

Research Report

Master of Arts, Digital Art: Interactive Media

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Abstract

This research report explores the application of an open source model for African folklore in a digital realm, and the advantages and disadvantages associated with the open source model. The investigation considers possibilities for collecting, archiving and digitising folklore, which would assist in its preservation, and how this could be accessed and shared with the world on an open source platform.

The research explains folklore as a form of oral tradition and explores the open source model and how it works. The research made use of two case studies. The first case study was used to explain the method and processes in collecting folklore for documentation. The second case study was used to show how traditional folklore objects or materials are transformed into digital content, archived and shared on an open access framework which serves both to preserve folklore and to make it publicly available.

This research report made use of a "desktop research" methodology. Information was gathered through extensive searches of published article, journals and books. Substantial and prolonged engagement with the websites and databases for the two case studies was entered into, and a synthesis of these resources assisted in forming the overall argument of the paper.

This research report argues that an open source model for disseminating digitised African folklore provides the best option however certain considerations need to be carefully elucidated. Finally, the report makes recommendations for the process of collecting and digitising specifically African folklore.

Declaration

I declare that this research report is my own unaided work; submitted for the degree of Master of Digital Arts at the University of the Witwatersrand, Johannesburg. It has not been submitted before for any other degree or examination in any other university.

Johnson Sennah Gilbert Date

_____ _____

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Introduction

This research report explores the advantages of initiating an open source model for folklore in the digital realm. Furthermore, it will also briefly look at folklore and traditional narrative in African societies as the context to the open source model. The cultural significance of folklore and traditional context and rendering them narratives accessible through a digital platform is briefly considered. Two studies on digitising folklore on an open source framework will be appraised. These are the "Open Folklore Project" and the "Columbia University Center for Oral History Project".

Folklore and traditional narratives can be seen as forms of oral tradition. They have been employed as a means for communication in most traditional societies for many years according to Roney on page 6 in his article, "*A Case for Storytelling in the K-12 Arts Language Curriculum*", *(2008)*. Roney further states that storytelling is a useful tool for sharing knowledge and content and can be relied upon for teaching as well as learning (6). Folklore and storytelling continue to be used as tools for communication today. Furthermore, in his book *"Oral Tradition as History" (1985)* Vansina observes that knowledge is acquired from elders in society. These elders employ the use of these verbal processes to transfer knowledge to subsequent generations by this communication technique (100-101). To this end, oral tradition could be preserved when digitised and would reach a wider audience through an open source model.

The proposal of integrating oral tradition, particularly folklore and traditional narratives, with technology may have seemed inappropriate on a continent like Africa in the past. This was because Africa was behind in terms of the digital divide in the world, according to Fuchs and Horak in their article *"Africa and the Digital Divide"* (2006) (102-104). Castells defined the digital divide in his book *"The Internet Galaxy" (2002)* as "inequality of access to the internet" (248). Another definition, provided by Van Dijk in his article *"The Deepening Divide, Inequality in the Information Society" (2005),* suggests that it is "the gap between those who do and do not have access to computers and the internet" (178). The digital divide referred to in this context is the accessibility and usage of the

internet on the African continent compared to other countries in the world where internet accessibility and usage is high. This would be at a disadvantage to the open source model.

Information provided by Fuchs and Horak showed the following statistics. Out of the fifty four African countries only three countries have an internet access rate that is higher than the worldwide internet usage rate of 15.7 percent. Six of the fifty four countries have an access rate higher than 10 percent, and twenty other countries have an access rate that is lower than one percent (102-104). However, Dhliwayo in his article *"Developing a Fibre Optic Backbone for Africa" (2005),* states that the African internet sector has witnessed some growth in the past few years, especially since the laying of undersea fibre optic cables in some countries in the west , central, north and southern Africa (124-126). He further notes that the submarine cables cover a distance totaling 28,000 km. This connects the countries of Portugal, Spain, Senegal, Ghana, Benin, Cote D'Ivoire, Nigeria, Cameroon, Gabon, Angola, South Africa, France, Mauritius, India and Malaysia (125).

In Ghana, information technology is now widely used by many people in Africa for most day-to-day engagements and many individuals rely on the internet for information.

The Spy News Agency homepage is an online news site that provides General News, Business, Politics, Health, Features and Opinions, Life & Style, Entertainment and Sports on Ghana, Africa and the world at large. According to the Spy News Agency in an article titled *"Mobile Internet Penetration in Ghana goes up by 9.73 %"* (2014) indicates that monthly mobile internet usage in Ghana increased by 9.73 percent in April 2014. To this end, Ghana records a total of 14,254,407 mobile internet subscribers (Spy News Agency, par. 1).

Although the internet penetration rate has grown, it is still considered to be behind the rest of the world. To this end, many telecommunication companies operating in Africa are considering options for broadband wireless access technologies to enable widen internet across.

Hinson and Adjasi in "*The Internet and Export: Some Cross-Country Evidence from Selected African Countries*" *(2009),* acknowledge that although internet usage in Africa was low in the past years, there has been a significant growth that. This indicates the increasingly important role that the internet play (311). Given these improvements one can argue that there is sufficient internet coverage in Africa to render oral traditions available on a digital platform.

Oral Tradition and Technology

In a paper titled *"Digitization and security of "Bulgarian Folklore Heritage" archive" (2010)* suggests that an interactive digital platform may be suitable for bringing oral tradition and technology together. This is because non-interactive media such as video may miss the element of interaction which is vital to a traditional storytelling environment (Bogdanova *et. al.* 335). To this end, a blend of technology and oral tradition would present a new way of storytelling in an interesting manner.

Vansina believes in her book titled "*Oral Tradition as History" (1985)* that oral traditions have always been delivered by word of mouth because of their oral nature and the traditional value they bear (118). The concept of bringing oral tradition and technology together would preserve the participatory and interactive nature of traditional storytelling. This could also serve as a way to preserve our traditional storytelling in an interactive way on digital platform. This is because folklore is an important part of the culture and history of certain groups of people in society. Folklore also plays major roles in these communities such as educating them and reminding them of their history.

Layout of Chapters

This research report provides some insights into the role and importance of folklore and traditional narratives, and the possibility of digitising it to preserve it, and also looks at the possibility of making it available through an open source model. Additionally, this paper will examine how important oral traditions, in particular folklore and traditional

narratives, can survive in the age of communication technology through digital media platforms to uphold the transmission of knowledge.

In Chapter One, the definition of oral tradition is explored. Additionally, this chapter will discuss the characteristics of folklore and the relationship between folklore and tradition. This is because folklore is often defined on the basis of tradition. The usefulness and function of storytelling, and the preservation of folklore in the context of an open source model, are also discussed in this chapter.

Chapter Two will define open source and examine the open source model in a broader way to give an understanding of the concept. Copyright and ownership are defined and discussed since these are key concepts of the open source model. Some fields where the open source system has been applied successfully are also considered. This chapter will conclude by exploring the advantages and disadvantages of an open source system.

Chapter Three will discuss the "Open Folklore Project" as the first case study for this research report. It will explore the process of data gathering for the project, how resources are digitally preserved and the kinds of collection in the database. This project will also be examined as a digital platform for folklore collection and traditional narratives and for how different resources are categorised and grouped. Finally, this chapter will explore how content is digitised so that individuals, groups or institutions can have access to it.

In Chapter Four, "Columbia University Center for Oral History Project", the second case study for this research report, will similarly be explored. It will also investigate how data is collected into the library, it will explore methods of digital preservation of data and methods of archiving and finally, it will be used to explain how the open source model works in terms of access and rights.

The findings of these case studies are presented in the conclusion of this report which will show whether the open source model can be applied to folklore in African in a

digital globally-connected world. Finally, some recommendations are made on how the open source model should be applied to folklore in African.

1.0 Chapter 1

1.1 Introduction

This chapter will begin by exploring the definitions of oral tradition. This is important and necessary because oral tradition is the umbrella which encompasses folklore, storytelling and traditional narratives, as noted by Ben-Amos in his article *"The Seven Strands of Tradition: Varieties in Its Meaning in American Folklore Studies" (1984) (98)*. The definitions of oral tradition are thus fundamental to the discussion on folklore and traditional narratives which will take place later in the chapter. This chapter will also discuss the characteristics of folklore and the relationship between folklore and traditional practices. Folklore is often defined with reference to traditional practices according to Utley in his article, *"Folklore Literature: An Operational Definition" (1961) (196)*. The usefulness and function of storytelling and preservation of folklore, in the context of an open source model, are also discussed in this chapter.

1.2 Oral Tradition Defined

Scholars and theorists have defined oral tradition differently depending on the context in which it is used. This assertion is made by Ben-Amos in his article titled *"Toward a Definition of Folklore in Context" (1971) (3).* Miller defined oral tradition in his article *"The African Past Speaks", (1980)* as an account describing eras before the time of the person who relates it (2). Hart in *"Getting Started in Oral Traditions Research", (1985)* places oral tradition in a similarly temporal framework, defining it as the transfer of traditional knowledge from one generation to the next generation verbally (30). In an article titled *"General History of Africa: Methodology and African Prehistory" (1981),* oral tradition is defined as a "testimony transmitted verbally" from one generation to another (Ki-Zerbo 142).

Similarly, Vansina, in his widely read and cited book, captured the definition of oral tradition as "verbal messages which are reported statements" from one generation to

another generation (27). This definition reiterates the fact that "the message must be transmitted through oral statements" (27).

Based on the aforementioned definitions of oral tradition, it becomes clear that oral tradition is verbally transmitted. The definitions provided by Hart, Ki-Zerbo and Vansina have similarities. All three definitions agree that there should be a message that is transmitted verbally. Miller's definition indicates that certain persons relate to tradition and culture differently, thereby creating room for various interpretations (2). Everyone belongs to a specific group, and these groups have different traditions they believe in and culture they practice (Vansina 19). The definition provided by Hart emphasises the transmission of oral tradition over generations (30). Whilst Ki-Zerbo believes it is a "testimony" (142), Vansina suggests it is a "message" that is transmitted through verbal means (27). Furthermore, when information is transmitted through two or more persons it is possible that the original message may change to some extent (17). For instance, a few words may vary which changes the original message (17). This therefore changes the import of the message, giving it a different meaning. This confirms why oral tradition has no standard definition, leaving it open to various interpretations, depending on context.

Folklore is an aspect or a form of oral tradition, and this paper specifically considers the advantages of an open source model for folklore in a digital realm. The next section explores what folklore is, and how it is defined.

1.3 Folklore Defined

There are several definitions of folklore. Both "semantic and theoretical differences" may have contributed to this proliferation in the definition of folklore. Whilst it is still difficult to define or describe what folklore means and stands for, anthropologists consider folklore as literature. Scholars of literature have defined it as an aspect of culture (Ben-Amos, "Towards a Definition of Folklore in Context" 3). Folklore has other related terms, such as folk life or folk arts, according to Dorson in his article, *"Folklore and Folklife: An Introduction" (1972)* (2).

Ben-Amos defined folklore as "artistic process or communication in small group situations" and further extends the framework within which folklore can be referenced (Ben-Amos, "Toward a Definition of Folklore in Context" 14).

In *"Living Folklore: An Introduction to the Study of People and their Traditions" (2005)* Sims and Stephens made an observation which concluded that folklore helps to "form and express identity in the midst of an always complex, sometimes confusing social context" (1-2). By extension folklore comes with a feeling of both denial and memories. One is able to remember the knowledge acquired from a particular sharing moment and the sensation that characterised it.

