INFLUENCE OF AGE ON EMPLOYEES' KNOWLEDGE OF, ATTITUDE TOWARDS AND PERCEPTION OF SMART TECHNOLOGY IN THE WORKPLACE

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ABSTRACT

The study examined the influence of age on employees' knowledge of, attitude towards and perception of smart technology in the workplace. Data were collected using structured copies of questionnaire and the data were analyzed using descriptive statistic and inferential statistics. Specifically, T-test for independent measures was the statistical tool used for the analysis of the data with the utilization of the Statistical Package for Social Sciences (SPSS) version 21.0 The results showed that age did not significantly influence employees' attitude towards and perception of smart technology in the workplace {t (277) = -0.871, P> .05} and {t (277) = - 0.114, P> .05} respectively. But age significantly influenced knowledge of smart technology in the workplace {t (277) = -2.293, P< .05}. It was concluded that age did not significantly influence employee's attitude towards and perception of smart technology but age significantly influenced knowledge of smart technology in the workplace. Therefore, it was recommended that the work organizations should train and re-train their employees, especially the older employees in order to integrate them into the digital era and equip them adequately in order to make them have favourable knowledge, attitude towards and perception of smart technology.

Keywords: Age, Knowledge, Attitude Towards, Perception, Smart Technology, Workplace, Employees

INTRODUCTION

As the Industrial Age has metamorphosed into the Digital Age, the technology element of the smart workplace has developed even more rapidly (Ulukan, 2020). While smart Office' term has been commonly used by the academic world and industry, 'Digital Workplace' and 'Smart Workplace' concept or terminology has also started being used for describing 'digitally and technologically enhanced workplaces (Ulukan, 2020). This is mainly due to the breakthrough developments in the wireless and paperless communication technologies, digitalization of documents and processes, and developments in collaboration tools and technologies such as, high tech audio-visual tools, internet of things as well as intelligent systems & equipment such as Smart Building Management Systems, that control the building in a way to provide a functional and comfortable office environment, which in turn improves the employee experience (Ulukan, 2020). Utilization of these smart technological tools and equipment, together with the smart workplace principles led to the design of workplaces being transformed into digital or smart workplaces (Ulukan ,2020)

Ulukan (2020) further describe smart workplace as a term, typically used to describe the workplace with a set of tools that are transforming towards a digital environment. Deloitte (2014) sees the Smart Workplace as - The digital workplace is defined as "all of the technologies that employees use to get work done in today's workplace, including both those that are currently in use and those that are yet to be deployed. Following this definition, they refer to tools &technologies such as HR and business applications, instant messaging through the use of electronic bulletin board and emails, social media and virtual meeting tools (Deloitte, 2014).

Roberts, (2015), broadens the definition of Smart Workplace to include the word "system" in the description, it is possible to describe a "holistic set of tools, platforms, and settings for work, delivering in a coherent, usable, and productive manner." In several research studies, authors such as (Bakar, Williams & Schubert 2018) generally focused on the technological part of the digital workplace as some of the technology companies and software developers are using to describe their products or services such as IBM, Microsoft and many others (IBM, 2020). Therefore, Smart Workplace term may be confused with technology-based work platforms, products or services, in other words, the software and application-based solutions. Perhaps 'Smart Workplace' would be a better way of describing the technologically enhanced agile offices as it refers to the agility of the physical workplace, efficiency-driven processes and extensive use of smart and highly developed technology (Ulukan, 2020).

Smart technology, according to Bower (2019), is a technology that employs artificial intelligence, machine learning, and huge data processing to

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bring cognitive knowledge to previously inanimate objects. To look at it another way, according to Poslad (2009), smart technology is defined as electronic equipment that can communicate with other devices or networks via wireless protocols such as Bluetooth, Zigbee (wireless fidelity), Wi-Fi (wireless fidelity), LiFi (low-power wireless), 3G (third generation), and 4G networks, and that can operate interactively and independently to a certain degree. The Internet of Things is made up of all modern artefacts that have been made smart with computational power and connected to the Internet (Poslad, 2009). They come in a number of varieties because they typically include a hardware layer (containing radio broadcasting indications), In addition to a network layer (which allows devices to communicate with one another), there is an application layer (that also allows end-user orders to be received) (Poslad, 2009).

