

Dark Patterns in Online Marketing and Electronic Commerce: Re-Contextualising the Concept of Illiteracy

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Abstract— The traditional construct of illiteracy as the inability to read, write and apply computational skills in daily living has been re-defined by the rapid proliferation of e-commerce and the associated skills which has significantly modernised and shifted consumers' operational base to a highly digitalised databases, platforms and applications. This shift is complicated by the use of captivating, sophisticated and deceptive promotional user interfaces by online shops and platforms, designed to manipulate consumers' decisions making towards often unintended purchases. This study critiqued the traditional definition of illiteracy for failure to capture the vulnerable population of functionally digital illiterates. Considering the hardship and vulnerability state occasioned by this, the study proposes a re-contextualisation of the concept of illiteracy to include digital illiteracy. The method of research employed in achieving this purpose is purely doctrinal wherein data in its original forms are examined, collected and analysed. The findings reveal that published work in illiteracy as an aspect of vulnerability excludes digital illiteracy in spite of the exploitative patterns of e-commerce and online shopping dark patterns. The study recommends a contextualisation of illiteracy to include digital illiteracy as well as encapsulating same in relevant legal and regulatory frameworks.

Keywords: Online Shopping; E-Commerce; Digital Illiterate; Vulnerability; Dark Patterns; Caveat Emptor.

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INTRODUCTION

Electronic commerce (e-commerce) in the current 21st Century has witnessed a positive surge and acceptance as a global means of buying and selling of goods and services (Gupta et al., 2023). Increased digital transformation of the global space and the associated convenience coupled with ease of access offered by e-commerce and associated transactions contribute to the spread and wide acceptance of the system as daily means of transaction (Azam & Ansari, 2024). E-commerce has enjoyed rapid evolution and introduction of innovative measures towards increased service delivery and customer satisfaction. Prominent among these innovations is the shift to online platforms and applications (Pierson, 2021) based transactions in the post COVID-19 period, offering consumers the opportunity to initiate and conclude commercial transactions without a necessary physical contact with the sellers.

This ensures a better, more efficient, convenient and easier access to goods and services of various forms and brands (Zangana et al., 2024). The combined positive impact of e-commerce and digitalisation is felt globally including Nigeria and other developing countries (Timothy et al., 2024). In Nigeria for instance, the impact of e-commerce and digitalisation has permeated different areas of human life and endeavour including the banking sector in the form of mobile and electronic banking; and digital payment systems (Onikoyi et al., 2022), retail shopping (Nagarjuna & Izhar, 2024) among others.

The numerous benefits of e-commerce notwithstanding, electronically conducted transactions and the digital market, place digital illiterate persons in increasingly numerous challenges owing to their peculiar vulnerabilities centered around inability to read and understand the basic digital signs and codes used in communication and transactions in e-commerce (Yang et al., 2025) and the digital space. In traditional consumer protection studies, vulnerability is used to describe and conceptualize the peculiar and disadvantaged situations of persons caused by their environment (Bendeke, 2023), age (Schroder-Butterfill & Marianti, 2006), disability (Bah, 2025), poverty (Adepoju et al., n.d.), illiteracy (Maddox, 2024) among others. The right of illiterate persons in traditional commercial transactions has provoked several discussions and debates over time (Prasad et al., 2023). Accordingly, legal and regulatory frameworks at different levels have been channeled towards protecting the right of illiterates in the commercial transactions and contracts (Prasad et al., 2023) with specific provisions on the need to read and interpret contents of commercial contracts (Prasad et al., 2023), provisions on jurat (Prasad et al., 2023), as well as provisions on the need to obtain an informed and freely donated consent from illiterate persons in contractual agreements (Prasad et al., 2023).

