ISSN: 4388 -7618
Volume 10, Number 3, 2022
Innovative Journal of Marketing Management

DIGITAL INFORMATION AND COMMNICATION TECHNOLOGY ON BUSINESS PROCESS

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ABSTRACT
This study examines The Impact of Digital Information and Communication Technology on Business Process. The objective of this study is to examine the relationship between Digital Information and Communication Technology and business process. To achieve the objective, the study employed survey of literature review displaying the concept and measures of the independent and dependent variable. The study, therefore, concludes that the use of ICT helps reduce cost, improve productivity, improves business performance, improves profitability And Further recommended that, Business should employ Digital ICT to enhance Productivity.

Keywords: Digital ICT, Market Information System, Digital Infrastructure, Business Process, Video conferencing, social media and Web Development.

INTRODUCTION

Information and Communications Technology (ICT) involves the use of computer hardware, software and telecommunication devices to store, manipulate, convert, protect, send and receive data/information (Olifer&Olifer, 2006). ICTis fast developing and is now part of every aspect of our livelihood. Businesses cannot survive in this 21st century without ICT since all activities undertaken in the business setup is linked to ICT. Consequently, communication flow is very essential in the growth and development of every business entity. ICT makes it possible to communicate easily with staff and customers of the company. Businesses of this 21st century are advancing at a very fast pace. With the world becoming a global village, business transactions are becoming increasingly dynamic and consequently this has caused an increase in world trade. Thus the increase in the volume of trade in Nigeria and other developed countries require fast transfers of monies, payment across continents and many other services that promote growth of business (Al-Mudimigh, 2007).These transactions cannot be carried out effectively without the use of Digital Information and Communication Technology.

Maintaining a place in this competitive era becomes ot only the responsibility of the owners orleaders of the business but that of the employees. All digital technology that assists individual business and organization in using information the ict covers all electronic product that deals with information and communication been digitized.

With the numerous positive impact of ICT in businesses, it is hard to imagine a contemporary business functioning without adoption of Digital Information and Communication Technology. Thus, Digital Information and Communication Technologypermeate every aspect of twenty first century businesses (Ansah, Blankson, and Kontoh, 2012). According to Crede&Mansell (1998), ICTis crucially important for sustainable development in developing countries. ICT encompasses the use of Computers, Internet, E-mail, Mobile Phones and Fax machine (Ansah, Blankson, and Kontoh, 2012) . According to Fapohunda (1999), computers are now commonly used for writing letters, and reports, printing books, newspapers, and magazines, drawing pictures and diagrams, doing statistics, mathematics and handling financial records, controlling traffic lights, flying airplanes, making and playing music and video, sending messages anywhere in the world. Also, Eseyin (1997) describes the Internet as a mixture of many services with the two most commonly used being electronic mail (e-mail for short) and the World Wide Web (www). It plays a significant role in education, health, political processes, agriculture, economy, businesses and newsgroups. Woherem (2000) states that with Internet connectivity, one can do business all over the world

without physical contact with the buyer or the need for a business intermediary. There have been so many research on ICT and Employee performance and impact of information technology on business but not on Digital Information and Communication Technology and business process , which is what forms the basis for carrying out this research.

MARKET INFORMATION SYSTEM: This is otherwise known as market intelligence system or market information services. (Wikipedia). There are information system used in accessing, analyzing and disseminating information on the prices of goods and other relevant information especially to farmers, traders, processor and others involved in handling agricultural products.
Market Information system or services is a term that is literally integrated into the agro-sector. It is widely used in increasing the transparency and volume of information available via the supply chain of different agricultural products. It has the ability to provide valuable services supported by the development of the internet and advancement of electronic commerce (e-commerce).

DIGITAL INFRASTRUCTURE: In present day market place, Digital presence is been felt by customers using the internet and mobile apps to purchase products and services on a daily basis.Digital infrastructures are technologies that provide the foundation for an organization information operation. Examples of digital infrastructure include;

a. Internet backbone, broadband
b. Mobile telecom, communication suites and applications.
c. Data centre and networks and enterprise portals, platforms and software.
d. Cloud services and soft wares
e. Operational security, user identity and data encryption
f. APIS and integrations