However, regardless of which terminology is used, in a broader context, a smart workplace describes not only some high-tech tools or systems, but a holistic perception of flexible, adaptable, technologically enhanced work environments and processes that promotes productivity, collaboration and innovation (Ulukan, 2020).

While the workplace and smart technology were evolving and transforming into a new model, these developments have encouraged many businesses to start harnessing the benefits of smart workplaces. (Esses, 1998). Gartner's research one of the earliest comprehensive studies in this area pointed out that some of the multinational companies have already started transforming their offices in the late 1990s and early 2000s (Endesa, 2008). Smart technologies are now present in practically every facet of life, however they are frequently overlooked and accepted as normal by users. Recently, businesses have begun to integrate smart technology with the goal of improving customer experience and increasing efficiency (Endesa, 2008).

Smart technology is increasingly being used in a variety of service industries since it allows businesses to track customers, enhance productivity, and evaluate consumer behavior (Nachtwey, 2016). It appears that integrating smart tools in the workplace is now a trend, but it is always worth considering if those tools just act smart when it comes to their usage of new technology, or unless they also think smart from the standpoint of a possible user (Judge, 2009).

Technological assets are rapidly encouraging enterprises' absorptive ability, allowing them to accomplish greater goals on their own through organizational process. (Haddock &Zanna1993).This newfound ability to absorb information allows the company to develop software products that support the integration of information, attitudes, and perceptions across all of the company's processes, allowing it to be more adaptable in its organizational structure while also fostering innovation across the organization to improve its overall performance (Pushpa, 2019).

The use of technology was integrated into the manufacturing process. A company's ability to adapt to new technology has become essential (Nachtwey, 2016). When it comes to determining an organization's success, more than just profit is at stake. What a worker thinks of his superior can be inferred from his behavior (MacDonald, 2006).Organizational behavior and the adoption of new technology are both affected by factors such as Workplace culture, connections with managers and coworkers, job happiness, leadership styles, and incentive systems are all important factors to consider when hiring. (Pushpa, 2019). The employee performance is influenced by technology in the organization transforming the future of work and opening the door to a new generation of smart workplace (Nachtwey, 2016).

However, the place of knowledge, attitude and perception in understanding smart technology cannot be underestimated. People's understandings of objects, concepts, beliefs, procedures, and the way things are done in the real world are referred to as knowledge (Ryle, 1949). In more specialized cases, it's known as expertise or know-how. When it comes to knowledge, Ryle (1949) made a distinction between the two. Knowing is how to do something and knowing how is to store information in one's head, these are two different things. Knowing derives from doing it yourself and teaching others how to do it as well. The greatest way to learn is to try a number of different things, see what works and what doesn't, reflect on what you've learned, and try again. (Ryle, 1949).

Knowledge can be classified as either explicit or tacit, according to Nonaka (1991) and Nonaka and Takeuchi (1995). Explicit knowledge can be formalized and codified; it can be stored in databases, business intranets, and intellectual property portfolios. People's minds include tacit knowledge. It's difficult to express in writing and comes from individual perspective (Nonaka, 1991). It encompasses scientific or technological knowledge, operational know-how, industrial insights, and commercial judgment (Hansen, 1999).

Instead of thinking of knowledge as something that people possess, it is wiser to think of it as something that people perform (Blackler, 1995). There are many kinds of knowledge: explicit and implicit, physical and mental, developing and static, spoken and encoded. Knowledge is varied and intricate,' he continued. Individuals or groups of people, according to Nonaka (1991), possess knowledge. Embodied or embraced knowledge is personalized and embedded, while cultural

knowledge is collective, according to Blackler (1995). Scarborough and Carter (2000) argued that knowledge is transferred among members of a group or community through their collective work experience.