Abrahams is of the opinion that folklore has identities that make it unique from other oral traditions (30). A conscientious observer can immediately recognise folklore items because of their artistic quality which Ben-Amos confirmed in his definition of folklore. Therefore one is not likely to confuse these forms with normal conversation since they are all self-conscious and do not happen as a spontaneous performance (18). Ben-Amos thinks that it is these characteristics that make an item of folklore so visible when it is performed. From Ben-Amos's point of view, folklore is unique and generally unmistakable. This will depend, though, on the individual sense of belonging (Ben-Amos, "Towards a Definition of Folklore in Context" 14).

Klein writes in *"Folklore. In International Encyclopedia of the Social and Behavioral Sciences" (2001),* that folklore has four basic meanings (5711). First, folklore denotes oral narration, rituals, crafts and other forms of vernacular expressive culture. Second, folklore or "folkloristics" names an academic discipline devoted to the study of such phenomena. Third, according to Klein, in everyday usage, folklore sometimes describes colourful "folkloric" experience linked to the music, tourist or fashion industries. Klein further believes folklore is like myth which can mean falsehood. In this regard it can be likened to a fairytale with many interpretations and understanding based on truth or imagination.

Oral tradition is the sphere under which folklore operates. This means the definitions of oral tradition and folklore may not be too different. Folklore appears to comprise a well known tale told in many different variations by several different people (Ben-Amos, “Towards a Definition of Folklore in Context” 3). Klein departs from giving a rounded definition of folklore but rather describes what he believes folklore represents and means to people. He believes folklore has many aspects, therefore referring to it as “myth” (5711). This then confirms Ben-Amos’s claim that folklore has several definitions (3). The observation made by Sims and Stephens shows that folklore creates the environment to form opinion which is in context with the situation, one’s need and use (1-2). Ben-Amos also believes that folklore is a communicative tool through which knowledge can be transferred and acquired (14). Though folklore has varied definitions, traditional practices have been the underlying idea in defining what folklore is (K. Wilgus 242). In the next section the relationship between folklore and traditional practice is discussed.

1.3.1 Folklore as Traditional Practice

According to Utley, when analysing how folklore has been defined, the term "tradition" is fundamental and prominent in the proposition of a firm definition (196). Utley explains that folklore relates to traditional practices and these are often referred to by scholars when attempting to define folklore. Contrary to the writing of Utley, some disagreed with the context of using tradition as the basis to define folklore (Wilgus 'The Text Is the Thing” (1973) 242). Ben-Amos defines tradition as the “attribute not just of time but more pronouncedly of societies of earlier cultural stages” (“The Seven Strands of Tradition: Varieties in Its Meaning in American Folklore Studies” 99). Tradition has been used as a term to describe both culture and the non-writing societies (97). As much as he accepts the definition of folklore in context, Ben-Amos argues that "the traditional makeup of folklore is an analytical construct which is scholarly and not a cultural fact" (“Towards a Definition of Folklore in Context” 13). Ben-Amos agrees that tradition is a trait, not just of time, but also of denoting the “practices of earliest societies” (“The Seven Strands of Tradition: Varieties in Its Meaning in American Folklore Studies”). The way in which a

group of people or community associates with certain beliefs and cultural processes such as marriage, or festivals, is seen as their tradition (99).

This definition by Ben-Amos confirms that one cannot overlook context and tradition when defining folklore (99). This is important because of the diversity in traditional practices and cultural identities of people. For this reason some scholars have come to understand folklore as an element of traditional practice with a cultural identity. Therefore, when folklore is seen as a traditional practice there is the need to preserve and share it. This could be done through an open source model.

The difficulties associated in arriving at a suitable and acceptable definition for folklore are understandable. This is because of the varied definitions of folklore and the importance of context in which the definition is given. It may be inappropriate to single out one definition as acceptable to all. However, in the event that scholars arrive at a consensus on a definition, this will need to be reviewed from time to time because of the context of traditional practices in which folklore is defined. Tradition changes from time to time, thus the definition of folklore may need to change with it. Folklore is a form of an oral tradition and an instrument through which traditional knowledge is transmitted or shared.

For the purpose of this report, I will define folklore as a form of cultural identity. It will be based on traditional practices with which a group of people associates and which connects them together and is passed on from one generation to the next. Folklore can denote the life lived by a group of people, which some scholars have referred to as folklife (Dorson 2).

In the next section I will briefly explore the relationship between storytelling and folklore.

1.4 Storytelling and Folklore

Folklore is an oral tradition, dictated by cultural practice, which is passed on from one generation to the next. This is generally done through the medium of storytelling. If we preserve the stories by digitising them, folklore may be preserved as well.

In an attempt to establish when the first storytelling definition came about, Roney writes that formal definitions of storytelling began appearing in the 1970s (5). According to Chambers in his article *"Storytelling: The Neglected Art" (1966)*, the art of storytelling is one of the earliest, if not the oldest, forms of human communication (718). In *"Storytelling Process and Practice" (1986)*, Livo and Reitz stated that other scholars, in defining storytelling, made a number of statements beginning with "Storytelling is. . ." to indicate that it is an ancient art. It is also seen as a stylistic practice, an immediate experience, a negotiation between the teller and the audience, an entertainment section and a game for participation (7-11). Storytelling is a useful tool for sharing knowledge and content and can be relied upon for teaching as well as learning (Roney 6). Pellowski defined storytelling in his article, "*The World of Storytelling" (1977),* as a "unique art form, and a medium of communication" (15).

Kuruk notes in his article *"African customary law and the protection of folklore" (2002)*, that folklore appears in different forms and types in Africa. This folklore types come in visual and object oriented forms. Examples of visual forms or types include poetry, riddles, songs dance or music. On the other hand object oriented folklore includes mosaic, woodwork, metalware, jewellery, costumes, handicraft, paintings, pottery and carvings (7).

Storytelling can be described as the art of using language, physical movements and gestures to create imaginary images for a live audience. Similarly, it is the art of recreating literature, taking printed words and giving them life (Pellowski 15). Storytelling is used by the elders to give advice, educate and clarify situations (Roney 6). In its most basic form, storytelling is a process whereby a person (the teller), uses mental descriptions, narrative structure and vocalisation or signing to communicate with other humans (the audience)

(Pellowski 15). Since storytelling is an educational tool through which knowledge is passed on to other generations, it is appropriate to preserve and protect it. By digitising folklore, traditional knowledge can still be passed on, and accessed by many, on an open source system.

1.4.1 Function and Uses of Folklore

The effectiveness of storytelling as a tool in teaching and learning is because it promotes easy understanding according to Tappan and Brown in *"Stories Told and Lessons Learned: Toward a Narrative Approach to Moral Development and Moral Education" (1989) (185)*.

Henige's article, "*Oral Tradition and Chronology" (1971),* identifies one of the functions of folklore as "preserving the semblance of stability and continuity" (374). For instance, the Igala (an ethnic group of Nigeria) have made use of folklore as a means to educate the population for generations. This has proved an effective means of transmitting information about politics and policies which add to the stability of the society.

Storytelling is a vehicle through which folklore is delivered and traditional knowledge is acquired (Chambers 718). Henige's illustration confirms that folklore plays an important role in the history or culture of a group of people. Knowledge can be acquired in various ways and through different forms. In the past folklore served as a technique through which traditional practices were passed on and people were educated (Hart 31). This kind of knowledge will be referred to as traditional knowledge. In order to protect this form of knowledge, an open source digital model could be useful. The open source model will allow free accessibility without one necessarily having to go back to the elders in the villages in order to access traditional knowledge.

1.4.2 Folklore Preservation

On how to preserve folklore, Stevens states in "*A Different Way of Knowing: Tools and Strategies for Managing Indigenous Knowledge" (2008)*, that "the availability of digital technology has greatly expanded possibilities for preserving indigenous knowledge that

are more sensitive to the unique characteristics of indigenous knowledge and the needs of indigenous communities"(25). Stevens furthermore points out that some indigenous communities see the benefit of recording, preserving and transmitting their traditional knowledge in non-traditional ways in order to guarantee that it is not lost.

Some authors argue that digitising folklore is a matter of urgency. Castellano in his article, *"Updating Aboriginal Traditions of Knowledge" (2000),* senses real danger if steps are not taken to digitise folklore which will help preserve traditional knowledge (32). The fact is that "the elders who still retain traditional and spiritual knowledge, and who know the context in which empirical observations must be evaluated, will join their ancestors without passing on what they know" (32).

Tobin recounts other factors that also threaten the loss of traditional knowledge in his paper, *"Towards an International Regime for Protection of Traditional Knowledge: Reflections on the Role of Intellectual Property Rights" (2004).* According to Tobin, educational programs that promote typically Western values in subjects such as science, language and history are worrying. Similarly, health programs that downplay the significance and effectiveness of traditional medicine are cause for concern (25). Tobin strongly believes that in order to protect, promote and strengthen traditional knowledge and traditional practices, laws, policies and programs should be developed.

There is considerable doubt whether traditional knowledge that is recorded and removed from its original context will still have value. Christie, in his article, *"Computer Databases and Aboriginal Knowledge: Learning Communities" (2004)*, points out that "digital objects do not contain knowledge itself, but rather information" (1). This digital database stores art or previous performances which were vehicles for transferring traditional knowledge (1). Other tools, such as books or images, could be similarly used. To this end, the preservation of folklore through digitisation should not be seen as a means of replacing traditional forms of education in communities that teach through oral tradition. It should rather be seen as something that will improve, or be used as, an additional tool in this

context (1). This will also allow folklore to reach a wider group who cannot access traditional knowledge in its original, verbal form.

1.5 Conclusion

In this chapter, I have explored the definitions of oral tradition. I have also explored the definition of folklore, which is not dissimilar from the definition of oral tradition. This chapter has also explored storytelling as a vehicle through which knowledge is transferred to other generations and discussed the functions and uses of folklore.

My exploration and analysis of the various definitions for oral tradition has revealed several similarities and differences between theorists and scholars. This serves to explain why there is no consensus on a universally acceptable definition for oral tradition. The definitions were given or described based on the scholar's thoughts about what oral tradition should be. Oral tradition is a verbal or spoken culture or history of a group of people living in close contact. The culture of a people is their way of life, which includes their belief system, festivals, rituals or celebrations such as marriage and birth rights. The transmission of this traditional knowledge from one generation to another is what constitutes oral tradition. Among most scholars, there was one underlying element that kept repeating itself - the mode of transmission being verbal. Some scholars defined oral tradition as culture, whilst others described it as embedded in a group association.

Interestingly, the definition of oral tradition has no distinct difference from the definition for folklore. Oral tradition, as explained in the beginning of this chapter, is the overreaching genre of folklore, storytelling and traditional narratives among others. Similarly, there is no universal definition for folklore that is acceptable to all scholars and theorists. Rather the definition of folklore is in context and relates to specific situations.

When dealing with folklore, the process of traditional practices involves ways in which cultural heritage is transmitted from generation to generation and this is where storytelling and traditional narratives have roles to play. They are the mechanisms used in

the transmission process. In summary, oral tradition is the message, folklore is the tool used and storytelling and traditional narratives become the process to transfer knowledge from one generation to the next.