CONCEPTUAL FRAMEWORK

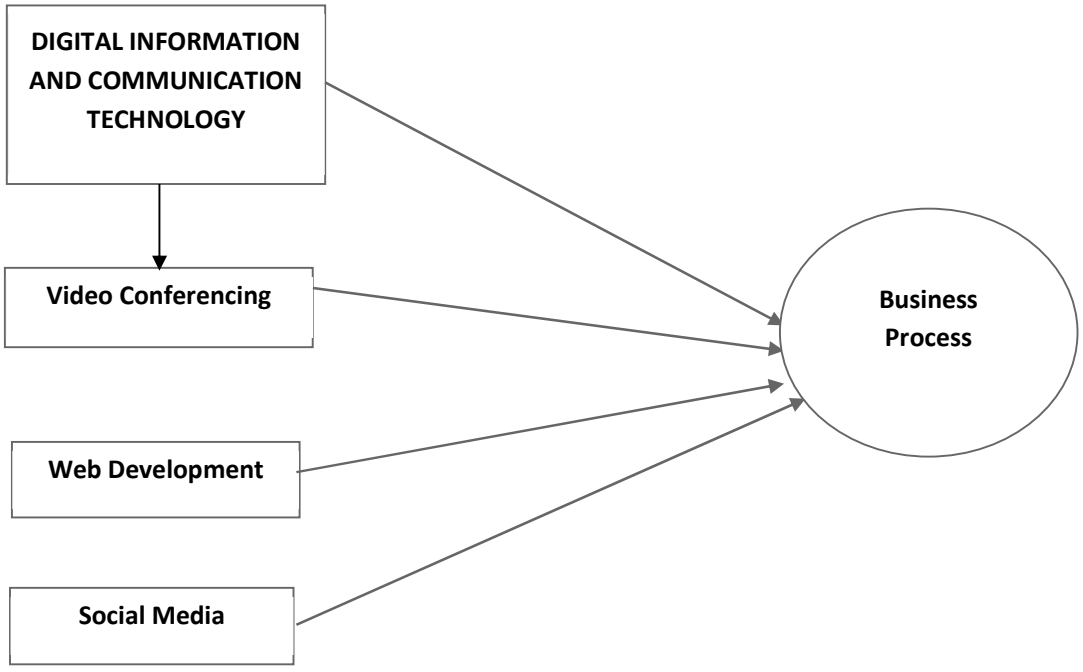

Fig 1.1 Conceptual Framework on the Impact of Digital Information and Communication Technology on Business Process.
Source : Researcher's Conceptualization (2022).

OBJECTIVE OF THE STUDY

This paper aims at examining the Impact of Digital Information and Communication Technology on Business Process. Therefore the objectives of this study include the following:

1. To examine how video conferencing affects business Process.
2. To examine how web development affects business Process.
3. To examine how Social Media affect Business Process.

REVIEW OF RELATED LITERATURE

CONCEPT OF DIGITAL INFORMATION AND COMMUNICATION TECHNOLOGY

Information & Communication Technologies (ICT) is an all-encompassing term, referring to communication networks, the internet, computing services, and various forms of digital content.
Digital ICT (Information and Communication Technology) is defined as the study, design, development, implementation, support or management of computer based information systems, particularly software applications and computer hardware (Sobhani, 2008).
According to Laudon and Laudon (2007), Digital ICT comprises all the technology that simplifies the processing, transfer and exchange of information and communication services. It is considered as a subject of expertise that links information technology (computers and applications) and telecommunication networks (intranet and internet), that lets people and computers co-exist and inter relate regardless of physical location.
Werthner and Klein (2005) also concluded that the term Digital ICT includes hardware, software, networks and people that should be united by inter-linking each one to the other in a systematic process to create the necessary information that helps the decision makers, producing products, offering services, promotion, controlling and for achieving business aims and goals.
Digital ICT is clearly considered a key factor of business growth in the 21st century, specifically, in the current vibrant business and highly competitive environment which requires utilizing ICT to improve productivity and cost efficiency, and to present high quality products and services to customers (Allen and Morton, 2004). Recently, the term, Digital ICT has expanded to include the role of Digital ICT tools not just inside the company but outside the company, for example, a UNDP report, 2001, concluded that ICT is considered as a tool of marketing and contacting customers and looking for potential customers and stakeholders, as well as offering ICT services is distinguished as a potential service for customers (Werthner, and Klein, 2005).
According to Kabanda (2011), notwithstanding the rapid expansion, adoption and easy access of internet, its services are highly unequal across and within countries. Emerging countries face considerable challenges in internet utilization for their growth and development on account of inadequate fixed-line infrastructure, and lack of supporting infrastructure, including electricity and steep prices of Digital ICT technologies. An approximate 75% of the world population, live in emerging markets, unsurprisingly have limited or no access to the Internet.