However, digitalization has constituted a form of barrier to a considerable number of human population whose illiteracy arise from the peculiarities associated

with technology and digital life as the major e-commerce tool. The nature of e-commerce and online transactions is such that interactions take place in highly automated and technologically driven platforms and applications designed to accept and respond to click, browse and other electronically generated formula and algorithm designed on a presumed digital literacy and technological competence of users (Stankov, 2023). This creates a peculiar form of illiteracy-digital and technological illiteracy, a form of functional illiteracy not necessarily based on lack of education or skill, but woven around the inability to efficiently understand and navigate the tools and technology of the internet and the digital space. Based on the presumptions of competence by the developers of the e-commerce platforms, traditional illiterate, digital illiterate, and technological incompetent persons encounter hardships in navigating these platforms thereby infringing on their economic rights and expanding their vulnerability to exploitation considering that they are forced to rely on third parties thereby broadening the gap and possibility of exploitation, misinformation, identity theft, data breach and third party unauthorized access- the major menaces in electronic commerce (Albshaier et al., 2024).

The transformation from traditional commerce to digitalized electronic commerce characterized in its wide acceptance calls for a re-examination of the concept of illiteracy as an aspect of vulnerability. Digitally illiterate persons are continuously left vulnerable to economic exploitation and other digital related menaces. This study therefore seeks a rethink of the concept of illiteracy as an aspect of vulnerability beyond the conventional categories of persons deficient in skills and knowledge, to include functional-digital and technological illiteracy related barriers by attempting some research questions such as whether digital illiterate persons face challenges in online commerce; the extent of protection provided for the digital illiterate persons in the existing legal and policy frameworks on online commerce; the impact of social exclusion to equality and justice. It is in rethinking illiteracy to accommodate digital and technological illiterates as done in this study that the scope of vulnerability particularly as a result of functional digital illiteracy can be re-conceptualised.

In order to achieve its objective, this study analysed the obstacles and operational barriers often faced by illiterate persons in online commerce, examined and evaluated the adequacy of the applicable relevant laws in this area and proffer policy and technological recommendations for digital inclusion using the doctrinal research method. Accordingly, both primary and secondary source materials are examined and utilized. These are source materials such as statutes, case laws, juristic commentaries, periodicals, journal articles and online materials.

CONCEPTUAL CLARIFICATIONS

Digital Illiteracy

The concept of illiteracy describes a situation where a person cannot with understanding, read or write in his everyday life (Egbonu, n.d.). Similarly, it is used to refer to a person with little or no education and unable to read or write (Hornby, 1995; S.C.O.A. Zaria v. Okon, 1959). The ability to read and write is an important aspect of communication in human life. It controls development, social life and inclusivity considering that it is capable of increasing employability and productivity (Haderlie & Clark, 2017). In the case of *Otitoju v. Governor of Ondo State* (1994), the Supreme Court defines an illiterate as someone unable to read and write with understanding in the language of a transaction executed. This definition by the Supreme Court reinforces illiteracy as a relative term in contract language. In spite of the seeming wide spread of education, the global level of illiteracy is alarmingly high especially among the adult population. A (UNESCO) study in 2013 estimates the global illiterate level among adults at 774 million with about 98 percent of this spread in the developing countries (Maddox, 2024).

Illiteracy results in negative effect on health of the affected population considering the associated inability to understand and communicate perceived risks and its level of damage when it eventually strike. The need to act promptly towards avoiding risk is often useless to illiterate persons who cannot understand the warning messages communicated and displayed on written and print media including leaflets, newspapers, billboards, and informational booklets. This supports the reasoning of Thengal (2013) who maintained that illiteracy is a curse to humanity considering that the socio-economic strength of a nation depends on the educational strength of its population. The developed countries of the world are not immuned from illiteracy and its associated vices. It has been argued that even countries with high literacy rate such as the United States of America harbour high level of illiterate population (Harman, 1970).

Traditionally, the availability of formal education removes illiteracy. However, there are instances where persons with formal education can be illiterates functionally. Functional illiteracy means that a person despite possessing the relevant reading and writing skills, cannot use the skills so gathered to develop himself or his community (Vágvölgyi et al., 2016). In other words, functional illiteracy can be described as the inability of a literate person to use their acquired reading and writing skills for his good and benefit of his community. This could manifest in the inability to fit into the new trend of digitalized way of doing things characterized with the mastery in digital and computerized platforms and electronic devices. A study conducted by Baskakova and Soboleva (2019) revealed that about one third of the adult population in Russia is at risk of functional illiteracy. Functional illiteracy especially as it applies to the use of

technologically built and digital devices can present in the inability to navigate a user interface (UI) or understand a checkout process.

