



Online Entrepreneurial Services For Nigerian Libraries

¹Okpomu, Bethel; ²Orumah-Oberhiri Godwin & ³Alah Okpomu E. Mary

¹Department of Computer Science
Federal Polytechnic, Ekowe
Bayelsa State, Nigeria

²Acting Polytechnic Librarian
Federal Polytechnic, Ekowe, Bayelsa State
P.M.B 110, Yenagoa, Nigeria
+234(0)703-222-1926
E-mail:orumahwin70@gmail.com

³Department of Public Administration,
Federal Polytechnic, Ekowe
Bayelsa State, Nigeria

ABSTRACT

This study is intended to educate both entrepreneurs and librarians on the need to adopt ICT a core developmental and innovative tool which helps to transform any business through the power of the web. In addition this article is focused on giving a crystal review of online entrepreneurial Services for Nigerian Libraries as a vital intermediary and new paradigm of business, learning, knowledge and research if adopted in almost all academic institutions in Nigeria and also to show how ICT can be adopted into library services in other to boost reading, learning culture and researches amongst lecturers, teachers, students and numerous researchers cutting across all careers and field of study. From inception, researchers and researches carried out by scholars, students and academicians have been through the use of textbooks, circulation desks, shelves, pamphlets, printed journals and other sources of print learning material in Nigeria where learning, research and knowledge through the use of intelligent Agents (IA) and technology is seen as difficult, new, and distinct due to the advent of technology (ICT) in library science and entrepreneurial practice in Nigeria. This work is a complex, and duly demand a sincere, holistic and excellent background because the under listed key words for discussion are the soul or hub of any business sector, academic institutions and other corporate establishment because the term “Entrepreneurship”, “ICT” and “Librarianship Services” have different meaning and concept to different adopters of this strategy as it relates to higher productivity.

Keywords: Online, Entrepreneurial, ICT Services, and Libraries.

INTRODUCTION

This research analysis is intended to measure and evaluate the need and importance of information communication technology into the traditional library services in Nigerian education/academic sector and institution as it relates to learning, knowledge, researches and technology. To have an all-inclusive frame and foundation of this study the under listed definitions will help to evaluate the above discussion as it relates to library science and services through the aid of ICT in Nigeria’s learning and research services. Business seasons come and go due to the fact that some business managers have not find or sort for the right movers or people to work for the survival or sustainability of their business, but with the advent of

online digital aide or support to businesses it has become more easier to do business transactions without barriers to the access of the (web 2.0).

1.1 Definitions of Online Services & Online Entrepreneurships: In modern day style or method of teaching, learning and research approach you cannot attain or gather recent models, plan and concepts of transfer of knowledge without the aid and adoption of information communication technology services otherwise referred to as (ICT). Given, the above observations what then is the meaning of Online Services.

Online services could be defined as the act of conducting businesses, and learning services electronically especially through the internet otherwise known as the web (www). Before the advent of the internet learning and research has been through the traditional form of active learning and assimilation from the pedagogical view of learning. But after the advent of web 6.0 into learning ICT have been adopted into learning and research thus not limiting it to library services. Accordingly, Johnston and Clark, (2005) states that “service is the combination of outcomes and experiences delivered to and received by the end-user”. This paper from its composition is a multi-combination of online, entrepreneurship, and librarianship services therefore; the writers of this work have decided to analyze these concepts for the purpose of learning and knowledge.

Following, the extreme **reach-and-content** of the power of online technology and the entrepreneurial concepts the adoption of online applications and entrepreneurial services aid into libraries operations in Nigeria, it will enable most Nigerian academic institution’s to have access and material resources and also be viewed as the latest paradigm of learning and research for effective teaching, business and knowledge management through the services of (I.A) intelligent agents. Thus, the use and adoption of online entrepreneurial services in Nigerian libraries will help to foster rapid growth in theoretical and empirical researches through the support of online digital agents and entrepreneurial management.

1.2 What is Entrepreneurship? The word “entrepreneur” is a French word which literally means “go-between”, the concept of entrepreneurship in the business world could be defined in diverse form with different meanings to different individuals because the greatest of human endowments are intelligence and entrepreneurship besides man, animals and plants, every other thing in the globe is a product of human intelligence and entrepreneurship with these statements both the classical and neo-classical theorist have postulated or defined the meaning of entrepreneurship but there is no best definition of this concept, it all depends on the benefits, focus and profits of the individual or end-user defining it. **Robert D. Hisrich**, (1986) defined entrepreneurship as “the process of creating something different with value by devoting the necessary time and effort, assuming the accompanying financial, psychological, and social risks and receiving the resulting rewards of monetary and personal satisfaction”, following the above description and definition the under listed concept will help to explain/define the meaning of entrepreneurship as it is viewed by different authors and school of thoughts, the 17thCenturies : described entrepreneurs as person’s bearing risks of profit (loss) in a fixed price contract with government. **Richard Cantil**, (1725) viewed it as a person bearing risk is different from the one supplying capital, while **Joseph Schumpeter**, (1934) defined entrepreneurs as an innovator and an individual who develops untried technology.