Organizations and people within organizations both have knowledge. Libraries, manuals and presentations as well as databanks are excellent places to find organizational operational and procedural knowledge (Wenger and Snyder, 2000).

As a result of their personal work experiences, people have valuable information (Boxall& Purcell 2000). Even if it is shared with their coworkers or even unofficially, If critical knowledge is retained in the heads of individuals or is transferred to another location if they leave the company, the organization may suffer a loss of competitive advantage (Boxall and Purcell 2000).
Hansen, Nohria, and Tierney (1999). Codification and personalization are two strategies for implementing a knowledge management strategy that have been discovered. Tierney, Hansen, and Nohria (1999), submitted that, when knowledge is systematically codified and stored in databases, it may be accessed and used at any time by anybody within the company, according to this codification technique. An explicit and formalized codification of information can be achieved through the use of people-to-document strategy (Hansen et al, 1999).

As a result, this method is document-based. Knowledge is removed from the individual who created it, separated from that person, and reused for a variety of purposes (Hansen et al 1999). It will be maintained in an electronic repository that will allow a large number of people to search for and access codified knowledge without having to contact the person who originally developed it. (Tierney, 1999)

Knowledge is either explicit or tacit, according to Nonaka (1991) and Nonaka and Takeuchi (1995). It is possible to codify explicit information. It is stored in databases, business intranets, and intellectual property portfolios and is recorded and accessible. People's minds contain tacit knowledge. Nonaka (1991) and Nonaka& Takeuchi (1995) describe it as "tough to define in paper" and "learned via personal experience." It encompasses scientific or technological understanding, resulted, industry insights, and commercial judgment, according to Hansen (1999). The most difficult aspect of knowledge management is converting tacit information to explicit knowledge (Hansen et al, 1999).

Further on other matter influencing factor of smart technology in the workplace is attitude. According to Buunk and Vugt (2008), attitude is a mental concept that is conveyed through a positive or negative judgment of a certain entity. This description is consistent with Roger (1983), who defines it as a long-term organization of an individual's thoughts about an item that predispose an individual his or her actions, which can be classed as "favourable or unfavourable attitude." An individual's overt responses to an object are guided (mediated) by their attitude, which is defined as a learnt implicit reaction that varies in strength (Fishbein, 1967). In Fishbein's view, attitude merely pertains to the appraisal of a notion, and every stimulus elicits a mediating evaluative reaction (Rothmann& Cooper 2008).

According to Allport (1935), Attitude is a mental or neurological disposition that is organized by experience and has a direct or progressing impact on the individual's conduct in relation to all objects and situations with which it is related. On a simple note, attitude can be defined as a state of mind or a predisposition to respond in a particular way as a result of an individual's life experiences and personality traits. The direction of one's attitude is either toward or away from something (Leonfestinger, 2008). An attitude is a fictitious construct that indicates a person's level of like or disliking towards something. A person's attitude can be either positive or bad (Leonfestinger, 2008). Attitude is a mental and emotional respond that is organized via experience and has a dominating influence on a person's response to something (Leonfestinger, 2008).

According to Eagly and Chaiken (1993), an attitude is a psychological inclination expressed by appraising a specific entity with some degree of favorability or disapproval. The assumption that expressing an attitude entails the utterance of an overall evaluation about a stimulus item is implicit in this definition. To put it another way, reporting an attitude is choosing between favouring and disfavouring, accepting and unaccepting, or favoring and disfavouring a specific subject, object, or person (Eagly &Chaiken, 1993). An attitude can be categorized into two types when considered as an evaluative judgment. For starters, attitudes might differ depending on their valence or the direction in which they are expressed. Some people have good attitudes, while others have negative views, and yet others have neutral attitudes. Second, the strength of one's attitude can vary (Eagly & Chaiken, 1993). For example, one individual may feel strongly about a subject, whereas another may feel considerably less strongly about the same subject (Eagly & Chaiken, 1993).