Digitalization and shift to digital technology has changed the mode of transaction in the contemporary world (Fernando & Jain, 2022). This shift affects the level of knowledge of both students and teachers considering that a teacher can only impact knowledge based on his wealth of it. However, in situations where the teacher and the learners are equally impacted, the level of illiteracy continues to surge as the indices of literacy dips (Fernando & Jain, 2022). A form of functional illiteracy currently experienced by many as a result of digitalization is digital illiteracy (Lamia, 2024). It is maintained that the effect of digital illiteracy traverses and impacts on different categories of human population ranging from the young and the old, as well as the educated and uneducated to the extent that the so called digital natives sometimes suffer its negative impact in the same magnitude as the digital immigrants (Della Ventura, 2020). There is no gainsaying the fact that African countries and population are more impacted by digital illiteracy considering that many African nations are yet to fully embrace and utilize the new and evolving digital life in spite of the numerous developments

and innovations in technology (Modjadji, 2025). The impact of digital illiteracy is further felt from the aspect of digital divide characterized by the difference and the inequality between the haves and the have nots (Modjadji, 2025). In other words, it suffices to say that a large population of most societies are still disadvantaged based on their inability to explore the changes going on in the digital world. A key feature of the disadvantage suffered by persons that are digitally illiterate spans through critical situations such as the inability to recognise scams, data privacy risks or predatory algorithms that eventually leads to serious economic loss to the affected victim and the society at large. In understanding the adverse effect of digital illiteracy, it has been argued that there is an urgent need to formulate policies and frameworks basically geared at mandating service providers to put in place, secured, easy to use, internet and web access friendly interfaces for the digitally illiterates (Datta et al., 2018).

Vulnerability in the Context of Digital Illiteracy

The term vulnerability is a concept the understanding of which varies with the context where it is used (Virokannas et al., 2020). It is a concept susceptible to varying conceptualization based on the context of its usage. Basically the various contexts where it has been used to define a sect or set of disadvantaged population include environmental sciences and climate change (Adger, 2006), social sciences and medicine (Delor & Hubert, 2000), poverty and associated risk (Anderson & Hatton, 2000) this notwithstanding, vulnerability can be defined as an internal risk factor of a population that is exposed and affected by hazards and leave a remarkable impact, usually

negative (Paul, 2013). The early mention and use of the term 'vulnerability' is associated with environmental sciences where it is used to describe the impact of natural disasters on the environment and affected persons (Paul, 2013). The major natural disasters subjecting the impacted persons to vulnerable state are phenomena like drought, fire outbreaks, earthquakes and flood. Flooding constitutes a major natural disasters associated with excess rain, and the outcome of which place the affected population in a vulnerable situation requiring external intervention for survival.

Residents of many continents of the world including Africa have been made vulnerable by flood risks. The nature and scale of this risk leads to vulnerability and exposure of the people and their physical environment (Salami et al., 2017). In the field of medicine and health sciences, vulnerability is associated with health challenges and health related disasters and diseases outbreak capable of affecting a vast population, leading to death and rendering the affected persons incapable while being so affected (Hutcheon & Lashewicz, 2014). Vulnerability in this sense recognizes that susceptibility to insecurity is a part of human nature and existence (Turner, 2006). Another important context in which the concept of vulnerability has been applied is age. Studies have shown that the elderly and the aged are more susceptible to health and environmental factor and impact which places them in a disadvantaged vulnerable state to sicknesses of various kinds and degrees (Amancio & Cunha, 2019). Earlier, Schroder-Butterfill and Marianti (2006) and Díaz et al. (2020) both agreed that old age has adverse effects to the natural ability to respond to treatments especially among the homeless and the childless.

Generally, the outcome or impact concept of vulnerability is tied to the ontological and existential dimensions where injustice and insecurity constitute the primary architectural leanings of inequality, placing some in more advantageous positions and others in vulnerable, needy position (Pariotti, 2023). Inequality describes the legal and socio-economic perspectives of vulnerability rooted in age, disability, poverty and other contexts and perspectives in which the term has been used. It has been emphasized that vulnerability in whatever form is characterized by discrimination considering that the aged, disabled, illiterate and poor vulnerable population face challenges in accessing the basic necessary facilities available to others as a result of their vulnerability (Zakour & Gillespie, 2013).