In other to support this concept of entrepreneurship for a crystal understanding, **David M^c Clelland**, (1961) also opined that an entrepreneur is an energetic moderate risk taker. In addition, **Gifford Pinchot**, (1983) defined entrepreneurship as an entrepreneur within an already established organization or system. In view of these scholarly definitions, it is therefore pertinent as co-writers of this research to state that an entrepreneur is not necessarily or limited to an individual, person or business organization taking or bearing risk but an individual who is capable of strategizing to develop, identify a problem, modify, modernize and also adaptation of ICT into the transforming their traditional businesses into click-and-mortar organizations and the library as a hub of knowledge, learning and research should not be viewed as a mere profit making venture but it must be viewed as the hub of learning and research, so therefore, if online entrepreneurial services is been adopted into most Nigerian libraries, it will boost the librarianship

profession and also will drastically create a cyber space for learning for that institution that have decided to invest or adopt the usage of (ICT)/ intelligent agents (IA) into modern day libraries services.

To have a true reflection of this study/paper an entrepreneur cannot be limited to those that are self-employed, or individuals operating within the supply chain environment like in the non-profit making organizations such as NGO's, government parastatals, government owned schools/hospitals, co-operatives, youths clubs, industries and so on, but also it should be viewed as a cycle which encourages every sector of business to know and practice business for productivity and reach within the value chain of service, learning and re-training.

1.2 *The Need for Internal Acceptance of the Current Trend of Adopting Entrepreneurship and Library Sciences in Higher Education:*

It is a crystal fact and trend to state that in most higher institutions of higher learning in Nigeria that there is the problem of acceptance and adoption especially when it relates or comes to the issue of re-branding, upgrading and modernization of traditional brick-and-mortar firms or institutions into click-and-mortar which is seen as the era of transformation in most profit making or entrepreneurial base businesses. In addition, this report sort to dispose that contemporary base or intensive sectors or economies, and business corporate organizations, private individuals and academic institutions are increasingly motivated or driven by the new trend of business and technology in other to sustain their competitive edge, advantage and niche within the value chain where they serve or operate from in a skilled workforce according to *Dill and Vught, 2010*. Thus, for library services to transform into entrepreneurial base learning hub or centre's they must possess the right skilled manpower-and- staff strength to revamp, re-structure and re consolidate the adoption of ICT into Learning, research and library services without any compromise in other to compete with the global method of research, learning entrepreneurial and library services standards. Accordingly, the adoption of online entrepreneurial services in Nigerian libraries can only be adopted if higher institutions will seek to diversify their traditional mode of service delivery and operations in research and learning into libraries that have resolved to transform and implement the concept of ICT as a tool for rapid content-and-reach as it applies to research and learning; if adopted to new paradigm of research will encourage and propel online research innovation and human capital development in almost all higher institutions of learning in nigeria.

More so, according to *Altbach et al., 2009* stipulates that it is essential for every academic institutions of higher to revolutionize and transform their scope of service and profit base in other to propel the traditional mode of any business as a relative cheap means or methods of integrating information communication/systems/ services across the value and supply chain of libraries.

1.3 *The Importance of Online Entrepreneurial Service in Library Development.*

The web 2.0 (internet) since its advent is described as a digital platform of transforming any business or sector with the ability to operate on a 24/7 basis through the power of technology, but the usage of online entrepreneurial support aid (software intelligent agents) into library development in Nigerian libraries is perceived as a new paradigm that most librarians are scared of investing into to support their work and career.

This practice if adopted will place or help to put Nigerian libraries on the world cyberspace as one of the reliable, efficient, and research Centre space for documents retrieval and storage with accessible reliance which electronically which begin to generate academic and financial benefits to any Nigerian library that decide to put the right technology in place. The adoption and use of virtual/e-libraries in most Nigerian academic and community libraries is only limited to internet access instead of making our libraries to be **Learning Resources Centre's** (LRC's) within any academic environment. Therefore, this discussion should be given proper attention and investment if the librarianship profession wants to attain its spot as an entrepreneurial base research sector, and knowledge generating hub of learning. Accordingly, once online entrepreneurial services is adopted in most Nigerian libraries through the power of web 2.0 it will create and provide a content based platform for communication, transactions, sales, research, knowledge

and also serve as a digital store and classroom for researchers, students and learners despite their field of study.

1.4 Integrating the evolution of the Internet & web 2.0 into Library Services.

Oral and secondary data over the year have revealed in most analytical researches, projects and other academic journals, pamphlets and real-time statistics shows that since the advent of the internet, almost all sectors of business, industries, government cooperation's, engineering, science, commerce, schools, military, medical sciences, and even the hospitality and services delivery organizations of all sort solely depend on the usage of online digital adoption as a virtual means of spreading and making their services have a virtual presence and reach to numerous and unidentified end-users or customers thus, the concept of online entrepreneurial services in libraries must not be treated with a kid glove or ignore because of the complexity of setting up and operating a digital/online learning space or environment, in addition knowledge and classroom learning is only complemented as effective when there is a reliable and adequate online access on a 24/7 basis.

Therefore, according to **Paul Deitel, and Harvey Deitel** et al 2012, they described the internet (online services) as a global network of live computers. This background is a composition of electronic services and application which can only be serviceable by the power of an active line of a pool of convergence of computing and communication technologies. To complement and give this topic a crystal clear recommendation and adoption for libraries services and operations in academic environment it is also vital to mention that in the late 1960's the Advance Research Projects Agency (ARPA) officially rolled out blue prints for networking their main computers systems of about a dozen (12) computers to carry out their daily operations and service. It is also noteworthy in this secondary research to state that the ARAP simultaneously funded universities and research centers/ institutions. To optimize the adoption of online entrepreneurial services in Nigerian libraries first we must learn to invest in academic researches so as to enjoy and have improved service productivity within and outside supply chain of any research centre or libraries in all academic and community libraries.