There are many benefits that arise when folklore is digitised. The digitisation will help preserve and protect traditional knowledge when those who transfer it are no longer alive (Castellano 32). In order for folklore to be accessed widely, an open source model could be appropriate. It will link people to their cultures and traditions on a platform without having to go to the elders. There are other benefits of digitising folklore beyond preserving it for future generations. One possible benefit is that this may make folklore more attractive to the younger generation or others who see folklore as an old-fashioned way of acquiring knowledge.

In chapter two, the open source software model is examined. Furthermore, I will look at the open source model in practice in other fields outside the software realm, specifically in education.

2.0 Chapter 2

2.1 Introduction

In the previous chapter I explored the concepts of oral tradition and folklore, including their definitions. I also considered folklore as an educational tool that might lend itself to preservation through digital means. In this chapter I will turn my attention to the concept of open source software. An open source software model provides a potential platform for digitising folklore. This is because the open source model provides an avenue where digitised content can be accessed for free and redistributed amongst users. Other accessible platforms which are not open source may have restrictions and limitations because of copyright and ownership related issues therefore preventing modification and sharing of source code. Additionally, before content can be made freely available through an open source model, it must first be digitised to conform to open source model specifications and requirements.

This chapter will define the open source model and explain practical applications of the system. This could provide guidance in digitising folklore. To this end, the chapter will demonstrate that the open source model has been successfully applied in a field outside the software environment. This analysis will be specifically related to how open source model has been applied in the area of education. Finally, this chapter will explore the potential advantages of an open source model for digitising folklore.

The term "open source" has been interpreted in various ways according to context, thus it has various definitions. The open source software code is typically created as a collaborative effort by programmers who come together to create it, and subsequently improve upon it. Stallman in his article, *"Why Open Source Misses the Point of Free Software" (2009),* explained that the "free software" which is now popularly referred to as "open source" may be associated with software creation and distributed among users within the software community and the general public (31) Free software is software that gives the user the freedom to share, study and modify it. Programmers continually add to existing software, thereby modifying existing source codes. This creates communality

among software developers (31). Stallman further notes that the term "free" is often mistaken for cost but rather should be associated with the freedom the software provides to users (31). This is in line with the philosophy of open source practice.

This chapter will also discuss the following initiatives, organisations and projects in connection with the open source model - the "Open Source Initiative" (OSI), the "Open Content Project", "Creative Commons" and the "GNU's Not Unix General Public License" (GNU GPL) project.

2. 2 Overview of Open Source Model

The open source model is a system of developing software code, improving on existing code and subsequently sharing this code with other user for its continuous development.

The concept of sharing and ability to access software code within the software community and users in general is a model that can be explored and applied in different fields. For the purposes of this chapter the open source model will be defined as a process to develop content for the benefit of users and developers. In this way users have free access, use content and able to modify it without any restrictions. Free in this context represents the freedom associated with open source model. They have no limitation on sharing the developed or modified content. The freedom to share without paying is allowed under the open source model.

Stallman views open source as a system that applies to the creation and development of software programs. Therefore open source is a development model which promotes a universal access - through free license - to its products. Redistribution of the original product, including subsequent improvements made to it, is universally allowed.

Bonaccorsi and Rossi, in their article, *"Why Open Source Software can Succeed" (2003),* agree with the open source model concept (1243-1244) and note that it was not

created or aimed at making financial profits. But Perens thinks software programmers and users must be allowed to sell open source software if they wish to, although some scholars think it would be a limitation (2).

The open source definition is a certified and acceptable guideline put together as a document. This document determines whether a software license will meet the standard and the requirements for it to be certified and classified as an open source product.

Perens, in his article, *"The Open Source Definition" (2008),* calls the Open Source Definition "a bill of rights for the computer user". It is a document that defines certain rights that a software license must grant in order for it to be certified as an open source product (2). Perens states that the Open Source Definition provides continuous rights of access to the source code to computer programmers and software users. This is based on the fact that, as a result of the evolution of new technologies, computer software becomes obsolete quickly (6). These guidelines for the development process are referred to as the Open Source Definition. In the light of this, there would be ongoing improvement of source codes which will be available for use, therefore sustaining the growth of the open source model.

DiBona and Ockman, in their article, *"Open Sources: Voices from the Open Source Revolution" (1999),* defined the open source software as "a freely available source code with contributions from thousands of programmers around the world" (171). These source codes, that are available for free, are improved upon by users who keep modifying them to suit the individual use. The source code could travel among users within the software community over a length of time. By the time the same source code gets to a user or developer who had initially used the software, it has been modified and improved upon, thus enhancing the software. This is possible because of the freedom allowed by the open source model in relation to sharing. Some software is classified under the free software movement. This will be explained in the next section.

Perens states that “free software” has been in existence since the 1970s (3). It was popularised by Richard Stallman around 1984 through the “Free Software Foundation” and the “GNU Project”. Stallman believes that users should be able to make use of software without restrictions. In addition, users must be able to access software with the freedom associated with the model. However, some open source programmers charge for copies of their software as a way to support themselves contrary to the principles of the open source model (Perens 3). This defeats Stallman’s idea of free access without having to pay for the use of software. If the freedom to modify and share is not allowed by the software, it could be a limitation to users of open source software. The source code must allow for modification and sharing in order to satisfy the open source philosophy and provide the necessary freedom.

2.2.1 The GNU’s Not Unix General Public License (GNU GPL)

Richard Stallman formed the “GNU’s Not Unix General Public License” (GNU GPL) project in 1983. The GPL is a license which serves to protect the freedoms of software users. The GPL is a “copyleft” license. The copyleft license means that works can only be shared using the conditions the license provides and this helps to ensure that the freedoms are protected. Although the GNU GPL is a copyleft license that provides protection of freedoms, the license does not restrict access, use and redistribution of content freely, which is the primary philosophy of the open source model. It is important to note that what is now popularly spoken of and referred to as open source, started as the free software guided by the GPL (GNU General Public License par. 1-3). The GNU GPL would then serve as guidance to users protected by the GPL. On the other hand, users of open source content do not need a license to use content on an open source model platform.

Licenses are guidelines or regulations directed at both users and developers of open source content. As noted in the previous sections, the GNU GPL is a regulation that serves to protect the freedoms of software users. To this end, Perens believes that software creators who do not make their programs open source are likely to face difficulties in competing with those who do (2). This situation will provide choices to users and

developers of software. Users will prefer software that grants freedom for use, modification and sharing with others. This will enhance the continual development and sustenance of the open source model.

The Open Source Initiative will be defined briefly in the next section. It will further be discussed in this chapter and will be connected to how the open source model has been applied and used in other fields such as education. This will be linked to the possibility of applying the open source model to folklore.

2.2.2 The Open Source Initiative (OSI)

The Open Source Initiative (OSI) is a non-profit organisation formed by Eric Raymond and Bruce Perens in February 2007. The rationale for the formation of the OSI was to organise and advance the cause of the open source model. This was intended to benefit users within the open source community and the wider public. The OSI provided guidelines to both developers and users of open source software. This ensured that the spirit of the open source model is maintained and continued as a practice. The OSI outlines the rights and freedoms related to the promotion and accessibility of software whose source code is made available (Open Source Initiation par. 1-17).

The guidelines include:

1. The right to redistribute;
2. The source codes can be modified;
3. No limitation in relation to other programs running efficiently;
4. It must be compatible to work on with other digital systems and software.

This will be further discussed in this chapter.

Lee and Cole, in their article, *"The Linux Kernel Development: As A Model of Open Source Knowledge Creation" (2000)*, state that some scholars, two of whom will be discussed below, consider the open source model to be a community-orientated concept

which came about with the popularisation of the internet - the medium through which open source models work (2). This is because the internet presents a platform where people can access information from many different locations and also organise progressive work on a single piece of code.

These definitions and descriptions of the open source model have shown that it is a community based development system. The open source model provides platforms to access source codes, software or content, with the right to modify and share. To this end, when an open source model is applied to folklore, it could be accessed by many users and would provide the freedom and right to share. This will enhance the continuous sharing of knowledge through folklore. Folklore lovers and users could in this way add to knowledge sharing by modifying it and passing it on to others. The open source model when applied to folklore would provide freedom under the open source model by allowing modification to the original folklore and subsequent sharing.

2.2.3 Licensing Models for Aiding Intellectual Property and Copyright Restrictions

The initiatives mentioned in section 2.1 above, the Open Source Initiative (OSI), the Open Content Project, the Creative Commons and the GNU's Not Unix General Public License (GNU GPL) provide guidelines to open source content users and developers. The homepage of the General Public License (GPL) has outlined certain freedoms that grant official authorisation to copy and modify software. The GPL regulates the use of the open source software whilst still allowing necessary freedoms (par. 2).

Rules and privileges include:

- The freedom to modify the software;
- The freedom to duplicate the software;
- The freedom to duplicate the modification;
- The commitment to pass on these rights;
- The license must not limit other software;

- The license must be technology neutral;
- No discrimination against persons or groups or fields (par. 2).

2.2.4 Copyright and Ownership: Objection to the Open Source Model

Copyright and intellectual property, which are generally considered as the legal rights of the author or the creator, curb the freedom associated with the open source model in terms of free access to users and developers, modification and the right to share. This is because copyright and ownership impose restrictions in respect to sharing and modification of an original piece of work. Copyright and ownership work hand-in-hand to protect and regulate how content protected by copyright is accessed and used. This indicates that it is a limitation to the philosophy of the open source model. This could be a limiting factor to the argument for the application of open source model for folklore, especially if folklore is copyright protected.

Bell, in his article *"Copyright as Intellectual Privilege" (2007),* explains how copyright is generally considered a class of intellectual property right (2). Intellectual property rights protect property such as a piece of music or a painting (21). Furthermore, Bell states that copyright has frequently been presented as "a legal privilege" (6). Folklore can be described as creative or intellectual property. It could come in the form of a story and yet it must be free from "legal privilege" in order for it to have the freedom provided by the open source model. It should be made accessible and available to the general public. There should not be a limiting factor on its sharing if wide dissemination would be beneficial.

The homepage of the *World Intellectual Property Organisation* (WIPO) explains copyright as a legal expression and a theory which describes exclusive rights given to authors and creators for their literary and creative works and content (par. 1). This exclusive right protects and covers literary works such as novels, poems, theatre plays, reference works, films and music. Additionally, artistic works protected by copyright law include paintings, drawings, photographs and sculpture, architectural and technical drawings (par. 2). Folklore could be classified as a creative work, however copyrighting it

could be a limitation therefore curtailing the open source model associated freedom. When folklore is copyright-protected one do not have the right to modify or share without the permission from the copyright holder. This is unlike the open source model, which allows the user the right to modify and share.

Grossman and Hart defined ownership in their article, "*The Costs and Benefits of Ownership: A Theory of Vertical and Lateral Integration*" *(1986),* as the "power to exercise control" (694). The power to control material lies with its owner, who has the right to decide how material should be used. When creative works such as poetry, folklore or novels are copyrighted, it curtails the freedom that is associated and enjoyed under the open source model. In some instances one has to buy the work outright in order to become the new owner or to be granted some rights that allow some freedom. This is a way one can have freedom to use the material for whatever purpose. This does not make it widely available to users unless the owner decides to make it accessible.