A modern form of vulnerability closely associated with the traditional context of vulnerability based on illiteracy is the functional digital illiteracy and exclusion. Digitalization and use of technology in different areas of life has introduced a form of functional and situational illiteracy among people who were not hitherto illiterates in ordinary normal circumstances but for lack of the ability to function efficiently in the digital space given the necessary digital tools and devices (Yap et al., 2021). In the modern world, a lot of human population of various degrees of learning and education

can still fall within vulnerable population as a result of a form of illiteracy centered on their inability to function optimally in the digital world (Pérez-Escolar & Canet, 2023). According to Holmarsdottir (2024) whose work is centered on the behavior of young persons who use the internet, the exposure to the internet place the young adults in a vulnerable state. This however is clearly different from the context in which vulnerability concept as a construct of digitalization is construed in this current research. The current research construes illiteracy in the functional sense particularly as it relates to inability to function efficiently in e-commerce and related contracts and transactions. Although these persons may possess the requisite formal education and ability to read and write, their inability to function efficiently in online contracts renders them functionally incapable and vulnerable. In the case of *P.Z. & Co. Ltd. v. Gusau and Kantoma* (1961), **the court held that** illiteracy applies to the specific language used in a document under consideration, rather than total, absolute illiteracy.

In undertaking a holistic discourse on the concept of vulnerability wrapped around illiteracy as affected by digitalization as done in this present research, a clear distinction must be drawn and established between digital access and digital illiteracy. According to a 2017 study, digital divide centres on the difference between the population of those who do and who do not have access to forms of information and communication technology primarily characterized in computers and the internet (van Dijk, 2017). This divide presents a clear picture of social and information inequality which in turn breeds social exclusion (van Dijk, 2017). In recent century, digital access holds the same and equal value to human population as postal, telephone, education and broadcasting services in the earlier centuries (Turock & Friedrich, 2010). To this end, digital access has been opined to hold an undeniable value as a major tool towards achieving equity, intellectual freedom, intellectual property rights and privacy as well as awareness and advocacy in recent times (Turock & Friedrich, 2010). This point is buttressed by DiMaggio et al.'s (2004) claim that the internet hold the possibility of expanding access to good jobs, better health, create good platforms for political discussion thereby enhancing citizen's direct access and interaction with their government; but a major shortcoming capable of imposing a negative effect to achieving the goals is inequality in internet access (DiMaggio et al., 2004). Thus, digital access can be described as the ability to gain access to information in the digital space also known as the internet using the relevant and available digital resources and facilities. The wake of digitalization in the current 21st century has necessitated a style of living where most information are placed in the digital space for ease of access to all. However, accessibility of information in the digital space requires the support of compactible electronic technology and devices and soft wares without which information of this nature cannot be accessed. These digital access compatible technology and devices are often available and affordable by the rich and well placed in

the society thereby creating a gap between the high and low placed persons which in turn affects digital access.

Digital access and the challenges of accessing the digital space should be differentiated from digital illiteracy. In spite of the fact that both create some form of vulnerability. While the former deals with the inability to access a technological device, the later defines the inability to efficiently access and function around the accessed device. This inability creates a more profound form of digital vulnerability. Digital vulnerability on the other hand refers to consumers who are disadvantaged in the use and understanding of digital skills and formula based on their peculiar situations and characteristics (Galli, 2022). It constitutes a threat to diverse human population considering the challenges posed by it (Scholz, 2017). Digital vulnerability caused by digital illiteracy is functional, situational and structural problem considering that a highly educated, wealthy person can suddenly become a vulnerable consumer / person when faced with the task of navigating a complex e-commerce platforms without prior digital training. Digital vulnerability in e-commerce pose serious problem in many forms considering that a small loophole in login and checkout process may lead to a financial loss (Wang et al., 2020)