1.5 Online Entrepreneurial Services the Explosive Growth for Libraries Operations

From literatures of production management, supply chain management, entrepreneurship management and library science communication is viewed to be quicker and easy via electronic mail, and other internet services application which allows all kinds of business transaction, research and learning outcomes amongst the world's population of online/web end-users whether students or career professionals.

Furthermore, the writers of this work also observed through secondary reports and surveys that after the initial advent of the web internet (online) services was limited to entrepreneurial transactions or services, alongside universities and other research institutions before the military began using it intensively to boost their general operations and administration hence therefore the non-adoption of entrepreneurship in libraries services will never harness its full productivity potentials if this topic is merely discussed on academic journals and it is not fully implemented as a core aspect of generating funds and promotion of knowledge/research according to **Paul Deitel, and Harvey Deitel** et al 2012.

Our background secondary findings and reflective analysis also states that "the earth and business today can only evolve on a 24/7 when online communication gets feedback from any operation whether financial base or academic centered in terms of maximizing profits", because every evolving trade, profession or business have realized that they could fine-tune their business or field of study operations via the web 2.0 (online) which is proven to be a platform that (helps to transform)-and- (boost-and-reintegrate) any brick-and-mortar (offline) business into click and mortar (online) ventures which is backed-up or powered/propelled by ICT intelligent agents (I.A) because the web 2.0 (online) as a new concept of transforming any offline business or field of study likewise is capable of organizing, share information, remix or reshape, criticize, update any business that is linked or connected to online presence that already have a physical platform or presence.

2.1 The Need for Perfect Online Entrepreneurial Services in Library Operations Through Implementation & Post-Implementation Period

According to C.S French (2012), implementation must follow or starts from a defined and detailed design stage. This involves the coordination of the efforts of the end-user department and the ICT department or unit it is intended to support or redevelop in order to get the proposed new system into operation. Thus, only a proper research and design can enable the collaboration or adoption of online entrepreneurial services to function effectively in Nigerian libraries if we must begin to explore our numerous academic and individual researches. In line with the need for perfect online entrepreneurial services as an intermediary in library service operations there must be the presence of coordinating committee/members in place to manage the implementation and completion process of digital adoption and services for any thriving business or sector. This process also must be composed of a prospective representative of the said department or profession that is yearning to transform their operations for more **value added services, reach** and **content** in order to initiate the planning system which in turn will be used or adopted for the project implementation.

2.2 The Need for Online Personal Information Entrepreneurial Managers.

The entrepreneurship value chain from the inception is predominantly occupied by business administrator's and business development clients who are cautious and capable of taking investment risks in order to maximize or make profit. In relation to this discussion it is thus pivotal to mention that online information management is one of the basic foundational concepts for any academic libraries that are evolving to rebrand and complement their workstation operations in order to make financial gains and academic profits as it center or relates to the librarianship profession as suggested by **Timothy J. O'Leary** et al. (2004) when he opined that personal information managers(PIMs) is one of the most preferred process or online platform of managing popular web-based application.

They also added that commercial online services is a cluster or mostly referred to as "members-only" company that provides not, only online or internet services but other specialized content as well as news, games, data storage-and-retrieval, reprographics, and financial data examples of (2) best known online commercial services search engine optimization links or sites are: AOL (American Online) www.aol.com and MSN (Microsoft Network) www.msn.com.

Given, the above reference it necessary to state that every online business operation is not limited to financial profit alone, but they simply set up to reach a wide range of end-users population with the purpose of offering content-and-reach based services thus therefore the adoption of online entrepreneurial services into library development should not be ignored, politicized or implemented as a mere test-ICT application, but a future of transformation if all units in the library departments ranging from the reference library, circulation, cataloguing, technical section, and serial section of any library wants to enjoy the benefits of entrepreneurship as an emerging online firm, universities or research center of learning.

2.2 The Concept of Budgeting as a vital Aid to setting up online entrepreneurial services In Libraries

Every academic research centers and knowledge hub keeps track or items that is a bit different or differ from other profession as librarians or research managers one of the basic need of project implantation is the ability to manage money within the sector you are employed to work or serve as most ICT departments often have one of the largest budgets in most academic institutions and organization. Here, this aspect of budget depicts that in terms of procurement budgeting is always seen as historical records and are in most cases carefully tracked documents because somebody (colleague or Subordinate) are always monitoring and watching the projected monies according to **Bill Holtsnider** et al. (2001).

2.2.1 What is Budgeting and How Does the Process Work ?

To support this section **Bill Holtsnider** et al (2001) categorically described and examined the concept of budget as the process of assigning specific amounts of money to specific departments within a company

for a single fiscal year. In addition, the fiscal year that the budget tracks or monitors is not the January-December calendar year but the year the budget covers or tracks can be any 12 month period although generally begins on January 1, April 1, July, or October 1 pending on the period that the budget is expected to cover or used for project implementation regardless of the 12 month period for your budget that is called the “fiscal” year. For any one, that is new to management, you will rapidly discover that the budget process and its attendant processes are critical to you and your department’s success as stipulated by *Droms, William G.*, (1998).

2.2.2 Budgeting: What are Some Key Factors that should be considered before introducing online entrepreneurial services in Nigerian Libraries Operation.