DIMENSIONS OF DIGITAL INFORMATION AND COMMUNICATION TECHNOLOGY

VIDEO CONFERENCING

Video conferencing also known as video teleconferencing is the two-way or multipoint reception and transmission of audio and video signals by people in different locations for real time communication. A videophone is a telephone with a video camera and video display, capable of simultaneous video and audio communication. Videoconferencing implies the use of this technology for a group or organizational meeting rather than for individuals, in a videoconference (Mulbach et Al , 1995). Telepresence may refer either to a high-quality video telephony system (where the goal is to create the illusion that remote participants are in the same room) or to meet up technology, which can go beyond video into robotics (such as moving around the room or physically manipulating objects). Videoconferencing has also been called "visual collaboration" and is a type of groupware.
While development of video-conferring started in the late 19th century, the technology only became available to the public starting in the 1930s. These early demonstrations were installed at

"booths" in post offices and shown at various world expositions. It took until 1970 for AT&T to launch the first true video-conferring system, where anyone could subscribe to the service and have the technology in their home or office. Video-telephony also included "image phones" which would exchange still images between units every few seconds over conventional plain old telephone service (POTS) lines, essentially the same as slow-scan TV. The development of advanced video codec, more powerful CPUs, and high-bandwidth Internet telecommunication services in the late 1990s allowed videophones to provide high quality low-cost color service between users almost any place in the world where the Internet is available.

SOCIAL MEDIA

Social media are interactive technologies that facilitate the creation and sharing of information, ideas, interests, and other forms of expression through virtual communities and networks(kietzmann, Kristopher h. 2011, Obar, Johnathan A. 2015). While challenges to the definition of social media arise (Tracy L.Solomon , Michael R. 2018) due to the variety of stand-alone and built-in social media services currently available, there are some common features:

1. Social media are interactive Web 2.0 Internet-based applications.
2. User-generated content—such as text posts or comments, digital photos or videos, and data generated through all online interactions—is the lifeblood of social media.
3. Users create service-specific profiles for the website or app that are designed and maintained by the social media organization.
4. Social media helps the development of online social networks by connecting a user's profile with those of other individuals or groups.

The term social in regard to media suggests that platforms are user-centric and enable communal activity. As such, social media can be viewed as online facilitators or enhancers of human networks—webs of individuals who enhance social connectivity (Dijck, Jose V., 2013)

Users usually access social media services through web-based apps on desktops or download services that offer social media functionality to their mobile devices (e.g., Smartphone and tablets). As users engage with these electronic services, they create highly interactive platforms which individuals, communities, and organizations can share, co-create, discuss, participate, and modify user-generated or self-curated content posted online. Additionally, social media are used to document memories, learn about and explore things, advertise oneself, and form friendships along with the growth of ideas from the creation of blogs, podcasts, videos, and gaming sites.[10] This changing relationship between humans and technology is the focus of the emerging field of technological self-studies(Dennis, Amy 2017). Some of the most popular social media websites, with more than 100 million registered users, include Facebook (and its associated Facebook Messenger), TikTok, WeChat, Instagram, QZone, Weibo, Twitter, Tumblr, BaiduTieba, and LinkedIn. Depending on interpretation, other popular platforms that are sometimes referred to as social media services include YouTube, QQ, Quora, Telegram, WhatsApp, Signal, LINE, Snapchat, Pinterest, Viber, Reddit, Discord, VK, Microsoft Teams, and more. Wikis are examples of collaborative content creation.

Social media outlets differ from traditional media (e.g., print magazines and newspapers, TV, and radio broadcasting) in many ways, including quality, reach, frequency, usability, relevancy, and permanence(Xiaohui et al 2016). Additionally, social media outlets operate in a dialogic transmission system, i.e., many sources too many receivers, while traditional media outlets operate under a monologic transmission model. For instance, a newspaper is delivered to many subscribers, and a radio station broadcasts the same programs to an entire city(Pavlik&MacIntoch, John and Shawn ,2015).