Attitudes, on the other hand, might be viewed of as on in all assessment (e.g., favour–disfavour) of an attitude object (Robertson, 2015). A number of conceptual models of the attitude notion have emerged as a result of this definitional approach. Throughout history, it has been one of the most often used models for understanding attitudes.

(Eagly & Chaiken, 1993; Zanna & Rempel, 1988). An attitude is a summation of an object's emotive, cognitive and behavioral components according to this perspective. Emotional responses to attitude objects are referred to as "affective" responses (Krosnick, 1992). There are many ways in which feelings influence attitudes; the most common is through affective reactions experienced by the individual after exposure to the attitude object. Many people, for example, claim that spiders frighten them (Krosnick, 1992). Poor emotional responses are more likely to result in a negative attitude regarding something (Krosnick, 1992).

Feelings and attitude items can be related in a variety of ways. Classical conditioning has been employed by a number of academics to examine how emotional input and an attitude object might influence a person's attitude. (Lynn, 1992). The cognitive component of attitudes means to believe, ideas, and traits that people identify with a certain item. (Jussim& Lynn 1992). In many circumstances, attitude of a person is essentially determined by weighing the positive and bad aspects of the attitude object. Many different sorts of attitudes are influenced by cognition (Jussim & Lynn 1992).

Attitudes from a behavioral standpoint refer to previous behaviors made in respect to an object of attitude (Fishbein, 1975). If a person recalls signing a petition against the development of a nuclear power station in their area, they may conclude that they have a negative attitude about nuclear power plants. (Fishbein, 1975). Bem came up with the concept of people inferring their views based on their previous acts. According to Bem's (1972) self-perception theory, individuals are not always able to access their thoughts about various objects (1977, Nisbett& Wilson). A person's attitude is more likely to be weak or uncertain, according to Bem (1972). Attitude can also impact strongly held beliefs, but in a different way. According to Festinger (1954), it is possible for people to change their beliefs so that they are more in line with their behaviors. People may persuade themselves that they enjoy multiple tedious chores if they are only paid a tiny sum to tell others that the tasks are fantastic (Festinger & Carlsmith, 1959).

Perception is indeed the process by which people evaluate and arrange stimuli in order to have a meaningful experience in the world (Lindsay & Norman, 1977). When a person is confronted with a scenario or stimuli, they are able to respond. The individual makes sense of the information he or she receives based on prior experiences (Assael, 1995). It is possible that one's impression of reality differs significantly from one's true beliefs (Assael, 1995). Perception is influenced by the degree to which a person is aware of and accepts input. Existing beliefs, attitudes, motivations, and personalities may limit a person's receptivity to new stimuli (Assael, 1995). Emotional anguish can be avoided by selecting stimuli that suit one's immediate needs (perceptual attentiveness). (Williams, 2008).

Through the use of a filter model, Broadbent (1958) attempted to address the issue of perception attentiveness as a result of restricted processing capacity, a person's perceptual system processes just what it believes to be the most important facts when facts are presented through two independent channels (i.e. modalities of delivery such as visual and aural). (Broadbent, 1958). When external input opposes the people's present thoughts, attitudes, motivation, and so on, perception defense develops an inner problem which reduce the quantity of outer input that passes via the perception process. Selective perception is the term for this (Broadbent, 1958). It is possible for an individual to limit his or her ability to process external stimuli by selective interpretation of what he or she sees. (Sherif & Cantril, 1945). Perception can be seen as the psychological process occurring in the brain of people leading to the organization and interpretation of information received from the environment (Williams, 2008).

Smart Technology entails self-monitoring, analysis, and reporting technology (Kietzmann& Kristopher, 2011). To provide cognitive awareness to objects, the internet of things, artificial intelligence, machine learning, and big data all play a role in this technology. (Bower, 2019). Smart devices like sensors are used in this workplace technology to accumulate, adapt, and communicate information about items and the environment, making the monitoring process frictionless and self-governed. Smart technology, according to Bower (2019), is a technology that uses artificial intelligence, machine learning, and large-data processing to bring cognitive knowledge to previously inanimate objects.