Owners of intellectual property and copyright materials expect to be compensated for their work. Some platforms, such as digital libraries in educational institutions, bear this cost in order to make content widely available to their students to access online resources. Outside users also absorb the cost by paying for use of resources in some instances. Some institutions with digital resources charge users who want to access information from their database before rights are granted to them. This is because the rights granted by the intellectual property owner may have been bought. Therefore, there is the need to recover some of the cost. The user would then, subsequently, also have the freedom to share material, because he or she now owns it. Copyright does not allow for sharing without the permission of the copyright owner, unlike the open source model, which allows the user to access, modify and share for free with other users without restrictions associated with copyright. Selling is also not allowed if one is neither the owner nor the copyright holder of the intellectual property. The copyright holder has the prerogative to nominate who can use the copyrighted material, how the work can be used and how it can be managed for purposes of redistribution. In this regard the copyright owner dictates who can access and use the copyrighted material. To this end, copyright is a

limiter to users. Some kind freedom could only be acquired from the digression of the right owner.

On the other hand, copyleft states that any modification of an open source product can be freely distributed together with its source and compile codes at the condition that the license grants similar rights over new modifications. Thus, software recipients can modify the program and, at condition that original authors are evidently quoted, can distribute their version of the product to other users under a new copyleft license. This permits decentralised programming and networking among users. This therefore makes copyleft a very useful concept in the digitisation of Ghanaian folklore in that the original owners are fully acknowledged and appreciated in open source product (GNU General Public License par. 1-3).

This section has explored the definition of copyright and ownership and has shown that they pose some restrictions and deny certain freedoms to users of copyright material. These would apply to the open source model and include restrictions on the freedom to access the material, the freedom to copy and modify it and the right to share it with others, all of which may require permission from the right holders. Authors of copyright materials also expect to be compensated for their work. This is a disadvantage to the application of an open source model for folklore, therefore making it a limitation. However, as discussed previously, folklore constitutes the national heritage and history of groups of people. It is provided, through storytelling, to subsequent generations as a part of their cultural learning. It is provided free of charge, and is considered a service to the community. Hence, some may argue that it is not in the spirit of folklore to impose copyright restrictions upon it. Nonetheless, communities should garner some benefit from sharing their folklore, especially if it is to be published on an international platform such as the internet, *"Preservation and Conservation of Expressions of Folklore: The Experience of Africa" (1991)*, (Mould-Iddrisu, 5).

The "Open Content Project" was formed in 1998 and is now known as "Creative Commons" (Open Content par. 2). Lawrence Lessig founded "Creative Commons" in 2001. It

is a nonprofit organisation that enables the sharing and use of creative works through free officially permitted tools. In 2002 the organisation released sets of "copyright-licenses" known as "Creative Commons" licenses. These licenses bestow certain rights upon authors. Authors can also waive these rights for the benefit of users. The Creative Commons licenses are separate from that of copyright (Creative Commons, par. 1-2). To this end, it can be seen as an extension of copyright. Content would be made available in an open and free manner for users through an open source model platform, provided the necessary permission has been secured.

The Creative Commons licenses are easy-to-use copyright licenses. They provide a simple and standardised way to give the public permission to use and share under the conditions of the right owner. The Creative Commons licenses allow the actual owner to change the terms of the copyright to suit the situation and purpose, whilst copyright licenses do not permit the terms of copyright to be altered. This gives the Creative Commons license some flexibility. Creative Commons provide the following general guidelines as to how one can use their copyright licenses:

- If a work of an author contains any copyright notice that is placed there by the copyright holder, it must not be tampered with;
- The name of the author must be cited anytime it is used;
- The title of the work must also be cited when one has to use the work;
- The appropriate Creative Common license that covers the work must be documented;
- Reference must be made to the effect whether the work is derivative work or adaptation;
- Content must not be use for financial profit.

The rationale behind the Open Source Initiative was to advance the cause of the open source model by providing guidelines to both developers and users of open source software which are intended to benefit users within the open source community and the wider public. This is to ensure that the spirit of the open source model is maintained and

continued as a practice. This license gives the user the freedom to use and share according to specific regulations and guidelines. The Creative Commons license would be more appropriate when its regulations are applied to folklore. This is because the Creative Commons license grants permission to the public. Another advantage of the Creative Commons license if applied to folklore is the flexibility associated with the license so that the right owner is able to change the terms of copyright.

These guidelines by the various initiatives, projects and organisations provide guidance to both general users of software and to developers but not of creative commons. The guidance and regulations could serve as a guide for disseminating folklore through an open source model.

The next section will discuss how the open source model lends itself to the field of education, an area which is outside the software environment.

2. 3 The Open Source Model in Practice

Some have argued that the open source model may not prove successful outside of the software realm. However, the next two sections will demonstrate that the open source model has successfully been applied in the field of education. This serves to strengthen the argument that open source model may be applicable in digitising folklore.

2. 4 Open Source Model in Education

The open source model has proved effective for accessing and distributing educational resources freely online. It has also provided a platform for individuals to access education without having to be in a specific physical environment. This could be seen as a freedom in accessing education through the application of an open source model. Consequently, as I will show, a similar model could serve to guide the digitisation of folklore.

The application of the open source model in education would rely on effective internet services in order to function. Brown and Adler in their article, *"Minds on Fire: Open Education, the Long Tail, and Learning 2.0" (2008),* reiterate that the growth and evolution of the internet has created a global platform for users (18). The internet would provide the platform through which education and educational resources could be accessed. To this end there would be substantial access to information and sharing of educational resources through the online platform.

The concept of an open educational system where resources are open and accessible to the general public was conceived as a result of the proliferation of the internet. In their article, *"Access to Education with Online Learning and Educational Resources: Can they Close the Gap?" (2008),* Geith and Vignare note that the term *"Open Educational Resources"* was adopted by UNESCO in a forum report in 2005 (2). Open Educational Resources refer to the "open provision of educational resources enabled by information and communication technologies, for consultation, use and adaptation by a community of users for non-commercial purposes. These include open content, software tools and standards" (2). The open source model's application in the field of education confirms the fact that educational resources are easily accessible to the public. The mode of transmission is via internet, and open to every interested party who can register for the programme. Additionally, to be able to access information effectively, there is the need to have access to a computer connected to the internet. This would enhance access to educational material and lessons online (2). With a system such as this, there is the freedom to access educational resources regardless of one's location internationally. To this end, the open source model could similarly be applied to folklore, and allow remote access to folklore resources from a significant distance.

Geith and Vignare state that online learning started in the 1980s and 1990s as a type of distance education which relied on technology. Later, the industry started using expressions like e-learning and online-learning (2). To this end, education could be accessed by many, irrespective of where they were located. This online sharing of knowledge could come at a cost as payment may be required for access to information.

Some institutions would bear the cost involved to make these educational resources available. In other situations, one may have to bear the cost oneself in order to access these resources. But the application of the open source model would mean that access to information and educational resources would be free. One could add to existing information and share it subsequently.

The principles of Open Education Resources are established on the academic traditions of free distribution of teaching and learning materials. Geith and Vignare further affirm that Open Education Resources come in different forms. Some are formal lessons and course-related materials such as syllabi, teaching notes, lectures and assignments. Others include textbooks and collections of digital media material such as libraries of images and films (2). These forms of educational resources are open, accessible and can be shared with the freedom characteristic of the open source model.

It is worth noting that the open source model has proven effective in e-learning, which falls under the umbrella of education. Attwell, in his article, *"Personal Learning Environments-the Future of e-Learning?" (2007),* notes that the traditional method of teaching takes place in a physical environment (6). The teacher stands in front of a class, and speaks or writes on a blackboard, whilst students listen and write down notes. The open source method of teaching is driven by technology and accessed from one's location (6).

Browne *et. al.*, in their article, *"A Longitudinal Perspective Regarding the Use of VLEs by Higher Education Institutions in the United Kingdom, Interactive Learning Environments" (2006),* state that the open source model lends itself to the effective running of e-learning programmes. Statistics available show that access to teaching material, web-based resources, multimedia resources, collaborative working and assignment submission all have ratings above sixty five percent. Both teachers and students are able to work, share and advance the cause of teaching and learning on the same platform. Here, the open source model provides wider accessibility and the freedom to share (182). However, although it is free from copyright-related issues, guidelines have been put in place to access

educational resource and share with others. Nonetheless the application of the open source model would provide a wider access and freedom of sharing to interested users on the same platform.

Kim and Bonk, in their article, *"The Future of Teaching and Learning in Higher Education: The Survey Says…" (2006),* believe online education has become one of the long-term approaches to absorbing many secondary school leavers into tertiary institutions. In America, over 2.35 million students gain admission to online courses each semester (23). This statistic demonstrates the effectiveness of the open source model in the field of education, particularly in the way it provides freedom for students to access education when and where they want to.

Through the online education system the distribution and exchange of course materials is free and is not limited by issues relating to copyright or to permission from creators of educational resources. This goes to emphasize how the application of the open source model system is used by many to access education, in spite of their location. To this end, when applied to folklore, it could be accessed and shared by folklore lovers without intellectual property rights limitations. The application of an open source model for this purpose could possibly be adapted to serve as an effective model guide to folklore.

This section has discussed and demonstrated that the open source model lends itself to other fields outside the software environment such as in education. It has proved effective because it provides and creates a platform that allows freedom to access education and educational resources. In this way the open source model gives interested individuals the freedom to access education from different geographic locations. Moreover, distribution of teaching and learning materials is easy to access. In the light of this the application of the open source model in the field of education has proved effective and successful. Education is accessed by many internationally. It has additionally demonstrated that outside the software environment the open source model does not restrict users who want to access education through this approach. This then makes a stronger argument for the idea that its application to folklore could also be effective. Finally, the application of the

open source model would be beneficial for both preserving and widely distributing folklore. This will be discussed in the next chapter.

2. 5 Conclusion

This chapter has defined and explained the open source model. The definitions and explanations have demonstrated that the open source model is a system that allows certain freedoms to general users and developers. This chapter has also looked at copyright and ownership in relation to the theory of the open source model. Finally, it has discussed a practical example of how the open source model has been applied in the area of education. This chapter has explored a relevant limitation to the open source model philosophy regarding copyright and ownership. These are components of intellectual property. Both copyright and ownership are controlled by their authors. This may curtail the freedom under which materials are modified and shared, and pose a challenge for the open source model.

The argument to apply open source model for folklore is strengthened because the model has worked effectively in education. The open source model provides the user the freedom to copy, use and modify educational materials. There are generally no restrictions on sharing. To this end folklore would be accessed and shared without copyright limitations. Through an open source model folklore resources that have copyright protection would have been cleared of all restrictions before being made available.

Chapter three will discuss the “Open Folklore Project” as a case study. It will explore the process of how folklore data is gathered and digitised. Additionally, it will examine how resources are preserved through digital means and the various collections in the database will be explored.

3.0 Chapter 3

3.1 Introduction

This chapter will discuss the "Open Folklore Project" as a case study. The discussion on the Open Folklore will be situated in context of digitising and preserving folklore.

The homepage of the Open Folklore Project describes this project as a "digital preservation and a publication platform" for folklore materials which operates on a free access system. The Open Folklore Project was created in 2009 as a result of a survey conducted about "practices in folklore studies" in the United States of America. The results of the survey indicated how important folklore is when it comes to research and educational efforts. The persistent difficulty in accessing content that relates specifically to folklore was however a challenge, including accessing these resources through digital means (par. 1).