There are tactical numbers of key factors that any ICT implementer or adaptors must consider before budgeting, planning or designing an online platform for any organization or academic libraries in other to give this discussion a background spot for take-off they are: Growth, Technological Change or Advancement, Human Resources (Staff), Software Maintenance, Hardware Maintenance, Time-and-Material Contracts and Warranties.

Concerning the above stated factors that must be considered the last choice for hardware support that will enable “*entrepreneurship*” and “*Library services*” to merge for efficient and effective services is the warranty that comes with new equipment’s, but it is important to realize that most on-site warranties generally provide for the best effort and higher levels of feedback therefore all equipment’s and tools procured to implement and proposed project must be duly certified by technical professionals as suggested by *Strassman, Paul. A* (1999).

To add more value to this topic, as librarians seeking to rebrand libraries services as an intermediary that is capable of enjoying or gaining entrepreneurial profits from their normal traditional offline services, we must understand also that a huge sample of text books, papers, journals, seminars, workshops and conferences have revealed that lack of skills and awareness is one of the core concern or greatest barriers to transforming any profession or practice to accepting the use of adopting online services (internet) for higher productivity that is likened to security wider reach and other value added services. Additionally, in many nations of the world, profession and field of study the basic know-how and literacy of current e-Business and Commerce practice is a crude problem to any stakeholder or new entrant that wants or desires to adopt the use of online services, this perception has been a major hurdles of transforming must traditional brick-and-mortar firms, businesses, institution and service delivery professions.

Thus therefore, the quest to spread the adoption of online entrepreneurial services in Nigerian libraries services and operations will help to spread the value and power of internet as an aid that supports, transform, bridge, complement and boost business and services. In fact, the adoption of online entrepreneurial services in Nigerian will definitely help to sustain and transform the cultural library profession practice into a world class practice that will be accessible to both lecturers, students, researchers and potential entrepreneurs that are willing and capable to take risk and also invest in the library profession whether in an academic institution, school, public or community libraries.

Furthermore, the need to promote and accept this entrepreneurial adoption will encourage and enable end-users (whether students, investors or researchers) to see the competitive value and benefits of using Information Communications Technology to transforming and reviving this profession hence both practicing entrepreneurs and librarians can combine and brainstorm with ICT professionals to test the best possible design and design application of achieving this plan. Lastly, encouraging this online application in libraries should be seen as a core task and priority in all academic institutions rendering library services/operations that are targeted or centered in research, ideas, knowledge, financial profits and development as strategically illustrated and examined by *World Economic Forum*’s Global Challenge Initiative on the Future of the Internet (2016).

To enable the librarianship profession in Nigeria to compete and upgrade the traditional library services into a world class standard for harnessing new skills, researches and efficient learning that is beyond traditional classroom learning libraries must begin to collaborate amongst themselves (learning institutions) libraries in other to develop and design new saleable, scalable and efficient replicable on-the-

ground entrepreneurial models that will be backed up or support by a structured content intelligent agents (I.A) library software's that will make every Nigeria libraries to have access to recent researches, findings, and latest trends/practice of doing business for higher productivity.

Again, once adopted this model through collective collaborations by governments, entrepreneurs, and librarians will drastically help to accelerate and broaden the financial capital base of every learning/research institutions, this adoption must be seen as a core priority in every state of our nation or region if we want to experience or an accelerating new wave of work, research and learning in library operations.

3.1 *The Barriers to Global Adoption and Use of Internet (Online) Services/Aid*

To create a true reflective analysis of this study the World Economic Forum (2016) white paper Internet (Online) for All: A Frame work for Accelerating Internet Access and Adoption states that “*after years of rapid increases of the advent of internet, the growth and percentage in the number of internet users is observed to be slowing down*”;

Accordingly, further investigations by the *UN Broadband Commission*(2015) also stated recently that “*growth in global mobile cellular (online) subscriptions and growth in internet usage have slowed sharply*”; this simply means that both private business organizations, individuals and end-users of online services not excluding both institutions and investors; we have reached a transition point in the growth and usage of the internet not minding the need of the end-users usage need whether for social, academic, and financial interest. This report also has it that the expected milestone of four (4) billion online (internet) end-users globally (worldwide) is unlikely to be attained or reached before year 2020, while stating that it will be difficult for the 3rd World nations to attain 50% internet (online) target end-users penetration rate/level before 2020. These facts, non-arguably listed the barriers to greater online (internet) use fall into four (4) main categories namely:

- Infrastructure;
- Affordability;
- Skills, Awareness & Cultural Acceptance; and
- Local Adoption and use, which often occur due to lack of local content.

To have a precise, comprehensive and defined frame work for the need to accept the adoption of internet access in libraries through entrepreneurial approach or models, both ICT consultants, entrepreneurs and librarians must endeavor not to engage themselves in practices that may disrupt the intention for adoption of online access into library services and operations or else it will hinder any form of designs, application and initiatives that have been put in place to encourage/foster the adoption and use of online services in Nigerian libraries. More so, as co-writers of this work we also suggest that in course of the adoption both entrepreneurs and librarians must endeavor to consider other social and economic factors that can affect the adoption of this project as suggested by **Boston Consulting Group** and The World Economic Forum (2014) .