Smart Technological Tools

Chua (2013) identifies some smart technological tools for workplace; they include mobile, cloud, social collaboration, digital service delivery, big data, payment systems, cyber security, robotics, augmented and virtual reality, and artificial intelligence.

Mobility: This gives firms and their employees access to communication and information anytime and anywhere they need it. Increasingly, our personal and professional lives are intertwined, with new tablet and smart phone manifestations such phone pads and phablets promising to further blur the distinctions between work and personal life, as well as geographical limits (Chua, 2013).

Cloud: After linking millions of computers, the internet evolved into a cloud of interactive computing platforms (Chua, 2013). It can provide IT resources (such as software, computer power,

and data storage) on demand. These resources can be scaled up or down to match demand, and they are accessible via fixed and mobile devices. As a result, corporations are creating their own "private clouds" that may be used in conjunction with public cloud services to meet peak demand.

Social Collaboration: In this way, businesses and industries can use social media platforms to create, share, and exchange information and ideas. Blogging, crowdsourcing, instant messaging, internet telephony, and sharing images and music become popular personal communication and collaboration tools. Then enterprises, governments, charities, and other organizations adopted them to increase internal and external communication and collaboration (Chua, 2013).

Digital Service Delivery: In handling initial questions and support requests via email, chat bots (artificial intelligence) can provide interactive live chat from websites and portals, and communicate via social media channels such as Facebook and Twitter.

Payment System: As a result, the internet has become a trade platform and a trading hub, reshaping global payment networks (Chua, 2013). Cheques and cash deposits are gone, as is the use of credit and debit cards. This has been driven by the advent of electronic banking and its multitude of supporting payment platforms. Statutory payments must increasingly be performed electronically, mobile payment possibilities are rising, and businesses and customers have numerous options for paying for goods and services.

Cyber Security: As the number of individuals who use the internet has increased, solutions for managing cyber security and protecting against intentional assaults and data loss have become more widely available and affordable. Those in jeopardy have raised their spending on cyber security and developed policies and processes, but these must be evaluated on a regular basis to ensure that they are effective against evolving threats (Chua, 2013). Because products and services are increasingly being supplied, sourced, and accessed online, safeguarding sensitive personal and company data and systems is vital to ensuring that operations and reputations are not jeopardized (Chua, 2013). Digital information theft has eclipsed physical theft as the most commonly reported fraud, and new research reveals that small and medium-sized firms are becoming a key target for cyber-attacks due to their relative vulnerability (Chua, 2013).

Robot: Sensors, control systems, manipulators, power supply, and software make up a robot (Chua, 2013). It can move, detect, absorb information, and make judgments. It can run on a battery, light, energy, or biofuel. In addition to work that requires precision and uniformity of standards, many companies are developing and deploying robots to undertake boring, risky, or demanding tasks.

However, the place of age in understanding knowledge of, attitude towards and perception of smart technology cannot be underestimated. These days ,it is not uncommon for someone to shop, to pay bills, or to make travel reservations at home using a personal computer. Automatic teller machines (ATMs) are frequently used to conduct banking transactions, and E-mail is a common form of communication. Furthermore, most workers most especially the younger age interact with some form of computer technology in the routine performance of their job roles. Clearly, the successful adoption of technology is becoming increasingly important to a person's ability to live and function effectively within society. Based on this, it is commonly believed that older people are uncomfortable with new forms of technology and that they are more resistant to using technology than younger people. This belief often places older people at a disadvantage in the workplace, because designers fail to consider older people as a potential user group when designing technology (Parsons, Terner, & Kersley, 1994)

Statement of the Problem

Smart technology has brought a range of benefits to many organizations, including long-term competitive advantages and decreased manufacturing and labour costs. As a result, the value of the product and services increases, and the business process as a whole improves (Nguyen, Newby & Macaulay 2013). Despite the benefits of smart technology in the workplace today, users are still not knowledgeable when it comes to the aspect of its usefulness. Users ought to embrace smart technology and have full knowledge of it for effective running of business (Aubert, Barki, Patry& Roy, 2008).