3.2 Folklore and the Open Folklore Project

The Open Folklore website states that the Open Folklore Project is collaboration between three organisations. These organisations are the "American Folklore Society, the Indiana University Bloomington Libraries and the Indiana University (IU) Digital Library Program". Furthermore, "the Open Folklore Project is a new scholarly resource platform" that aims to make a wide range of important folklore materials both "published and unpublished" available for free (par. 10). This means users are able to access resources from the Open Folklore Project without issues related to copyright restrictions. The collection of content and material in the database of the Open Folklore Project mostly relates to American populations. Nonetheless, some of the folklore content comes from other parts of the world. This section will start by exploring the American concept of folklore.

The Open Folklore project team is engaged in a number of activities to further the Open Access and preservation of Folklore materials including: securing rights and

permissions to make the materials available; putting the materials in a secure place, such as a repository to assure the long term preservation of the resource; bringing the materials together in meaningful collections to make them accessible; and educating and advocating to others about the importance of preserving these materials and making these materials accessible.

The aim of the Open Folklore project is Open Access and preservation of Folklore research materials. The project attempts to make these materials open and free on the web instead of behind a pay wall. The materials include books, journals, and websites as well as unpublished material (gray literature). A goal of the project is to become largely financially self-sustaining rather than relying on grants to support its primary operation.

Open Folklore Project hopes to build on the new developments in digital circulation of folklore materials to respond to the issue of troubling access and preservation problems. The project aims to work closely with rights holders to make books and journals, including those that have already been digitised, fully and openly available online and also support the publication of existing and new journals in folklore with an open-access publishing platform. There are also plans to fully digitise older grey literature, and educational materials produced by public folklore programs, and hope to provide digital preservation for such resources and publications that are "born digital." In conclusion, the project aims to provide an online tool that will offer a platform to search all of the above classes of material while filtering out unreliable sources.

3.2.1 The necessity for preserving folklore; The Aim of the Open Folklore Project

Dundes, in his article, *"The American Concept of Folklore" (1966),* makes it clear that in order for the true interpretation of what American folklore stands for, there is the need to separate the word "folklore" into two. Dundes defined "folk" as a group of people who must share and be connected to at least one common cause (323). Originally, 'folk' were considered to be those people native to the United States of America (230), however the term is now more generally used. These factors could include a common occupation, a

common language or common belief. It is most important to note that a group formed for whatever reason will have some traditions which they can call their own (323). In principle, a group must consist of at least two persons. Most groups consist of many more than this number. Members in a particular group may not know all the other members. But there is a possibility that every member will know the common core of traditions belonging to the group. These traditions help the group have a sense of group identity (232).

Dorson claims in his book *"American Folklore" (1959)* that most American societies have traditions that they uphold and cultural practices they perform. These are important to them, and they understand the role these traditions and cultures continue to play in their society. Their folklore represents their tradition and as such will need to be transferred to other generations in order for it to be sustained. This folklore serves to keep the society in check. To this end, documenting it on a platform such as the Open Folklore Project through an open source model would help preserve it for the future (180).

Ben-Amos defined "tradition" as the "attribute not just of time but more pronouncedly of societies of earlier cultural stages" (The Seven Strands of Tradition: Varieties in Its Meaning in American Folklore Studies 99). Ben-Amos further argues that tradition is a trait representing a societies' traditional practices. The way in which a group of people or community associates with certain beliefs and cultural processes such as marriage and festivals, is seen as their tradition. This represents their way of life (99). There has been a shift, in contemporary times, in how knowledge related to traditional practices is shared. It is now based on memory accounts from elders in the society. Some scholars have raised concerns about the future of folklore for those American people who still believe, practice and hold it in high esteem especially as the elders pass on.

Dundes, in his article, *"Folkloristics in the Twenty-First Century" (2005),* presents an unattractive outlook for the future of folklore studies as an academic discipline (385). He further argues that the "state of folkloristics at the beginning of the twenty-first century is depressingly worrisome" (385). Dundes concludes by stating that this has been a recurrent

problem within the folklore discipline for many years. Such alarming statements need to be addressed (385).

Many years before Dundes raised his concerns about folklore, Dorson had lamented in his article, *"Introduction: Concepts of Folklore and Folklife Studies" (1972),* that in "a few more years, there will be no more folklore" (41). This is because tradition keeps changing and if it is not transferred to the younger generation, it could be lost.

3.3 The Processes of Collecting Folklore Resources for Digitisation in the Open Folklore Project

There are different methods that are undertaken in collecting folklore materials into a project database. Folklore digitisation also involves some processes that the folklore material has to go through in order to be classified as digitised folklore material. In the case of the Open Folklore Project, harvests metadata from Folklore Open Access repositories and journals all over the world using the OAI-PMH protocol. This collection of folklore research materials is "curated" by the Open Folklore group and is expanded and added to by working with partners in the folklore community. The harvested records are then discoverable via an Apache Solr faceted search. One of the project's activities is to educate folklorists about how they can get their folklore research materials in repositories and Open Access journals so that they can be added to the Open Folklore search.

Zarins in his article, *"The National Digital Library of Latvia "Letonica"' (2011),* reiterates the ultimate aim of digitising folklore. He notes that preservation and storage of folklore in a digital form is necessary because it prevents precious information from being lost. It also ensures that future generations are able to access the information that has been stored digitally (120). This clearly is a solid foundation on which the Open Folklore project was founded as its objectives are clearly embedded in the arguments propounded by Zarins. To this end, digitising resources in the Open Folklore Project has been a way of preserving them for future use.

For the Open Folklore Project, the collection and digitizing of folklore was done in support with "Strategic Partners" and "Friends of Open Folklore". These two partners of the OFP have scholarly digital content and resources that is critically important to folklore study and research. To this end they contribute material to the OFP thereby sustaining the effect running of the project. Additionally, publishers, repositories, right holders and many other organisations have generously contributed range folklore materials that are available and accessible into the project. These institutions have linked their websites to the OFP for access.

The Strategic Partners are organisations with content that is significant to "folklore scholarship, whose values and goals are closely aligned with the Open Folklore Project and are committed to devoting resources to achieve shared goals". These organisations have goals akin to that of the Open Folklore Project. They support the Open Folklore Project by providing resources to enhance their database. This will maintain the growth of the project and make folklore resources available to users. The kind of resources provided by the strategic partners towards the Open Folklore Project is in the form of both published and unpublished folklore information. The published materials though may have issues with copyright but have been made available by the owners and authors as their contribution to the development, growth and sustainability to the Open Folklore Project (par. 11-12).

3.4 Applying the lessons of the Open Folklore Project; Arguing for an Open Source model in Digitising African Folklore

Lee *et. al*. (2002) noted that because the goal of digital preservation is to ensure long term access to stored material, it is important to adhere to modern information preservation requirements. In digital preservation the material must be retained to present its original meaning. It is therefore essential that techniques used in preservation are flexible and standard to allow easy accessibility across platforms (93-94). The process of preserving content digitally involves transferring the material onto a digital platform before the old material becomes so obsolete that it can no longer be accessed (94).

In the Open Folklore Project, there was the complete digitisation of metadata collected from other sources and curated in a digital format. This method could be applied to folklore Ghana. The advantages for digitising folklore are enormous and can be utilized for Ghanaian folklore contents. Open Folklore project is taking part in a number of new models in collection building. First, Open Folklore is involved with finding and collaborating with partners to build the collection of materials in repositories and helping partners develop Open Access journals. Second, Open Folklore has created the Open Folklore portal that builds a collection of free Open Access materials in the subject area of Folklore. Third, the project is preserving collections of websites that are important to the Folklore community using the archive.

Based on the successful collection of folklore resources and subsequent digitisation of these resources into the Open Folklore Project, it can be safely assumed that Ghanaian folklore can similarly be collected and digitised in order to preserve Ghanaian traditions and cultural practices in the right context.

Collecting and digitising folklore is a possibility. This is because every society in Africa has its own unique folklore which gives it an identity. Ghana (where the researcher originates from) alone has many rich cultures and traditions that can be collected and digitised in order to be preserved. Kuruk in *"Africa customary law and the protection of folklore" (2002)* note that there are types of folklore. Types of folklore identified in Ghanaian statutes include poetry, riddles, songs and instrumental music, dances and plays, productions of art in drawings, paintings, carvings, sculptures, pottery, terracotta, mosaic, woodwork, metal ware, jewellery, handicrafts, costumes, and indigenous textiles (Kuruk, 7).

The collection approach stated by Lourdi *et. al.*, and used successfully in the Open Folklore Project, could be adapted and applied to the collection of folklore material and resources in the Ghanaian situation (198).

To convert folklore collections into digital formats an electronic version would have to be created. The conversion from traditional folklore to electronic version such as video, sound or images is important because the collections are not "born digital" (Tangherlini 12).

However, it is important to note that in the Ghanaian perspective, the issue of Open Source Access should be tackled on specific basis and context since there are unique communities and norms with established folkloric practices. Generally, rights to folklore are vested in particular segments of Ghanaian communities and exercised under carefully circumscribed conditions. For instance, with regard to song, the recitation of *oriki*, a praise singing poetry among the Yoruba in Nigeria, is restricted to certain families. Another example is that, in Nigeria, the Dakakari people have given exclusive rights to women to make funerary sculpture. With respect to textiles, according to Mould-Iddrisu in her paper *"Preservation and Conservation of Expressions of Folklore: The Experience of Africa" (1991)*, state that the chief of the Ashantis in Ghana is the trustee of the interests in all fabric designs, which he either reserves for himself or allow prominent royals or dignitaries to copy them for their use (Mould-Iddrisu, 5). All these rights in folklore resemble modern intellectual property rights and as such great care should be taken when trying to collect, digitize, preserve and make repositories from such folklore. In applying the general principle of Open source to such folklore in unique Ghanaian communities, it is imperative to hold broad consultative discussions with persons who are custodians of the folklore. In addition, legal issues and preserving the intellectual and cultural heritage of the indigenes need to be addressed. For Ghanaian folklore of unique importance therefore special considerations and copyright issues need to be addressed in a way to protect the community since other users cannot modify the original content without quoting and acknowledging the originator.

3.4.1 Collecting and Digitising Folklore in the Ghanaian Perspective

According to Lourdi *et. al.* in their article, *"A Multi-Layer Metadata Schema for Digital Folklore Collection" (2006)*, folklore presents itself in different forms during the collection

process. Information about the history, cultural practices and way of life of the indigenes is amongst the material gathered (198). Additionally, Lourdi *et. al.* note that the process of collecting folklore material is done along regional demarcations.

One method of collecting folklore is the notebook method. This is based on a questionnaire prepared by folklore experts. This method of collecting folklore materials could be adapted and applied when collecting Ghanaian folklore. These notebooks travel from one place to another within a demarcated region. Furthermore, many notebooks return with maps created by the author attached. Photographs, lyrics and handcrafts are also collected in the process. Lourdi *et al* believe that the notebook method of collecting folklore material is a major source for folklore research. This is because these notebooks contain primordial information collected from the inhabitants interviewed in each place visited (198). Ghanaian folklore originates from the people within the society and as such it is a representation of them.

Another way of collecting folklore is the location method of collection. This is done in the actual place where the folklore material is found. Some of this material is so old and fragile that moving or touching it might destroy it. Thus documentation and digitisation is done where it is found without any unnecessary touching or moving of the folklore material. Some forms of folklore are impossible to move for documentation and digitisation (Lourdi *et. al.* 198). These methods of collecting folklore materials could be applied in the context of Ghanaian folklore. Documentation could be done at the place the folklore object is located such as a mountain or an historical place if it cannot be moved.