Research also revealed that the United Nation's (17) Sustainable Development Goals which was agreed in September (2015), and long side its other related 169 targets is centered on Information Communication Technology (ICT). These millennium development goals are “integrated and indivisible and thus help to furnish and balance the three (3) core dimensions of sustainable development which comprises of the economic, social and environmental. These physical goals and targets are intended to cover or stimulate positive and productive benefits to the entire regions of the world in the next 15 years; the critical importance of these goals specially focuses on humanity and the planet: i.e people, planet, prosperity, peace and partnership”. The concept of ICT was also described as an engine for achieving these sustainable- development goals and also a reliable remedy “that can power this global undertaking”; according to Fmr. UN Secretary- General **Ban Ki-moon**, (December 2015).

3.2 The Effect of Internet on traditional Intermediaries

E-Business Management is a vast digital, application and strategic model of doing and transforming must traditional (offline) business into click and mortar (Online) platform not minding the field or trade whether virtual commerce operations or e-learning which is also electronically centered. Here, it is vital to add that the introduction of the World Wide Web (online internet technology) to all businesses is one of the closest and most friendly developments that information technology has made available to man for the sole purpose and benefits of communication, surfing, research, commerce and learning. The under listed steps and processes must be considered and tested before adopting this frame work as the real-time set may differ pending on the investors ability to integrate this model. This illustrative framework will serve as a comprehensive overview of the topic and issues that need to be tactically considered and addressed when discussing and panning online (internet) access and adoption. While evaluating other articles and literature on e-commerce and online business transaction model as it relates to intermediation. It is clear that most transactions are now done on the internet especially by most capital base organizations or institutions. The internet is rapidly and constantly becoming a core and trendy channel of doing modern day business operations for a variety of businesses because of its power of speed and interactivity according to Wynne et al. (2001).

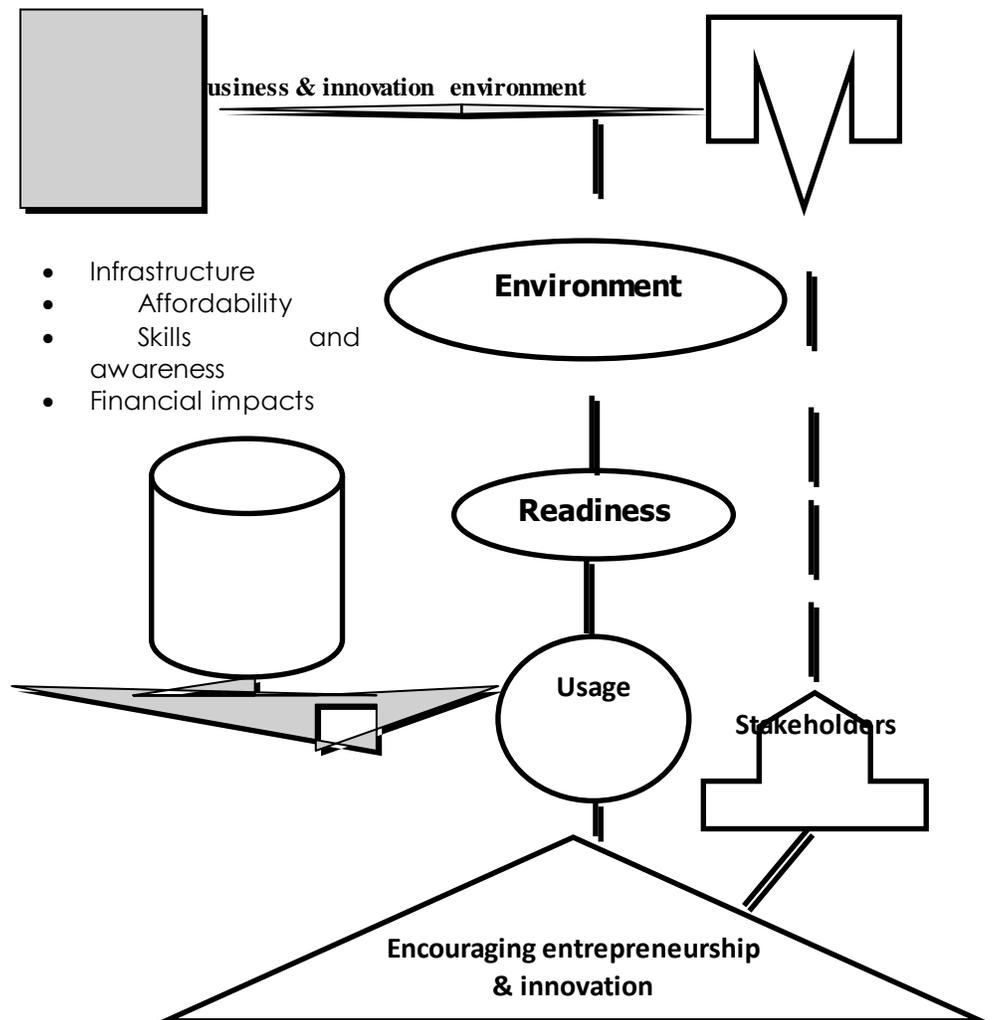


Figure 1: An Empirical Illustration Design Model /Framework for Online Entrepreneurial Services for Nigerian Libraries as Adopted from Internet for All: A Framework for Accelerating Access & Adoption (2015).

3.3 *The Benefits of Online/Digital Adoption*

A recent research carried out by Information and Communications Technology Council (ICTC), March (2016); reveals that since the advent of (the web) digital technologies are rapidly changing the way companies and other business institutions do business, due to quick and accessible data and communications, responsive case management, information consistency, and seamless information changes.