WEB DEVELOPMENT

Web development is the work involved in developing a website for the Internet (World Wide Web) or an intranet (a private network). Web development can range from developing a simple single static page of plain text to complex web applications, electronic businesses, and social network

services. A more comprehensive list of tasks to which Web development commonly refers, may include Web engineering, Web design, Web content development, client liaison, client-side/server-side scripting, Web server and network security configuration, and e-commerce development.
Among Web professionals, "Web development" usually refers to the main non-design aspects of building Web sites: writing markup and coding (Campbell, Jennifer, 2017). Web development may use content management systems (CMS) to make content changes easier and available with basic technical skills.
For larger organizations and businesses, Web development teams can consist of hundreds of people (Web developers) and follow standard methods like agile methodologies while developing Web sites. Smaller organizations may only require a single permanent or contracting developer, or secondary assignment to related job positions such as a graphic designer or information systems technician. Web development may be a collaborative effort between departments rather than the domain of a designated department. There are three kinds of Web developer specialization: front-end developer, back-end developer, and full-stack developer (Northwood, Chris, 2018). Front-end developers are responsible for behavior and visuals that run in the user browser, while back-end developers deal with the servers. Since the commercialization of the Web with Tim Berners-Lee developing the World Wide Web at CERN, the industry has boomed and has become one of the most used technologies ever.

CONCEPT OF BUSINESS PROCESS

Business also known as commerce or trade involves primarily engaging in the production of goods, providing services and the distribution of these goods and services from the production point to the end user. It is the exchange of goods and services occasioned by correspondent exchange of money known as legal tender.
Business process is a collection of connected tasks that is aimed at the efficiently and effectively delivering of product (good) or services to the client. It occurs at all organizational levels and may or may not be noticeable to the customers.
Kirchmer (2017) perceived that a business process may often be visualized as a flow chart of a sequence of activities with interleaving decision points or as a process matrix of a sequence of activities with relevant rules based on data in the process. Kirchmer further noted that the benefit of using business process includes improved customer agility for reacting to rapid market change. Kirchmer proposed three types of business process approaches;

1. **Operational process:** This focuses on the proper execution of operational tasks of an entity. This is where personnel get the job done.
2. **Management process**: This ensures that operational processes are conducted appropriately. This is where managers ensure effective and efficient work process.
3. **Governance process:** This ensures the entity is operating in full compliance with necessary legal regulations, guidelines and shareholder expectations. This is where executives ensure the rules and guidelines for business success are followed.

Globally, internet technology has been improving rapidly and has brought with it a lot of opportunities in all spheres of life. Economically, socially, and culturally, the internet continues to greatly impact on nations, communities, institution and the individual (Chux-Nyche, 2021). The increasing revolution in internet technology has its impact on the business process giving birth to e-commerce

DIGITAL INFORMATION COMMUNICATION AND TECHNOLOGY AND BUSINESS PROCESS

In the business world, it is reality that cannot be debated that consumers are increasingly hyper connected and focused on using the latest technologies to conduct their personal business, so if organizational managers cannot keep up with consumers demand, their competitors steps in to fill that gap. The digital infrastructure is what drives business processes in a globalized economy

because they help business become smarter and enable provision of high quality experiences to keep up with customer's demands and employee productivity.
Base22.com (2022) stated that by creating a solid infrastructure and developing world class integrated platforms connecting all your different departments and services helps in marketing product to new customers , provide a more productive and engaging employee experience and provide excellent services to those partners and stakeholders who have been with the business for a long time.

WEB DEVELOPMENT AND BUSINESS PROCESS

Every day, new business opportunities arise as a result of technological advancements. Even though technology makes things simpler, it can be difficult for businesses to capitalize on possibilities if they do not have prior expertise with the technologies in question.
Exactly this is the situation in which businesses with little or no web design or development knowledge find themselves. The fact of the matter is that website development services have changed the way companies conduct themselves.
It isn't easy to do business in today's world without the assistance of a reliable website, which is where professional web creation services come in.
Essentially, the difference between web development and website design is that the designer in website design, designs the user interface of the website. On the other side, web designers work with web developers to incorporate web design into the web development process.
Unlike the design of your website, which may either make or ruin your business, the website development process defines the functionality, applicability, and general functioning of your website. When it comes to your target audience's perception of your business or organization, it may make a significant difference in whether or not they become consumers.