Almqvist, in his article, *"The Irish Folklore Commission: Achievements and Legacy" (1979),* notes that people were specifically employed as folklore collectors. These collectors visited homes with questionnaires and asked questions related to the field of research (12). This shows that there are different methods that could be employed in gathering and collecting folklore materials for documentation.

This section has demonstrated how the Open Folklore Project has collected folklore material and digitised them before making them available and accessible. In the light of this success, the same could be replicated in Ghana to achieve similar results. This would help digitise some of the rich Ghanaian folklore and preserve it for the future.

3.5 The Advantages of Digitising Folklore; the Success of Open Folklore Project

Digitising folklore preserves the stories and the tradition of a group of people which would be shared and the knowledge transferred to other generations. This is because the elders in society who are generally seen as the ones with most knowledge in society will one day not be available share their knowledge acquired over the years with the younger generations. The Open Folklore Project has resources that have been documented from such elders for the general public to use.

Bogdanova *et. al.* defined digitisation in their article titled *"Digitalisation and security of "Bulgarian Folklore Heritage" archive" (2010)* as the "creation of an object, image, audio, document, or a signal from a discrete set of its points or samples" (335). They further note that this is a way of creating digital content. Digital content can be created out of analog traditional material or three-dimensional objects such as artifacts or works of architecture using digital tools. Digitisation can take the form of a recording (video or sound) or a digital photograph. But this would depend on the nature, form or the state in which the folklore material is collected (Bogdanova *et. al.* 335). Lee *et. al.* in their article titled "*The State of the Art and Practice in Digital Preservation" (2002)* recount how information was stored in the past. Information was recorded on carvings on stone, bamboo, ceramics or wood (93). With the current digital age new methods of storing content and recording information have emerged. A radical change has occurred in how information is stored with the innovation of electronic storage methods. Another point worth noting is the introduction of high-performance computing and high-speed networks. The use of digital technologies is growing speedily which allows for easy storage and ensures long-term access to material (Lee *et. al.* 93).

Lee *et. al.* further note that because the goal of digital preservation is to ensure a long term access to stored material, it is important to adhere to modern information preservation requirements. In digital preservation the material must be retain to present its original meaning. It is therefore essential that techniques used in preservation are flexible and standard for easy accessibility across platforms (93-94). The process of preserving content digitally involves transferring the material into a digital content and onto a digital platform before the old material becomes so obsolete that it can no longer be accessed (94). Folklore resources is more accessible when digitised because scholars, folklorists, and researchers in the discipline are able to have unlimited access to folklore content through the internet on a digital platform without necessarily having to go to the place where it is found.

The resources in the Open Folklore Project are organised according to their forms and format. Lourdi *et. al.* believe that effective organisation of resources contributes to the preservation of the information. They further claim that digitising folklore could increase the number of both long-distance and in-house visitors. Long-distance visitors view the resources online and retrieve information using specific access points. On the other hand, in-house visitors are mainly folklore researchers who want to study the material closely and contribute to its documentation (199). The Open Folklore Project offers the platform for both. Resources are accessible online for distance visitors who are not located at the home of the project. Ingram, in his article, "*Moving Theory into Practice: Digital Imaging for Libraries and Archives" (2000),* is of the belief that as there are no travel costs involved this interaction may allow for the creation of new knowledge when accessed remotely.

The sustenance of financial benefits cannot be overlooked in this discussion because it is one way a guarantee when folklore is digitised. Digitised content is able to last for many years. This is because digitised folklore collection would last longer than raw collections.

Other advantages aside preservation, storage and making it widely accessible exist. Bogdanova *et. al.* point out that when folklore is digitised, it provides long term revenue. Visitors, researchers and tourists have to pay a fee before they are able to access these resources from a specific location, revenue is generated. In comparison, digital content would last longer than the raw collection. Therefore if not digitised it will be lost at a point in time and will mark the end of revenue generation (335). In *"Selection for Digital Conversion" (2000),* de Stefano states that access to collections that have been digitised often encourages people to go back to the original environment of the collection to have a first-hand experience and see it for oneself (13).

This section has discussed the advantages of digitising folklore materials with respect to the Open Folklore Project. The Open Folklore Project has presented a more accessible platform to both near and distance users. It has also discussed the advantages in connection to financial benefits.

3.6 The Disadvantages of Digitising Folklore in the Open Folklore Project

Although digitising folklore presents many advantages in the current information age there are also some disadvantages. This is because not everyone is computer literate. This poses some challenges for that population group.

Postman, in his paper, *"Five Things We Need to Know About Technological Change" (1998),* notes that computer technology has invaded the privacy of people. He argues that it is no doubt that the computer has been, and will continue to be, advantageous. He further argues that it is clear that the computer is indispensable (3). In the Open Folklore Project the resources that are available can be accessed through the internet. This puts a number of people who do not have access to the internet at a disadvantage. Smith's concern in his article, *"Real-Life Choices" (2000),* is the fact that people would have to be reliant on the internet in order to access these digital resources. According to Smith, a computer with a stable internet service is required. Without a stable connection it would be difficult to view and retrieve digital information (2).

The physical relationship is compromised when folklore is digitised. This is because digitised folklore cannot be accessed in its original environment. In *"Old Objects, New Media: Historical Collections, Digitisation and Affect" (2012),* Newell acknowledges that digitising folklore resources in an information era is welcomed for the purposes of preservation. He confirms that new historical possibilities are opened up by bringing distant traditional resources closer in a virtual space. Newell however argues that it is important to have "physically intimate relationships" with these traditional resources. This to him remains vital for many people who want to be connected to their tradition and history). He concludes by stating that institutions that document and hold these digital folklore resources only regard them as "additional objects of significance". These digital collections cannot be a replacement for the original object (208).

This section has highlighted and discussed the disadvantages of digitising folklore. The discussion on the disadvantages in the Open Folklore Project has exposed a limitation in respect to internet accessibility by people who are not computer literate. It has also brought to the fore the fact that the physical relationship between the user and the folklore object is lost when digitised. Another disadvantage worth noting is the fact that original and natural folklore objects would be replaced by digitised versions.

3.7 Forms of Digitisation

In order to digitise folklore the raw collections must go through a process. This process is necessary because it places the raw collections into a different category. This category could be referred to as digitisation. This section will discuss digitisation and the different formats digitisation takes. Suitable and standard digital media formats for digitisation of folklore material.

According to Tangherlini in his article, *"The Folklore Macroscope: Challenges for a Computational Folkloristics" (2013)*, folklore collections are not "born digital". He further argues that it is important to digitise folklore in an information age. This is because digitising folklore would preserve it for the future and also make it widely accessible to users. Bogdanova *et. al.* defined digitisation as the "creation of an object, image, audio,

document, or a signal from a discrete set of its points or samples" (335). Digital content can be created out of analogue traditional material or three-dimensional objects such as artefacts or works of architecture using digital tools. Digitisation can take the form of a recording (video or sound) or a digital photograph. This would depend on the nature, form or the state of the folklore material. The Open Folklore Project has digitised materials such as photographs, text documentations and sound in their database.

Bogdanova *et. al.* caution about the requirements needed for the digitisation processes and the file formats it should take. This is to ensure that priority is given to quality and to retain details about the digitised material. They further note that as text documents do not occupy a large space there are not many concerns about requirements. The concern rather should be focused on the file format. In order to make it accessible on a multiplatform it is favourable to use file formats such as TXT, DOC, PDF, RTF or HTML (336). In the case of the Open Folklore Project, documentation of text is made in HTML, PDF and Word formats. This is to allow easy accessibility to users.

According to Bogdanova *et. al.,* for digital images, "completeness of the static image is measured in number of pixels, resolution, number of colours and image compression" (336). Therefore to preserve the quality of the digital image they suggest a file size from 2 MB to 50 MB. In terms of dimensions, 1200 x 800 pixels to 6000 x 4000 pixels are appropriate. A resolution of 600 dpi to 2000 dpi is recommended, and file formats such as BMP, TIFF, PNG or JPG with minimum compression should be used. Although there are other digital file formats that are equally suitable, the requirements mentioned above are most appropriate for different digital access platforms such as a mobile phone or computer. To this end, the quality of the image would be maintained. The Open Folklore Project has applied and used these standard digital image requirements in relation to resolution of the image, dimension, size and pixel to make it standard and easy to access on standard digital platforms.

Bogdanova *et. al.* note that uncompressed digital video requires a lot of space for storage. A DVD disc has the capacity of 4.7 GB. This can accommodate 1 to 2 hours digital

video recording. Additional requirements point out that the number of frames per second should be 25, the picture resolution of 720 x 576 pixels, screen ratio of the picture should be 4:3. They also recommend a bit rate of 2000 Mbps to 4000 Mbps. DVD, DV-AVI, MPG, AVI or PAL are standard file formats (336). These standard digital requirements for video content are upheld and used by the Open Folklore Project and have enhanced easy accessibility of the digitised folklore material. It also presents the digitised material in standard formats that would cut across different digital platforms.

Finally, they believe file formats such as WAV or PCM with a sample rate of 44 100 Hz would be suitable. The bit resolution of 16 and file size up to 100 MB is also appropriate and recommended. This will preserve the integrity of auditory information (336). The application of these standard file requirements to the various file formats such as image or sound would enhance how this digitised folklore content is accessed on different platforms. The kind of digital video and sound resources found in the Open Folklore Project are of good quality, therefore one can draw a conclusion that these requirements have been adapted and applied.

This section has discussed the processes and methods used in collecting resources and looked at them in relation to the case of the Open Folklore Project. It has again explored forms of digitisation and examined the processes of digitisation. It has look at appropriate digital formats in relation to sound, video and images. Requirements and standard file formats, size of images and quality of audio and video acceptable on digital platforms has also been discussed.

3.8 The Success of the Open Folklore Project

The Open Folklore Project to a large extent can be viewed as a successful project because the objectives of the project which is to collect digitize and make folklore accessible to all has been achieved in some aspects and there is ongoing processes to fully address other loopholes. This is based on the fact that the Open Folklore Project has made digital resources available for users to access.

On the website of the Open Folklore, one can access from their database e-books, journals, articles, presentations, speeches and grey literature. Additionally, there are links to other folklore resource homepages that deal with the discipline in terms of research or providing some sort of information about the discipline (par. 12-14). These resources could be copyright protected but the institutions and organisations are right holders. They have purchased or own the rights to the material they contribute to the Open Folklore Project.

The most interesting aspect of the Open Folklore Project is that it currently holds over fifty-seven thousand volumes of folklore collections at the Indiana University Bloomington Libraries. This is the largest and most comprehensive collections of its kind in the world. The books available in the database of the Open Folklore Project fall into three categories. These are in-copyright, public domain and open access (Open Folklore par. 10).

The in-copyright books are published books that are made available online though it is protected by copyright laws. In this case the reader or the library pays for the access of the book. The public domain category books are also published books with their copyright agreement expired. Thus allows for digital versions to be freely available online. The third category, the open access books are recent publications. These classes of books are either born digital or digitised from printed copies with the permission of the authors to make it freely available (Open Folklore, par. 8). This is possible as a result of the contributions from the Strategic Partners and the Friends of Open Folklore to support the project.