Simultaneously, an in-depth consultation with Canadian businesses and adopters of technology in terms of service delivery and productivity recorded the following statistics (data); also depicts that (4) out of (5) which amounts to (81%) of respondents agreed/reported that online digital technologies have actually improved their business productivity. They agreed that this transformation have doubtlessly enabled employees to utilize their work time and also the efficiency to work smarter. More so, another sets of respondents with a percentile of (66%) says it digital adoption decreases production costs respectively; further findings also shows that (40%) reported increased market share amongst a host of other market competitors. Accordingly, to have a complete feed of this statistics (48%) of respondents revealed that digital adoption as a new paradigm helps with boosting innovation and lastly just (1%) increase in labour productivity resulting from the adoption of online (digital technology) has earned the Canadian Economy a total of \$ 8 billion according to (ICTC, March 2016).

Although, the word and term “Online” still refers to the internet this multi-purpose technological search engine is a global connectivity platform that is capable of transforming any business, profession or career, this is why **Kevin Ashton** (1999), described and defined the internet (online) as the “*Internet of Things* (IoT)”; he also argued that by traditional association through data collectivity, connectivity and generation the internet have been able to access and house all sort of information that have help in creating **reach-and-convenience** in most field of human practice and transactions, online platform is therefore viewed as the store of knowledge for all according to **Evans, Dave** (2011).

A simultaneous study in course of this research also shows that one major aspect or importance of the internet “Online” is the capability and ability for “innovation and productivity”; and this is the core role entrepreneurship plays, coordinates and delivers in every growing economy. Here, it was again revealed that entrepreneurs play vital or critical role that drive growth. Hence therefore, professions or entrepreneurs who use or adopt the use of technology as a digital aid as parts of their solution will definitely likewise enjoy or create “new digital innovations” and the librarianship profession must not be neglected in this 21st century when everything is going viral according to **Asliturk E., Cameron, A.** et al (March,2016). In summary, entrepreneurs and librarian who both intend to use technology (ICT) as parts of their work/career solution must ensure that they have the right skilled manpower, know-how and technology because it is known to be a hyper-connected technologies which rapid expand and create new markets and opportunities as cited and established by **Juan Ignaci Vázquez**,(2011) .

To enable readers of the work to have a vast understanding of this topic it was also been argued that ICT is a principal driver of economic development and social change worldwide (**Kozma, 2005; Leech, 2008**). To clarify this discussion it was also discovered that in many countries of the world today, the need for social and economic development is used to measure or justify investments in educational reform/transformation.

Another crystal argument to this effect is by **Kelles-Viitanen**, (2003) who particularly centered his arguments on 3rd world (developing countries) in general said that ICT- non-resistably plays and perform a major role in all spheres and aspects of national and economic life as well as in social, educational and cultural development because it gives online access information and services.

3.4 *Education & Learning vs. Library Services*

Learning and enterprise are (2) key major components as it relates to business and human development. Nonetheless, these essential life skills are important as they promote personal development, self-worthiness, and also social and economic needs for all institutions, families and businesses. Apart from

entrepreneurship online adoption into library profession, libraries have been supporting lifelong learning support and activities, access to materials, information on learning opportunities including referral services to learning resources in virtual transactions and in real-time learning. Accordingly, libraries help to create work-and-link people with jobs by providing the resources and support to development which includes seminars, talks and workshops with topics that will encourage business ideas generation, life coaching, commerce and sustainable business opportunities.

This thus, will serve as an ideal platform to promote business collections and resources on enterprise support. To complement these suggestions it is likened to mention that for people who are self-employed (entrepreneurs), it is pertinent to say that investors who would like to invest in libraries are advised to set-up and build start-ups and SMEs because the library by its traditional nature operates or functions as their workplace or station. In addition, this topic suggests that each library service should always serve as an incubation space that is capable of providing working and meeting space, 24/7 free Wi-Fi access, information resources, the presence of a skilled information analyst or manager, online publishing, learner and research support services and lastly 24/7 access to information and academic material retrieval expertise.

Accordingly, in line with this research the co-writers of this topic strongly suggests that due to the absence of entrepreneurial online services in most nigerian libraries the adoption thus, must be initiated into all learning and research hub of all academic institutions curators of information that are established to support information provision, book collections, and businesses, this adoption will definitely end up promoting business planning, marketing, financial control and streams of social media access which in-turn will further develop online resources for entrepreneurs and people seeking employment in the libraries.

3.5 The Need for Digital (Online) Entrepreneurial Skills

In other, to give this topic a clear argument and foundation over library skills and digital entrepreneurial skills. It is advised that for there to be any innovation and advancement in this sector, it is encouraged that entrepreneurial skills must be combined with leadership skills because it is a basic prerequisite and driving force for every “**New Digital Economy**” especially in management positions as suggested by(**European Commission,2012**). Furthermore, entrepreneurs operating in digital (online) economy can be classified into (2) categories namely;

1. Those who leverage existing digital technologies as an integral part of their business, products and services.
2. Those who invent new digital innovations.

In addition, to support this discussion it is essential to state that digitally savvy professionals with strong entrepreneurial practitioners, understands the current practice and cutting edge digital (online) technologies such as e-commerce, data analytics, mobile, cloud and social media will never desist from ignoring the values of ICT in innovations, but will rather successfully adopt the use of digital aid/intelligent agents (software’s).