Dulebohn (2003) stated that employee's opposition may arise because of distrust, the feeling of being controlled and fear of unknown. Meanwhile many multinational companies invested hugely to acquire and maintain smart technology, despite this huge investment, the attitude of employee is still not in support as a result of inability to operate the smart technology.

Many technological and multinational companies are now implementing the smart workplace designs and standards. Some industries however have not shown the same level of willingness to implement the new smart workplace concept due to various reasons. Among these reasons are the poor knowledge of smart technology, negative attitude towards technology and poor perception of smart technology. These reasons notwithstanding, a large number of companies are now realizing the benefits of the smart technology in the workplace, because

it is linked with corporate responsibilities and ideals such as sustainability, environment, productivity and profitability (Fullan, 2012). In light of the above, the main purpose of this research was to examine the influence of age on employees' knowledge of, attitude towards and perception of smart technology in manufacturing industry in Ogun State.

Research Hypotheses

i. H_1: Age would significantly influence employees' knowledge of, attitude towards and perception of smart technology in the workplace.

LITERATURE REVIEW

Theoretical Review

Technology Acceptance Model

Davis (1989) propounded the Technology Acceptance Model (TAM) idea. The perceived usefulness and perceived ease of use are two cognitive assumptions held by the TAM. According to the hypothesis, the user's behavioural objectives, attitude, perceived utility, and the system's perceived simplicity of usage all influence the adoption of technology. In this sense, the theory places a greater emphasis on the key elements that influence technology acceptance and utilization. According to Davis (1989), perceived utility refers to people's opinion that a certain technology may help them do their jobs better. Furthermore, according to Davis (1989:320), the use of most tools and processes can benefit both the organization and the individual. The third TAM construct, according to Davis (1989), is perceived ease of use, which refers to how much people believe that using a system would help them do their jobs irrespective of their gender. This means that implementing technology solutions will make both male and female jobs easier and less stressful. According to Bradley (2019), perceived usefulness stems from people's acceptance of technology and its ability to increase work performance. In this aspect, the perceived utility of technology is largely determined by the utility of its application. For example, if librarians and other knowledge resources staff at universities believe that technology is useful and advantageous to their profession, they are more inclined to accept it. Bradley (2009) claims that librarians will find it much easier to use new systems in the library environment in order to demonstrate perceived ease of use. This concept has gained a lot of momentum and is still being utilized to improve the performance of numerous organizations. In this context, numerous technological instruments like as software and the internet have been deemed to be quite beneficial for knowledge management.

Empirical Review

Older Age and Smart Technology in the Workplace

Studies have been conducted to examine the relationship between age and knowledge of, attitude towards and perception of smart technology. Essentially, previous studies have stressed that older people were observed participating in beginners' computer classes as a part of a project whereby a tutorial on computer usage was aimed at teaching older people concepts of file management (Hawthorn, 2007).

The observations of the beginners' class displayed aspects of the view that older people are incapable of using modern technology (Czaja & Sharit, 1998; Ryan, Szechtman & Bodkin, 1992). Yet, tutors in this class did not adapt the speed of teaching to the needs of their students. Older age was left feeling inadequate and incapable of using computers something that the older users and their tutors both ascribed to their lack of learning ability, their being too old and their belief that there was just too much they did not know (Hawthorn, 2007). Being too old to learn to use computers is a belief held by many older people, even before attempting to use computers (Timmermann, 1998). However, the negative self-beliefs held by the older students may well be ascribed not solely to their poor performances (Hawthorn, 2007), but also to the negative stereotypical views held by their tutors, as well as the fact that the tutors expected them to learn new skills not commensurate with their existing skills and knowledge more rapidly than they were capable of doing. There is empirical evidence that computer attitudes are negatively correlated with computer anxiety, suggesting that those with increased anxiety towards computers are more likely to have negative attitudes towards using them (Igbaria & Chakrabarti, 1990). In addition, computer-related anxiety appears to increase with age (Laguna & Babcock, 1997). This latter finding, together with Hawthorn's (2007) observations regarding older students' perceived lack of knowledge and experience about computers, suggests that older people's negative attitudes may be caused by their level of experience with computers.