The Open Folklore Project has what it identifies as “Grey Literature”. These are valuable folklore resources and information based on research. Although these resources are important contributions to research it is not widely accessible. This is because it was not formally published or intended to be made available. Therefore do not find its way into library collections. In the event that it finds favour in a library collection it is often difficult to reference it in a formal way (Open Folklore, par. 13). The Open Folklore has digitised folklore collections that are available and accessible from their homepage, adding to its success.

Journals in the Open Folklore Project encompass entertaining jokes and variety of tales which touch on every aspect of human situations, to societal issues of certain population groups (par. 13). To this end the Open Folklore Project has made these jokes and tales available to users in digital formats such as voice and video content.

This section has discussed the success of the Open Folklore Project in connection with how institutions have contributed to the project, thereby making resources available for use by the general public. The contribution of resources by the Strategic Partners and the Friends of Open Folklore has contributed in sustaining, effective running and provision of digital resource adding to the success of the project. This section has also proved that the Open Folklore Project is successful therefore could be adapted and applied in making digitised folklore accessible through an open source model in the Ghanaian context which this paper proposes. The fact that folklore resources are available and accessible confirms that the Open Folklore Project has been successful therefore could be adapted and applied to folklore in the Ghanaian context. It has also lived to its objectives of making digitised folklore resources available and accessible to the general public which adds to the success of the Open Folklore Project.

3.9 Conclusion

This chapter has discussed the Open Folklore Project as a case study. It has considered how folklore materials are collected into the Open Folklore Project by employed collectors and the travelling notebook method. Most of these folklore collections in the project are from American societies and represent their tradition and identity. Other collections were gathered from other parts of the world. This chapter has also discussed digitisation. In the exploration of digitisation I have explained the standard media formats which are suitable for these collections.

I have also considered the advantages and disadvantages of digitising folklore and I have examined how successful the Open Folklore Project is, based on the various

arguments raised in the previous sections. The implication of the Open Folklore Project for digitising Ghanaian folklore which is proposed in this paper has been discussed.

The next chapter will similarly discuss the “Center for Oral History” project as the second case study. In this instance, it will explore digital preservation and archiving methods. The kind of open source model system used by the project will also be examined and discussed.

4.0 Chapter 4

4.1 Introduction

This chapter will discuss the "Columbia University Center for Oral History" (CCOH) Project as a second case study for this research report. The discussion of the CCOH Project will be placed in the context of archiving digitised folklore resources for preservation purposes. This discussion is necessary because archiving play a vital role in the preservation of digital content. The discussion on archiving and preservation in this chapter will explore the long term preservation of folklore resources which would be available for long term access. The discussion of digitisation and preservation in chapter three was situated in the context of converting raw folklore materials to digital materials which similarly serves as preservation method. Finally, this chapter will explore the kind of access system used by the CCOH Project.

The CCOH is one of the leading centers for the practice and teaching of oral history in the world. The CCOH is "a digital and traditional library" project in the United States of America. Its database is located in the Columbia University Libraries and accessible to all interested users across the world. The CCOH database has more than 8,000 different interviews of folklore materials from folklorist and elders in society which is available to users. These interviews are in audio, video and text formats. On the website of the CCOH there are other wide ranges of subject areas such as "media, business, medicine, public health, law, arts, human rights and community history" which is found in their database. Community history focuses on traditions which include folklore (CCOH par. 1).

4.2 Overview of the Colombia University Center for Oral History Collection Project (CCOH)

According to Clark in "*Columbia University Center for Oral History: Ten-Year Report" (2011)* the Columbia University Center for Oral History started as the Oral History Research Office in 1948. It was founded by Allan Nevins with the purpose of using interviews as a method of documenting historical information for research purposes. The project was

initially focused on political leaders worldwide, who had distinguished themselves in government office. This is because these leaders have the opportunity to serve in government and may have enough knowledge. Therefore would be in a better position to share their experience to the world which is documented for future reference (Clark 3).

Current statistics show that the project holds over ten million resources in their database. There are hundred thousand current journals and serials. Digitised resources are classified into manuscripts, rare books, microfilms, and other non-print formats. The collections have grown to include resources outside political histories. The CCOH project is linked to twenty-two different libraries at Columbia University. It also has affiliated institutions where these resources are accessible (CCOH Libraries, par. 2-4). The CCOH Project has a continued commitment to document political histories and their impact on society (CCOH Libraries, par. 1-4). This statistics show that oral history and for that matter folklore has been transformed from their raw state into digitised formats. This transformed digital content archived is intended to preserve it for future use.

Interested groups that access resources from the archives of the CCOH Project include scholars, students, writers, documentary makers and advocates. They also have visitors from around the world who come to study at the University. Their digital archives are accessible over the internet. This implies that the CCOH Project has no limitations as to who and which group of people access and use resources from their database. It is made open and available to the public.

4.3 Digital Archiving and Preservation

This section will explain digital archiving and the role archiving plays in preservation of oral histories and folklore. Archiving plays a significant role in the preservation of digital content and makes digitised materials or collections such as folklore resources available when it comes to digital platforms to users. This is because it serves as a repository or a holding platform for the digitised materials. These repositories are most often digital libraries in academic research institutions. These are digital libraries that are

known and recognised by the institutions where they are established such as the "Columbia University Center for Oral History" Project (CCOH).

The CCOH approach for recording and documenting resources into their database was based on two methods. Firstly, the CCOH relied on collecting information from people who were involve in these histories or were at the centre of it thereby gathering information through an autobiographical approach. In this case persons who were directly involved in the life histories would provide an autobiography recounting their experiences. The second method was recording interactions by way of interviewing people and the elders in the society using voice and video recorders. These documentations and recordings were based on belief systems, personal psychology, ideologies of the people, their visions and aspirations. The recordings were done in digital format whilst the autobiographies were converted into other digital formats such as text and voice.

Ross in his article titled "*Digital Preservation, Archival Science and Methodological Foundations for Digital Libraries" (2007)* defined a digital library as "the infrastructure, policies and procedures, and organisational, political and economic mechanisms necessary to enable access to and preservation of digital content" (7). They are at the same time archives and resources that are held in the archives do not have to be held elsewhere. To this end the libraries can be accessed from where it is established when they are needed and from different locations.

Beagrie in his article titled *"National Digital Preservation Initiatives: An Overview of Developments in Australia, France, the Netherlands, and the United Kingdom and of Related International Activity" (2003)* states that establishments such as libraries have evolved over the years into archives to preserve digitised material such as folklore. These establishments are the custodians of what he termed as "collective memory" (4). Preservation is an important aspect of digitising resources and subsequently making them available and accessible to users. This is because digital content would be more accessible on digital platforms. The CCOH Project is one of such establishment that holds digital resources like folklore at the Columbia University campus. Beagrie notes that institutions

and establishments such as libraries do not necessarily have to hold the physical folklore materials and objects. This is because it can be converted into digital content which would save space as compared to keeping the physical objects. He explains that digital content does not require large space for storage purposes. All that these institutions and establishments would have to do is to network and provide access to the digital resources. Additionally, there would be no need to go to the physical location of the original object if one does not want to have a physical relationship with the object (Beagrie 3). All information and resources have been converted into digital formats and made accessible to the public (Clark 5). Digital resources in the database of the CCOH Project include documentation in terms of its origin, when it was translated into a digital form and some history of the folklore itself. This makes it more attractive to users who might require more details about the folklore, additional to seeing it converted into a digital material (CCOH par. 4).

Byrd *et. al.* in their report *"Digital Preservation Task Force" (2011),* describe digital preservation as "the series of management policies and activities necessary to ensure the enduring usability, authenticity, discoverability and accessibility of content over the very long-term" (7). Digital libraries that eventually evolve into archives that hold digital materials would not naturally preserve these materials by just serving as a holding place for them. They require good management practices and processes which will provide long-term preservation for the digital materials.

Beagrie believes that digital preservation environments are changing. He further notes that "digital media are fragile by nature" (3). This is because materials that are in digital format are easy to create using digital tools. He states that digitisation differs from traditional technologies such as paper or microfilm. Furthermore, it is easier to corrupt or alter traditional materials without it being noticed (1). The CCOH Project database has its resources in digital formats, thereby making it easy to access and locate them in their database. It is also possible that over time the database could be corrupted and this would make it difficult or impossible for users to access (3).

Hardware and software evolve quickly and pre-existing versions become obsolete. This could affect how digital media materials are preserved and accessed. There should be a plan, one which requires timely action, because the folklore object can be lost with the passage of time. Beagrie suggests that digitisation and documentation should normally be done at the time the folklore object is gathered and collected (3). This is where a digital version would be created out of the raw folklore object before the object is lost.

Ross believes that digital preservation goes beyond just the storage of digitised folklore materials in a database for interested groups of people to access (2). It is also about how to maintain its attributes and authenticity, how to maintain protected information about the folklore object during the creation process, how the digital version of the folklore content is created and about its usefulness as a whole (2).

The duplication of digital information is important. This allows for the creation of backup of content. Many copies of the digital content are created and these can be relied on when one copy is corrupted or destroyed. To this end, the availability of the digitised content can be sustained for a longer period of time and users can access this material over many years.

Lee *et. al.* cautioned in their article, *"The State of the Art and Practice in Digital Preservation" (2002),* that it is not enough to simply replicate digital information as a guarantee to preserve digital resources (95). The preservation of digital content would require good management. Creating new copies from the old one with new software could also be another way to preserve the digital content, particularly given the rapid changes in the software world. The CCOH Project has resources in their archive which serve as a backup to their main database. This can be relied upon when content in the main database is difficult to access, for example, as a result of changes in software or where the digital content has become corrupted (Clark 5).

This section has defined and explained digital archiving and preservation in terms of the CCOH model. It has also discussed how archiving and preservation are inter-related and

demonstrated how archiving contributes to preservation of digitised folklore resources with the objective of making it available on digital platforms.

4.4 Open Source Model for Columbia University Center for Oral History Project

This section will explore the type of access model being used by the CCOH Project. It is important to explore this because digital resources and materials can be accessed from the database and archives of the CCOH Project.

In chapter two the open source model was discussed as a system that allows users and interested parties access to source code or digital content on a digital platform without limitations. It provides the user freedom to copy, modify and share with others without having to pay for the content. It was originally associated with the sharing of software codes through the internet. Users are able to access these software codes, modify them for their use and are allowed to redistribute them through the same platform to other users. The open source model could be applied to folklore in the sense that digitised folklore resources can be accessed or shared using this model without any limitation.

The CCOH Project uses a type of access model and provides a platform where users are able to get access to resources in their database. This access mechanism used by the CCOH Project is known as "open access". The open access model allows users to access information and content from its database through digital means.

Suber in his book *"Open Access" (2011),* states that digital technology has created a number of revolutions (1). One of these revolutions is what he refers to as the "access revolution" in a digital age. Suber further explains open access as a kind of system where authors and scholars are able to share their creative materials with the public. This is not based on, or motivated by, financial gain, but rather on a desire to satisfy and to provide content to readers and users (3). He notes that resources that are classified as open access are digitised materials or literature. They are available online and do not generally come

with copyright and licensing restrictions. This presents users with freedom of access and the freedom to copy and to share. Suber believes that the open access model is a "barrier free" access system that could be applied to accessing resources (4). Digitised folklore could be one of such resource that could adopt the use of an open access model. To this end, copyright restrictions would be solved and users would not have limitations in accessing resources.