The Concept and Nature of Right

The concept of right connotes that all men are born equal in freedom, dignity and rights (Mishra & Singh, 2023). Based on this equality, freedom and dignity that characterize rights, rights can be described as a company of inherent privileges exercisable by man merely for being part of the human race (Mishra & Singh, 2023). Traditionally, the concept of human right has evolved with the evolution of man considering the postulations of natural law theorists on natural rights as embedded in natural law (Forte, 2022). However, human right as a modern concept was made manifest in the League of Nations and United Nations (Antai et al., 2024). A significant exposition of the concept of right of persons as humans and members and part of the human race was made in the Universal Declaration of Human Rights (UDHR) in 1948 (United Nations, 1948). A major provision of the Declaration is that all human beings are born equal thereby emphasizing that no human is superior or inferior to the other by virtue of his race, colour, religious, economic or educational background. In order to fully grasp with the concept of right, the term is examined in its ontological perspectives.

Ontology is a field of study that is used to refer to the science of being or existence. It is rooted in metaphysics, a branch of psychology preoccupied with the study of reality, being or existence (Kazemi, n.d.). In spite of the fact that modern socio-cultural factors have significantly contributed to a shift from the ontological perception of right and its inherent values (Morska, 2022) resulting from the fact of inalienable

right of man rooted in the natural belief that man is privileged to certain right just by mere fact of him being born human has not been eroded (Morska, 2022). Ontological basis of human right is closely related to natural right theory which posit that all humans are entitled to certain fundamental rights by virtue of being humans. Considering this line of thought, it is apt to maintain that human nature is similar in all men. Human nature here refers to the freedom and constant ability to take rational decisions concerning one's affair which in turn, leads to one's happiness and flourishing. Conversely, ontological basis of human right emphasizes that the right to take favourable decisions is rooted in human nature and taking away this right will most likely impinge the nature of man as well as deepen his vulnerability. Factors capable of deepening a person's vulnerability and inability to make favourable choices include poverty, age, physical challenge and illiteracy, or lack of formal education. In the context of this study, a major factor capable of negatively affecting human right to digital and economic right is functional illiteracy in the form of digital illiteracy and inability to function optimally in the digital space. This factor deepens consumers' vulnerability in online and electronic commercial transactions considering that they may resort to coping mechanisms such as limiting their quest and search for information online, or in some instances, rely on often unreliable third parties, thereby compromising their privacy. The operational mechanisms of e-commerce platforms and applications are woven around some dark patterns capable of misleading digital illiterates.

IMPACT OF DARK PATTERNS IN E-COMMERCE

The wide acceptance and adoption of e-commerce has provided numerous opportunities for consumers and suppliers / service providers alike. To consumers, e-commerce has expanded the opportunity to easily access goods and services at a comparative and economic effective price. In the same vein, it offer suppliers and service providers the opportunity of not only reaching numerous consumers within a limited period of time, but also provide platforms for increased sales (Pratama et al., 2024). E-commerce has impacted different aspects of human life ranging from communication, banking, buying and selling of goods and services among others. Leveraging the technological devices such as telephones and computers of various forms powered by the internet, the task of creating awareness about the existence of goods and services in the intending consumers has drastically reduced. Consumers also enjoy the numerous services offered by e-commerce considering the ease with which goods and services can be sourced for and purchased without leaving the comfort of ones home in many occasions.

This notwithstanding, information accessibility in the internet as well as digital illiteracy stand out as major challenge bedeviling consumers smooth access to

information in the online space. A consumer who does not have the necessary required and compatible digital devices may not access the needed information for the intended transaction. Another aspect of the problem is the inability to process information presented about a desired product after gaining access into devices and platforms; or even the inability to log out after completing an exercise online.

The nature and mode of operation in physical stores is such that a consumer can personally and physically visit a store, inspect goods that are displayed for sale, and where necessary interact with sellers or their representatives so as to obtain needed information about the nature, price, quality, mode of usage and the availability of the particular good before making a decision on whether or not to purchase. This enables the consumer the opportunity of physically inspecting products displayed for sale, ask questions and obtain information about the product usage, make an informed choices about products of choice after comparing different similar products, access the state and condition of the product through physical examination, ask and obtain information about the working mechanism, the durability and the warranty as soon as possible. Physical and in-store shops offer consumers a wider interactive opportunities about the nature of products at a more convenient atmosphere thereby deepening consumers satisfaction compared to e-commerce online style of shopping which has proven to be less satisfactory considering the little or scanty information about products, the delayed period of receiving feedback on product information, and the speed of shopping process which do not take the level of a consumer's competence and compatibility to the process into consideration (Burke, 2002).