Younger Age and Smart Technology

By way of comparison, research focusing on younger people's attitudes towards computers has shown more consistent results. Literature shows a uniform positive attitude towards computers, whereby younger users regard computers as useful tools and important for everyday life (Bovee, Voogt & Meelissen, 2007; Pektas & Erkip, 2006; Teo, 2006), as well as having a positive view of their own technology-related capabilities (Houtz & Gupta, 2001). These findings occurred across a range of contexts and cultures. The uniformity of these results when compared with the vast contradictions found in older adult literature leads to the question—what causes these differences? It seems clear that as general age groups, children, adolescents and young adults display positive attitudes towards and pattern of usage with computers, yet there remains some doubt as to older people's views.

Interestingly, research shows that many factors influencing younger age attitudes and usage patterns are similar to those influencing older people. Levels of confidence (Gardner, Dukes & Discenza, 1993), computer exposure (Levine & Dontisa-Schmidt, 1998) and experience with computers (Bovee et al, 2007; Teo, 2006) are major influences on attitudes of young people, just as they are for older people. Despite the comparative findings being congruent, there is reason to suggest that should early experiences with computers be negative, young people may well still develop negative attitudes (Gardner et al, 1993).

Further, a young person's attitude is influenced by the amount of computer experience and the nature of that experience (Garland & Noyes, 2005). Given the similarities between the influences on younger and older people's attitudes towards computers, it is reasonable to expect that these findings could extrapolate to the experiences of older people. Having not been raised in such a technologically centred age, older people generally have less prior knowledge than younger people, and as such, are more likely to have negative initial experiences with computers. However, if the older person is given a more positive initial experience, and the nature of further experience follows suit, then positive attitudes are just as likely to develop as they are for younger users.

Methodology

Research Design

The study was a survey in which Ex Post Facto design was adopted. The independent variables (IV) was socio-demographic characteristic of Age. The Dependent Variables (DV) were knowledge of smart technology in the workplace, attitude towards smart technology in the workplace and perception of smart technology in the workplace.

Population of the Study

The target population for this study comprised of full-time employees of Nestle Nig. Plc and Unilever Nig. Plc Agbara Industrial Estate, Ogun State Nigeria. This study comprised of the entire male and female, low level, middle level, and high-level manpower staff in Agbara branch of the selected industries.

The staff strength of Nestle Nig. Plc was 2,300 full-time employees across Nigeria. However, in Agbara manufacturing site of Nestle Nig. Plc, there were 320 full-time employees. while in Agbara manufacturing site of Unilever Nig. Plc there were 225 full time employees. These figures were gotten from the selected industry websites (see www.nestle-cwa.com and www.unilever-ewa.com) the population for the two selected manufacturing company located at Agbara Industrial Estate were used for the study.

Sample and Sampling Technique

The sample of this research was calculated by using Taro Yamane (Yamane, 1976) formula to calculate sample size for the two sets of populations.

$$n = \frac{N}{1 + \mathrm{N(e)^2}}$$

Where : n= sample size required
N = number of people in the population
e = allowable error (0.05)

Substituting numbers in formula: for Nestle Plc Agbara Ogun State Nigeria.

$$n = \frac{320}{1 + 320(0.05)^2}$$

$$n = \frac{320}{1 + 320(0.0025)}$$

$$n = \frac{320}{1 + 0.8}$$

$$n = \frac{320}{1.8}$$

$n =$ 177.7

$n =$ 178 (Approximate)