It was also gathered that “entrepreneurs” who create new digital technologies are capable of benefiting from the latest R&D technological innovations which is thus transformed into products or services that can be sold on the markets. This research also observed that entrepreneurs possess critical skills which includes spotting new trends, creativity, risk taking and risk assessment, long-term strategic thinking, ability to evaluate different scenarios, networking, resilience, focus and also the ability to finding the right digital talent for the right positions according to (**Aileron,2013**). Secondary survey reports also revealed that entrepreneurs also possess excellent interpersonal -and- business skills which are capable to propelling maximize market opportunities, and a driving force that can generate strong commercialization skills such as sales and marketing, capital-raising and ability to implement new products into the marketplace as postulated by (**The Conference Board of Canada,2013**) .

Furthermore, the benefits of digital adoption is that it open-up opportunities for increased innovation & advancement which of course will lead to improved employee engagement that will create open doors for optimum increased sales and profits. The writers of this article also observed that online adoption frequently makes an institution/firms/organization's to enjoy increased attractiveness. Another potential is that digital technology is technically capable of generating additional jobs for desirous unemployed job seekers a chance to find jobs in non-information communication technology (ICT) roles. A good example is the research carried out by the **Boston Consulting Group**, (2013) on SMEs when they confirmed that digital adoption helped to create twice as many new jobs and also grow their revenue base by 15% more, than those other competitors and new entrants who uses just traditional brick-and-mortar style of operation and less technology. There is also the advantage of cost savings and diverse business gains multiplier effect upon successful adoption as clarified by ICTC, 2013. It is obvious that this concept or idea which focuses on "Online Entrepreneurial Services in Nigeria Libraries is test program waiting for the 1st movers in the Nigerian Librarianship sector to adopt, the writers of this paper strongly believes that immediately hub of knowledge and research (learning) adopts this online platform it will definitely transform the method and operations of librarianship in all cadre's and units of the library department of any institution.

Although there is still more findings, analysis and observations still be investigated by other scholars in the ICT, Entrepreneurial Sector, the Librarianship profession we strongly believe that demand for the adoption of entrepreneurial services into library science and operations will definitely create 24/7 access for student's whose institution have updated and remodeled their institutions daily routine operation work task into "super digital information platform that is capable of exploring modern practices and delivery of services in the chain of commerce, learning, research and teaching without necessarily bordering on the need for borrowing text books on shelves for personal/individual researches.

Again, it is positive to state therefore that for those 1st movers that will subscribe to this trend, such movers will have the ability to sideline their competitors with incredible strong end-users base (library end-users –and- entrepreneurs) which in-turn will propel sales opportunity for the institution especially in the area of student's admission, and learning because such kind of learning hubs or institutions can be access from all parts of the globe if they have as to the institutions (PASSWORD) as a registered student-or-member. The quest and zeal for e-Business & e-Learning is technological capable of making any library to become a " *store of information* ", but the only challenge is for our libraries, government and private sector investors convert this information into knowledge, and use this technological support and knowledge to support our teeming and evergreen students, researchers population since today's students population globally will enjoy to enroll into academic institutions that have virtual learning presence, practice and operation than institutions that are still dependent on traditional book shelved libraries and cataloging boxes, when online cataloging access can be accessed from a networked and wired computer (PC) for the purpose of tracing, tracking and locating any textbook or journal of their choice .

3.6 Possible Challenges of Digital Adoption of Online Entrepreneurial Services into Libraries in Nigeria:

Although the policy of adopting ICT creates access for digital innovations with strong performance outcomes. Obstructions or obstacles must seemly occur so as prevent potential investors to ignore the financial aspect of establishment the proposed facility. This is why financial realities (Lack of Money) can make investing in online business a top challenge for must companies, shops, factories, schools, universities and so on.

In other words, this paper is of the view that due to the composition and technicality of online business setup most enterprises and libraries always possess the problem of Skilled e-Commerce/Business managers and application strategist to adopt, monitor, and implement these facilities for the purpose it was procured. Accordingly, we must acknowledge that both libraries and entrepreneurship are vital repository catalyst for career, structural, change and evolution no matter the field of human endeavor as

documented by (INSEAD, 2013). It is noteworthy to state that as the global economy becomes more competitive and the online/digital divide shrinks, the digital skills and knowledge of both employees and entrepreneurs alike may serve as a yard stick or deciding factor of their success in the new online intelligence/digital aid economy.

3.7 Possible Indicators to be achieved upon successful adoption of online Entrepreneurial services in Nigerian Libraries

The under listed facts will help to transform and increase productivity within the entrepreneurship and librarianship field if adopted:

- Increased sense of ownership
- Cost savings due to decreased work time losses
- Better performance
- Increased trust
- Collaboration and synergy between employees and their departments: i.e (entrepreneurs and librarians)
- 24/7 online access and reach

Furthermore, it is crystal clear to mention that the concept of digital skills with proofs of practice and adoption by firms, institutions or organizations has made an inevitable entry into the development of careers and skills. It is also described as a platform that has succeeded in preparing a digitally-literate work force and online (digital) confident-businesses. Following the advent of digital adoption in businesses through software intelligent agents (8) eight core digital skills were identified they include according to (www.digitalskillsgap.com);

- Working with documents
- Project collaboration and management
- Digital/online etiquette
- Security and privacy content base
- Online Search and research
- Platform flexibility
- Communication and
- Attention management

4.1 The Effect of Technological Innovations in the transformation of Brick-and-Mortar Businesses into Click-and-Mortar Digital Firms