The open access system removes certain barriers, such as payment by the user for content that is made available to the public (4). Price barriers are major access barriers that limit many people in accessing content. Folklore resources in the CCOH Project are free. However, in a case where the user wishes to photocopy material and the copyright on the material is held by the CCOH Project, a fee would have to be paid. This paid-for content could subsequently be freely shared (CCOH par. 8). In another instance audio and video content that is in poor condition might have to be converted and transferred onto another digital format using CDs or DVDs and this would be billed to the user by an audio specialist (par. 12).

The use of an open access model to make folklore accessible is a possibility. The limitation, however, will be on how users can accommodate the costs for some resources, such as photocopying, if they are not in a position to access content online, and for audio materials that are in a fragile format and need to be converted.

Suber notes that copyright is another major access barrier. He explains that if you have access to a piece of work for reading but want to "translate it into another language, distribute copies to colleagues, copy the text with sophisticated software, or reformat it for reading with new technology" you would generally need the authorisation of the copyright holder (5). Resources in the CCOH are either free from copyright restrictions or their copyright has already been paid for. Some of the resources are protected by copyright and permission has been granted by the copyright holders for its use. In some cases users are made to share some of the cost for these resources before they are provided with access to the material. The user is not then restricted by copyright related issues and does have the

freedom to share the resources that he has paid for. Suber points out that removing price barriers does not mean readers are limited by their ability to pay. He also points out that removing permission barriers would allow scholars to use or reuse these materials for academic reasons.

The goal of the open access system is to make content useful in two ways. Firstly, to make it available and accessible to interested users and secondly, by allowing users to modify and redistribute it to others (5-6). Some copyright owners who make their resources available to the public through the CCOH Project allow for public listening online but restrict the content from being copied and shared by the user. Owners would want to hold the exclusive right to copy and share (CCOH par. 13).

This section has discussed the open access model and how it works. It has also explored and explained certain barriers that the open access model faces and how it deals with these barriers so that the resources remain accessible, useful and user friendly.

4.5 The Advantages of an Open Access Model; Lessons for Ghanaian Folklore

There are a number of advantages for users who access digital resources on platforms that use the open access model. Suber notes that the concept of the open access model has raised awareness among many scholars who now produce their content in digital formats, making them easy to access and use (18). This content includes articles, journals, and digital photographs amongst other digital content. In effect, they are born digital, therefore there is no need to transform them into digital formats before organisations and institutions such as CCOH and other digital libraries can make them accessible to the public. These materials are now "born digital". Content produced for this purpose is created without the limitations of copyright-related issues.

The introduction of high-performance computing and high-speed networks to create digital content has allowed easy access to CCOH resources. The reliance and use of technology in the everyday life of the individual cannot be underestimated. The use of

technology allows for easy ways of storage and ensures long-term access to digital content (Lee *et. al.* 93). To this end, the CCOH has found a way of digitising their resources as a means of preserving the content for long-term use and accessibility. The CCOH hosts their digitised resources on a web-based platform that uses a high speed computing network which allows users to play audio or video without difficulty. Because the CCOH uses a networked system, users are able to access digital resources irrespective of where they are located. This presents some advantage to users who have access to the internet.

The open access model used by CCOH allows users to access resources for free. Users do not have to pay for resources because the principle of the open access model is for resources to reach as many users as possible (Suber 14). The CCOH has made these resources available because they have the right and permission from content owners, thereby removing the barriers that could prevent or limit users.

4.6 The Successes of the Colombia University Center for Oral History Collection Project (CCOH)

The CCOH Project has recorded successes in line with their goals and objectives. The goals set out for this project are to "record unique life histories, document the central historical events and memories of our times, teach and to do research across the disciplines" (Clark 5). The CCOH Project is a digital library with the objective of documenting and preserving folklore materials in a digital format and of making collections widely available and accessible to students, researchers and the general public at large.

The success of the CCOH Project can be attributed to the fact that they have been able to successfully provide free access to folklore resources. The CCOH Project can now provide the general public with resources that would otherwise not be available. Barriers such as copyright related limitations or because of the non- existence or unavailability of a digital platform to access these resources have been clearly taken care of. But the CCOH has made provision for users who might not have the platform to access these resources from where they are located. They provide services where users can come in person to the

physical home of the project or to any other institution that is affiliated to the project (CCOH par. 5).

Further successes have been recorded in the area of decentralising CCOH digital resources by linking them to many of the Columbia University campuses and to many other institutions and organisations that support the growth of the CCOH Project (par. 13).

4.7 Adopting the Colombia University Center for Oral History Collection Project (CCOH) Model for Digitising Ghanaian Folklore

Based on the successful nature of the CCOH Project in relation to collecting and documenting oral literature materials into digital formats, its adaptation and application to Ghanaian folklore resources could be argued for or justified. This will present a number of advantages and benefits, amongst these the conversion of Ghanaian folklore into digital formats. The CCOH Project's successes in creating a digital library could serve as a guide to creating a similar one in an Ghanaian context. A digital library would serve as a means of preserving digitised folklore for future use.

That Ghanaian folklore can be collected, digitised, archived and its preservation subsequently assured is an achievable goal. The rich folklore of cultures in Africa, amongst these the oral traditions of Ghana, can be digitised and made available through an open source system. This will allow for wide user accessibility in an information society. The archiving methods used by the CCOH Project could be adapted and used to preserve this folklore. In addition, good management practices must be adhered to, following the example of the CCOH Project. The difficulty in adapting every aspect of the success of the CCOH Project would be related to high speed technology in terms of the internet, as this is a limitation in Africa, though, over the past few years, Africa's internet access has improved.

Based on the success of the CCOH Project, its adaptation and application to digitising folklore in the African context would help preserve the cultural traditions of Africa, an

example being Ghana. In the past, folklore and storytelling was shared by the elders in society who lived in the rural communities.

4.8 Conclusion

This chapter has described the Columbia University Center for Oral History" (CCOH) and the mission set out for its establishment as the second case study. It has explained what the CCOH Project does, which is to provide oral histories by documenting and digitising them in order to make it widely accessible. The discussion has been based on the role of digital archiving digital content as a way of preserving digital material to last for a longer time. It has also discussed how digital archiving alone is not a guarantee to preservation but good digital management practices are necessary in preservation.

This chapter has defined archiving and discussed both the advantages and disadvantages of digital archiving and preservation. Additionally, the successes of the CCOH Project has been explored and the implications to its adaptation and subsequent application to the Ghanaian context.

Finally, this chapter has explored the open access model and related it to the CCOH Project. The benefits that the open access model presents and has also explored in the context of how content is made available through this model.

Conclusion and Recommendations

This paper presents information about other projects that have successfully worked with in the realms of folklore and digitisation.

The research report follows the process of digitising folklore, from its collection at the point of origin, to its digitisation and eventually it's dissemination through an open source model, in the projects presented as case studies.

This research began by exploring and defining oral tradition. It further discussed folklore - which is an oral tradition - It has been argued that folklore may be lost as the elders who traditionally disseminate it pass away. Hence, a method for preserving folklore is necessary. Furthermore, it has been noted that migration has rendered folklore less accessible through conventional means. This circumstance suggests that a means of disseminating folklore to a geographically diverse audience is required.

This research report has proposed that the open source model presents an attractive platform for disseminating digitised folklore. Firstly, the model relies on guidelines and regulations which provide freedom to the developer and users in general. This encourages wide sharing of material. Secondly, the freedom associated with the open source model takes care of issues relating to copyright and intellectual property ownership. It has been shown that the open source model has been successfully applied in the field of education. It allows access to educational resources irrespective of location. To this end the open source model could work when applied to folklore. It will help promote wide access to folklore and individuals would not necessarily have to go to the village where the elders live in order to experience it.

The Open Folklore Project has been explored as case study to strengthen the argument and make a case for the application of an open source platform for folklore dissemination. The Open Folklore Project houses both digital folklore resources that are made available for the use of the general public. The methods of gathering folklore objects

and materials for the Open Folklore Project were also discussed, as well as the requirements for conversion into digital format. The Open Folklore Project as a case study has also explored the advantages and disadvantages of digitising folklore. We could learn from aspects of the Open Folklore Project when it comes to digitising and disseminating Ghanaian folklore resources on an open source platform.

The CCOH has similarly been discussed as the second case study for this research report. The CCOH Project holds over ten million oral history resources in their database. The discussion on the CCOH Project has been focused on how digital resources are preserved and archived. The advantages and disadvantages of digital preservation and archiving have been explored and we could learn from specific lessons in this project, especially in terms of how we might preserve and archive Ghanaian folklore.

Recommendations

The detailed exploration of the open source model, collecting, archiving and digitisation of folklore and dissemination of oral traditions in this paper are formative for developing a model for digitising Ghanaian folklore.

Based on my understanding of my home country I think that the notebook method would be most suitable and appropriate for collecting Ghanaian folklore, because the notebooks would travel from one place to another thereby covering every place within the collection zone. Employed research assistants, who speak the home language and understand the culture of various communities, could take notebooks from one place to the next, collecting folklore material such as documenting the histories, traditions and cultures as told by the elders in those communities. It would be necessary to assign each notebook to a particular region in order to facilitate and make the collection process precise, and maintain the identity and origins of the folklore collected. Folklore objects that are large in nature or cannot be moved away from their location would have to be documented at the place they are found or located. In such instances, the researcher would recommend that folklore objects are digitised at their source as this assists with preservation.

Ghanaian folklore comes in different forms, so recommending a suitable digitisation method would depend on the type of folklore material that is collected. Ghanaian folklore materials that are small can be moved from their original location and digitised afterwards. Such folklore includes writings on a piece of stone, wood, or bamboo. However, any person who is collecting these folklore materials should be sensitive to the feelings of the community, and may need to return the object once it has been digitised. Folklore that is told by an elder in society would need to be recorded. The recording could take the form of a video or audio. Other Ghanaian folklore objects such as historic location or mountain cannot be moved therefore would have to be digitised on location. The form of digitisation for this kind of folklore object would be photographs or video. In all forms of digitisation, standard file size and formats should be adhered to. Access to the digital archives should be free, especially to those communities who have contributed folklore resources, as a way of acknowledging their valuable input.

The open source model would be most appropriate to provide access and sharing of digitised Ghanaian folklore. The open source model will not impose restrictions for sharing African folklore, and this will facilitate the transmission of traditional knowledge to future generations.

Though Ghana has bridged the gap in terms of the internet divide, and does have substantial network coverage, the bandwidth required to download large files may not yet be present. Hence, it is recommended that digitised folklore content is separated according to file size on the open source database. This will allow users across the continent to select which files they download. Smaller files may be more practical and user friendly than very large files.

In respect to copyright and intellectual property, it is recommended that the communities and individuals who provide their folklore are consulted. These individuals and communities would have to decide whether their folklore could be shared for free, or not. It is possible that many communities may waive their ownership rights, in the spirit of

making folklore accessible to as many as possible. In the situation where communities request compensation for providing folklore resources, a fund would be necessary to pay for the copyright so that when it is distributed there would be no cost to users.

Folklore is an oral tradition that represents the life, culture and history of individuals and groups in society. Folklore teaches, and has shaped society, in terms of the values it represents. Generations have acquired knowledge through folklore - however aspects of modernisation and urbanisation pose problems for educating subsequent generations about their communal folklore by word of mouth. It is therefore important to preserve folklore in order to continue transfer of knowledge to other generations, and to archive it before those elders who are familiar with it pass on. The open source model presents an attractive means for preserving and distributing folklore to those who, for whatever reason, are not able to access it through traditional methods.

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