In spite of the seeming advantage and preference of physical shopping to online shopping especially in the area of information sourcing and availability, power between buyers and sellers is imbalanced and tilts towards sellers' favour considering the ability of sellers to persuade buyers towards choice making when faced with similar products using verbal and non-verbal communication skills (Cuilan et al., 2024). Vendors in a bid to make sales, apply suitable communication skills to pass information and ideas capable of swaying consumer to make choices (Fhitri et al., 2025). This imbalance becomes widened in e-commerce where vendors employ the instrumentality of various technological tools and digital marketing strategies to influence consumers' behavior towards making choices which are often unplanned and spontaneous. These include stimulus organism response method which employ strategies such as price promotion, fake promotion time limit, streamer consumer interactions and consumer-consumer interactions / reviews purposely devised to influence consumers to make impulsive decisions and purchases in a bid to beat the limited time or benefit from the promotions before it terminates (Kaniati et al., 2024).

This often creates an artificial scarcity and false sense of urgency sometimes overriding and swaying buyer's rational thinking and decision making thereby eliciting

an impulsive buying which may later be regretted (Runge et al., 2023). Online vendors sometimes use the tactics of displaying prices at the last stage of transaction. A consumer comes across an advertisement concerning a product in a platform say facebook, scrolls through the platform for the price but is directed to another page where the price is eventually displayed after the buyer has been taken through series of further advertisements and marketing promotional speeches and reviews capable of persuading them to buy irrespective of whether or not the displayed price is favourable. The earlier series of advertisements and promotions most successfully interferes with the buyer's neutrality in decision making and choice. Others are social proof and positive review strategies wherein vendors put on display positive and often doctored and censored reviews about a product while editing the negative reviews. This strategy is designed to prevail, manipulate and hijack buyers' neutrality and rational reasoning and decision making towards placing orders that are often impulsive and needless in the end.

The effect of these strategies, tools and interfaces has proven to be more effective on digital illiterates. Some interfaces such as the Universal Link System are designed to manipulate consumers' cognitive ability and heuristics (Babaei & Vassileva, 2025). The effect of this mechanism may not adversely impact digital literate users' cognitive, however, the digitally illiterate users lack the requisite digital knowledge to differentiate between genuine and deceptive prompts. Visual interference and false hierarchies is another technique designed to manipulate digitally illiterate consumers. E-commerce vendors utilize visual depictions over texts and textual descriptions. This manifests through highlighting 'accept' 'subscribe' and 'order now' buttons while hiding 'decline', 'skip' 'cancel' or 'no thanks' buttons with the intention of swaying the consumer to click on the 'accept' or subscribe 'button' that is readily visible. In some instances, several related advertisements are littered around a computer operation to the extent that it can be said that the operation is hijacked by the advertisements. Prominent among the often hijacked operations are downloading and accessing an information in a Portable Document Format (PDF). Most times, a single operation of this nature comes with triple layers of advertisement and trade promotion which does not allow the original operation to run and complete until the series advertisement concludes. Even at the conclusion of these advertisements which has been termed unsolicited (Ohwomeregwa, 2026), the 'close' and 'cancel' buttons are usually displayed in an almost invisible small printed manner to the extent that even literate users find it difficult to identify the icons. These form of advertisements and trade promotions to a digitally aware and literate user poses little or no challenge; however, a digital illiterate user may click on the more pronounced subscribed buttons irrespective of the fact that there was not prior intention to purchase goods of that nature. These dark patterns of promotion and marketing in electronic commerce weaponise a lack of digital literacy

against consumers thereby deepening users' vulnerability especially the digital illiterate ones.