VIDEO CONFERENCING AND BUSINESS PROCESS

Video conferencing can be beneficial for businesses, but only when it is utilized effectively. While some video platforms and digital tools may seem simple or intuitive to use, business leaders shouldn't make assumptions. Holding training sessions will ensure employees are aware of the multitude of features available to them within these platforms and how to best use them. For example, many individuals are utilizing tools like Zoom but are not aware of virtual backgrounds which can help to block out distractions.
Lighting and sound quality can also play significant roles in ensuring employees can effectively communicate and avoid distractions. Sometimes setting up the calls themselves, ensuring participants have the right links to join, poor audio quality and other elements can steal time away from actually discussing business matters. These are all issues which can be easily troubleshooted with both education and practice.
Business leaders would also be wise to equip their employees with strong Internet connections. Cutting in and out of calls with clients is far from professional or ideal.
Video conferencing has helped business processes in terms of Saving Time and Money.
Consider for a moment the costs associated with a traditional face-to-face meeting. For a meeting that participants must travel to attend, costs can add up quickly.
Even in-office meetings can come with an array of costs, including the paid time employees spend setting up the meeting and waiting for latecomers to arrive. It Brings Remote Workers and Telecommuters Together thereby sustaining good organizational communication.
And it also Increases Efficiency and Productivity. The combined effect of many of the advantages of video conferencing—such as less time and money wasted, increased personal connection and a lack of travel—is a greater level of efficiency and productivity.
After all, if attendees are spending the bulk of their time actually participating in a meeting rather than preparing for it, traveling to it or waiting for other participants to arrive, it makes sense that efficiency and productivity will go up.

SOCIAL MEDIA AND BUSINESS PROCESS

Social media can help you engage with your customers and find out what people are saying about your business. You can also use social media for advertising, promotional giveaways and mobile applications. Social media has help businesses in attracting customers, get customer feedback and build customer loyalty, increase your market reach, including international markets, do market research and reduce marketing costs , increase revenue by building customer networks and advertising develop your brand, exchange ideas to improve the way you do business recruit skilled staff, for example through job networking sites like LinkedIn ,increase traffic to your website and improve its search engine ranking and keep an eye on your competitors.

THEORITICAL FRAMEWORK

TECHNOLOGY ACCEPTANCE MODEL - FRED DAVIS (1989)

The theory was Propounded by Fred Davis in his doctorate proposal in 1989.
The technology acceptance model (TAM) is an information systems theory that models how users come to accept and use a technology.
The actual system use is the end-point where people use the technology. Behavioral intention is a factor that leads people to use the technology. The behavioral intention (BI) is influenced by the attitude (A) which is the general impression of the technology.
The model suggests that when users are presented with a new technology, a number of factors influence their decision about how and when they will use it, notably:

a. **Perceived usefulness (PU) –** This was defined by Fred Davis as "the degree to which a person believes that using a particular system would enhance their job performance". It means whether or not someone perceives that technology to be useful for what they want to do.
b. **Perceived ease-of-use (PEOU) –** Davis defined this as "the degree to which a person believes that using a particular system would be free from effort" (Davis 1989). If the technology is easy to use, then the barriers conquered. If it's not easy to use and the interface is complicated, no one has a positive attitude towards it.

External variables such as social influence are an important factor to determine the attitude. When these things (TAM) are in place, people will have the attitude and intention to use the technology. However, the perception may change depending on age and gender because everyone is different. The TAM has been continuously studied and expanded—the two major upgrades being the TAM 2 (Venkatesh& Davis 2000 &Venkatesh 2000) and the unified theory of acceptance and use of technology (or UTAUT, Venkatesh et al. 2003). A TAM 3 has also been proposed in the context of e-commerce with an inclusion of the effects of trust and perceived risk on system use (Venkatesh&Bala 2008).
Existing empirical findings on TAM are not consistent and conclusive (Moore& Benbasat, 1991). For instance, some studies indicated that PEOU has no signif-icant impact on TA, while others found that such an impact is significant (Hendrickson& Collins, 1996; Subramanian, 1994;Venkatesh & Davis, 1996). Many studies found that the impact of PEOU on PU is stronger than that of PEOU on TA, whereas others found a much larger effect of PEOU on TA than PU (Lim, 2001). More per-plexing is the fact that even in the same study, when the subjects were tested with different applications, PEOU was nega-tively related to TA in some cases, but pos-itively in others (Adams, Nelson & Todd,1992). With regard to the divergent findings, many possible explanations have been pro-vided. However, they tend to be qualita-tive and subjective. What is needed, we believe, is to integrate these findings and generate a quantitative and objective synthesis.

CONCLUSION

Digital Information and Communication Technology (ICT) connectivity is very extensive in modern businesses regardless of its size. With respect to all forms of technologies usage in today's business environment, the use of ICT helps reduce cost, improve productivity, improves business

performance, improves profitability of businesses, reduces corruption by helping keep accurate records and also makes transaction easy.

RECOMMENDATIONS

The study thus recommended that

1. The use of Digital ICT should be embedded in all businesses to help enhance and improve productivity.
2. Managers and business owners should trained staff towards learning new Digital ICT tools
3. There should be digital proficiency in ICT to encourage Employee effectiveness and efficiency
4. Digital ICT should be encouraged in every business to enable communication around the world easier.

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