Due to the advent of the **World Wide Web** (www) in almost all sectors of businesses, it has helped to transform the global economic growth of most economy especially through digital technologies. These *i-techs* adoption into traditional work style and operations have greatly intensified the prompt need for a new generation of highly-skilled manpower (workforce). Accordingly, this article tends to support the adoption of online technology into traditional & conventional mode of business into advanced digital workforce since today's employers or institutions prefer to hire experienced professionals who are specialist in their fields and also individuals who are capable of transforming their firms with a high-level cognitive standard that is backed up by a sound computational skills. This is why digital connectivity between billions of networked devices have made the (web 2.0) otherwise known as the "internet of things" (**IoT**) since online platforms is fast becoming a driving force that is centered on transformation of all fields and economy. As a result of findings generated by (Cisco,2011), it was gathered that by year 2020, there will be more (50) billion devices/businesses officially hooked or connected digitally worldwide because the advent of new digital economy is fast (rapidly) shaping and transforming businesses thus, making firms and organizations to crave for a business and workforce that gives access online (24/7 basis), and also offers a fusion of technology, business, computational, entrepreneurial,

creative and interpersonal skills that will help to boost production, sales, search and reach according to (Cisco,2011).

Studies by (ICTC, March 9,2016) also revealed that the adoption of digital skills in every aspect of the economy of any nation is paramount to the development and transformation of any business this was why they stated as thus,“ *in the coming years digital/online adoption will be the business and the business will be digital*”. Since the growing demand for technology adoption and the internet (web) are consistently fuelling the new business intelligence economy which in turn is swiftly affecting all jobs and not just jobs in the ICT sector but across all sectors and professions globally.

Again, research also shows that digital/online skills are gradually becoming increasingly important as it relates work life and operations because it focuses on supporting effective participation, inclusion and innovation in this current dispensation of digital new economy according to (WDM-Consultants, 2011). To ascertain the need for adoption according to (The Economist Intelligence Unit, 2015) they postulated that new technologies through the support and aid of (I.A's) intelligent agents & Artificial intelligence are capable of transforming and making work to be more complex because the level of collaboration and convergence between Information Technology Communication (ICT) and other spheres/circles of work and businesses are on the rise and have consistently increased because it sets the pace and ability to work effectively with one another in other to transform and solve strict business problems/challenges whether in academic institutions or business organisations which is said to be critical to ensuring success in business organisations as suggested by (ICTC, March,2016) publication.

4.2 Enhancing the developmental impact of online entrepreneurial services in the Transformation of traditional Library Services Operations

Literatures and reports have it successful entrepreneurship development through the adoption of ICT lies/depends on the presence and availability of ICT infrastructure, technical skilled manpower and end-user time. Thus therefore, institutions and organizations must exhibit a higher-level of technological know-how and capability in other to transform, upgrade and innovate their daily service operations as suggested by (Melfrad and Piffaz, 2004). This is vital because online/digital aides, facilities and infrastructures help to provide a platform which encourages profitability, sales and e-commerce, and productivity.

To give this title a clear understanding (Manny et al, 2008; Zhy et al, 2002; Zhu and Kraemer, 2002) also stated that online/internet/digital skills offers the technical base and know-how that is capable of ensuring the development of entrepreneurial business applications they are capable of transforming any traditional brick-and-mortar business into click-and-mortar business or institutions.

By implications, technological capabilities has gone beyond physical assets (both manpower, capital and resources) thus, it includes intangible resources which perhaps will help to generate competitive advantages for both librarians and entrepreneurs if adopted into the librarianship profession . Entrepreneurial skills development and team-based entrepreneurial activities are the primary determinant of ICT entrepreneurship development in an organization. However, experimental activities in terms of testing and prototyping, access to resources, coaching and experience sharing is another key constructs that will determine the adoption of ICT entrepreneurial Service development in Nigerian Libraries.

Although, the concept of entrepreneurship in library services and operation in developing countries like Nigeria is new, but the grand idea of this practice is to enhance the developmental strides and impact to improving the quality-and-allocation of entrepreneurial ability into the traditional library practice and also to implement and re-generate/upgrade the quality and quantity of data generation and research through the power of the web with its analytic intelligent agents and software's.

5.1 CONCLUSION

Throughout, this secondary research by the co-writers of this work an in-depth analysis was taken to properly educate-and-support the need of adopting online/digital entrepreneurial services in Nigerian libraries. From the abstract point to the concluding part of this discussion a core developmental impact of

the importance of new digital economy was dissected upon and also introduced, so as to educate practicing librarians on the latest practice and adoption of the web (2.0) into traditional business operations and transactions. This work also shows that the adoption of online/digital in all facets of businesses-and-profession is capable of transforming that business for improved profit maximization and benefits because the web (2.0) absolutely creates big opportunities and advancement in enhanced learning and productivity especially in the revolutionized digital age. Although the concept of virtual and e-learning was not discussed in this paper, but findings and sub-headings of this work clearly revealed that the presence of the web/internet adoption into the librarianship profession is to support learning, research, knowledge and offline classroom learning with the core need of creating financial profits for any higher institution of learning that would want to invest in online/digital entrepreneurship.

Furthermore, facts by other online/ICT and entrepreneurial scholars also revealed that the librarianship field/profession is a pedagogical centered profession thus the adoption of technology into this profession can be used to improve real-time teaching, research and also improve students learning outcomes with a 24/7 access, reach-and-content. In addition, all readers of this work must understand that the concept of “entrepreneurship” is to support economic development, productivity and other value added services, while the librarianship career is capable of rendering enhanced, efficient-and-real time learning when supported by technology and provision.

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