PROTECTION OF CONSUMERS IN ONLINE SPACE

The Caveat Emptor Principle

In traditional contract and commercial law, the caveat emptor principle which places due diligence obligations on buyers has formed a fundamental principle for decades. The origin of the principle which etymologically means 'buyer beware' can be traced to the early English Common Law particularly the court's decision in the case of *Chandler v. Lopus* (1603) where the court held that a seller was not liable for falsely claiming that a stone was a bezor stone in so far as the seller did not provide an express warranty for that claim. The implication of the principle is to place an obligation on the buyer to inspect goods displayed for sale before purchase. Based on this principle, a seller is not liable for any defect in product after sales because, it is presumed that buyers and sellers possess equal rights in the market and based on this equality, buyers have the right and opportunity to inspect goods before payment; as well as read and examine contract terms before signing. Where a buyer decides not to exercise this right and a defective product is delivered, or an unfair contract term is executed, then the seller cannot be held responsible for buyer's inadvertence. In online sales and e-commerce generally, the implication of this principle is that the buyer is responsible for thoroughly examining goods displayed for sale as well as meticulously read and understand contract terms before engaging.

Historically, the principle applies more efficiently in physical sales where the buyers and sellers have the opportunity of physical interaction and information sharing (Adnan et al., 2021). However, the current trend in commercial transactions revolve around the digital space where sale of goods and services online has become the order of the day, embraced by most human population and countries including Nigeria especially in the post COVID-19 period. The commercial sector currently witnesses numerous online shopping platforms that specialize in sale of different varieties of goods and services including Jumia, Temu, Shopify, Shein, among others (Shukla & Nigam, 2018). The small and medium term enterprises also utilize the services and opportunities of online platforms including facebook, Whatsapp, Instagram, Tiktok among others in creating awareness concerning availability of their products and services (Wardati & Mahendrawathi, 2019).

Online shopping and purchases are offour major stages. The last three stages are interaction, transaction and fulfilment (Chen & Chang, 2003). The first stage as recognized byAkalamkam and Mitra (2018) is the information stage. At the information stage, consumers browse and search online in sellers' platforms and applications for the particular product or similar ones before settling for a particular product of choice. The

second stage involves interaction with marketers in the form of negotiation and further questions and information about the product such as the price. It is at this stage that the price is fixed and consumers place orders afterwards. Marketers usually provide options of paying through direct online transfers or through the use of credit cards before delivery is made. Some marketers offer payment on delivery services where the ordered product is delivered to the buyer who pays at the point of receipt. Ordinarily, seller's liability to the buyer in respect of the transaction terminates with the delivery of the product and a confirmation from the buyer that they have taken delivery of same.

An examination of the nature of online purchase process reveals that sellers and buyers may be in different locations, sometimes countries and even continents apart, unlike physical sales where buyers and sellers are opportune to meet and interact physically, thereby giving buyers the opportunity to carefully select and make their choice as well as conduct a thorough inspection of the selected product. Thus, the principle of caveat emptor is more suitable in physical sales.

In online sales, the opportunities for buyers and sellers to physically interact, the opportunity to choose and inspect the already chosen product is limited. Online sales place consumers on a weak bargaining pedestal compared to the sellers considering that consumers are left with the only option-relying on the information displayed by the sellers on the platform where sales take place thereby leading to an information imbalance. In circumstance of this nature, consumers merely rely on the information provided by the seller during advertisements and product promotions. A major problem associated with this type of one-sided information is that they are often inaccurate, exaggerated and censored with the intention to persuade buyers to form the intention to buy. This study agrees with the opinion that in online sales, consumers rarely have the opportunity to inspect a product thereby placing consumers in a weaker bargaining position compared to physical sales (Li et al., 2023). Another problem associated with making verbose and ambiguous statements in advertisement of a product is that goods that are eventually delivered to the consumer may possess a different characteristic feature compared to the advertised and purchased (Kariyawasam & Wigley, 2017).

Apart from variations in the appearance of the advertised goods and those eventually delivered, instances abound where purchased goods are damaged in the delivery process. Having purchased or indicated interest in a particular goods, and having fulfilled the requisite condition for its delivery, the duty to ensure that the goods are delivered in safe and sound condition does not rest on the consumer.

However, consumers' complaints about defects or damages in goods delivered are usually shifted to third party carriers (Büyüksagis, 2022). This goes to show that applying the principle of caveat emptor to online sales works hardship against

consumers who have no power to ensure that goods purchased online conforms to the specified and displayed purchase requirements.

Difference in educational background is another reason that negates the express application of the principle of caveat emptor to online sale of goods. To the educated and literate ones, application of the principle may pose little or no challenge considering their requisite knowledge and ability to read and understand formal languages. However, applying this principle to illiterate persons may suffer some setback and failure considering the fact that illiterate persons do not possess the requisite reading and understanding ability. A major category of illiterate persons are the functional digital illiterates who may possess a relevant knowledge of reading and writing but does not have the ability and knowledge to navigate through the processes of digital interactions. Applying the principle of caveat emptor to online sales involving digitally illiterate persons proves even worse than the conventional illiterates. The reason for this is that illiterates are protected in commercial transactions using different statutes applicable in different jurisdictions, however, the digital illiterate consumers, a relatively new category of illiteracy has none of these protections thereby standing the chance of higher vulnerability.

PROVIDER/SUPPLIER DUTY OF CARE TO DIGITAL ILLITERATES

In electronic commerce generally, provider/supplier duty of care refers to the legal, ethical and moral responsibility of suppliers of goods and service providers in the online space to take steps reasonable enough in order to ensure adequate protection of consumers of their products and services. The rationale behind this requirement to take care is based on the nature of e-commerce which practically limits the right and opportunity for consumers to inspect and examine products before payment and delivery. Considering this limitation, legal frameworks are currently channeled towards protecting consumers and subscribers of online goods and services respectively. For instance, the Digital Services Act (DSA) which operates in the European Union countries such as France and Germany mandate suppliers and service providers operating in the e-commerce environment to exercise duty of care in favour of their customers and subscribers by ensuring a safer, transparent and accountable digital marketplace (Lamik, n.d.; Regulation (EU) 2022/2065, 2022). In Nigeria, the Federal Competition and Consumer Protection Act (FCCPA) make ample provisions on the duty of care of suppliers and service providers to consumers especially as it applies to ensuring safety of goods and services. The Act provides that goods and services made available to consumers must be safe for its ordinary or intended use (Federal Competition and Consumer Protection Act, 2018, § 131). To this extent, it is a mandatory requirement on suppliers of goods and services to ensure that hazardous goods which fact of hazard was unknown as at the time of display be recalled

immediately the supplier becomes aware of the hazard (Federal Competition and Consumer Protection Act, 2018, § 135). As it applies to authenticity and disclosure, the Act prohibits suppliers, providers, businesses and undertakings generally from making, promoting or providing misleading, deceptive, erroneous or fraudulent misrepresentations about their products or services (Federal Competition and Consumer Protection Act, 2018, § 123). The duty of suppliers to provide and disclose information about reconstituted, reconditioned or second-hand goods is also provided for in the Act (Federal Competition and Consumer Protection Act, 2018, § 117). These are some of the ways consumers including consumers of online goods and services are protected and secured using legal frameworks. Illiterate consumers are another category of consumers that requires protection in online contracts and transactions. Generally, illiterate persons' rights in commercial transactions including e-commerce are usually protected in relevant statutes for that purpose. However, the functional illiterates, particularly the digital illiterates are left with no specific protection considering their vulnerability and susceptibility to numerous online vices.

CONCLUSIONS

A major category of consumers requiring adequate protection are the digital illiterates. These are persons who are ordinary literate, possessing the ability to read and understand formal languages, but fall within the category of persons referred to as functional illiterates by reason of their inability to navigate the digital space (Chishti et al., 2024). These persons encounter problem in the various stages of online shopping. In the information stage which is the first stage of online shopping, digital illiterate consumers either bear the brunt of restricted information or are left with the option of depending wholly on the digital illiterate ones thereby creating room for third party interference (Jayasundara et al., 2020). The bane of this research therefore is to push for proper recognition of digital illiterate person's vulnerability in e-commerce in relevant statutes as well as make a case for suppliers, providers and platforms to be held responsible for the duty of care in ensuring that its interface provide for and protect digital illiterate

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