Substituting numbers in formula: for Unilever Plc Agbara Ogun State Nigeria.

$$n = \frac{225}{1 + 225(0.05)^2}$$

$$n = \frac{225}{1 + 225(0.0025)}$$

$$n = \frac{225}{1 + 0.5625)}$$

$$n = \frac{225}{1.5625)}$$

$n = 144$

Simple random sampling technique was adopted to select the sample for the study, in which each member of the population had equal chance of being selected. This study was carried out on employees of Nestle Nig. Plc and Unilever Nig. Plc, in Agbara, Ogun State Nigeria. Out of 320 staff in Nestle Nig. Plc. Agbara and 225 staff working in Unilever Nig. Plc Agbara Industrial Estate. 178 respondents were selected in Nestle and 144 respondents was selected in Unilever. The total number of respondents for this study was three hundred and twenty- two respondents (322) which were used for the study.

Research Instrument

The main instrument used for the study was a self -structured questionnaire. The questionnaire consists of four sections. Section A contained socio-demographic information, section B contains information on knowledge of Smart

technology in the workplace, section C contained information on attitude towards Smart technology in the workplace, while Section D contained information on perception of Smart technology in the workplace.

Development and Validation of Knowledge of Smart Technology in the Workplace Scale

The Knowledge of Smart Technology Scale was developed by the authors. However, this scale was used as a 20- item measure. The items in the scale were obtained from in-depth interviews and review of literature. A pool of 20 items written as measures of Knowledge of Smart Technology in the Workplace. This pool of 20 items was therefore presented to expert judges in Human Resource and Organizational Behaviour in the Department of Human Resource Development of Osun State University for scrutiny.17 items were retained in the instrument which were considered relevant, essential and properly worded by experts. The justification for this was derived from the assertion that the use of expert technique is an acceptable method of achieving content validity (Nunnally, 1978). The scale consists of five- point rating scale ranging from Very High Extent to No Extent with a weighted score of 5 to 1. The items were put in a questionnaire format and pre-tested in a pilot study to ascertain the psychometric properties of the 17 items in which 0.76 was reported as the Cronbach's alpha of the scale. However, in the main study, a Cronbach's alpha of 0.87 was reported for this scale.

Development and Validation of Attitude towards Smart Technology in the Workplace Scale

This section contained Attitude towards Smart Technology **s**cale. It was developed by the authors of this study. The scale was as a 10- item measure. The items in the scale were obtained from in-depth interviews and review of literature. A pool of 10 items were written as measures of attitude towards Smart Technology in the workplace. This pool of 10 items was therefore presented to expert judges in Human Resource and Organizational Behaviour in the Department of Human Resource Development of Osun State University for scrutiny. All these 10 items were retained in the instrument indicating that the items were considered relevant, essential and properly worded by experts.

The justification for this was derived from the assertion that the use of expert technique is an acceptable method of achieving content validity (Nunnally, 1978). This method yielded 10 items that received total support of the judges from expert ratings. The scale consists of four- point rating scale ranging from Strongly Agree to Strongly Disagree with a weighted score of 4 to 1. The items were put in a questionnaire format and pre-tested in a pilot study to ascertain the psychometric properties of the 10- item measure. The Cronbach's alpha recorded for the scale was 0.84. However, in the main study, a Cronbach's alpha of 0.92 was reported for the scale.

Development and Validation of Perception of Smart Technology in the Workplace Scale

Perception of Smart Technology Scale developed also by the authors of this study. This scale was a 16- item scale. The items in the scale were obtained from in-depth interview and review of literature. A pool of 16 items written as measures of Perception of Smart Technology in the workplace. This pool of 16 items was therefore presented to expert judges in Human Resource Management and Organizational Behaviour, in the Department of Human Resource Development of Osun State University, Osogbo for scrutiny. The justification for this was derived from the assertion that the use of expert technique is an acceptable method of achieving content validity (Nunnally, 1978). However, all these 16 items were found to receive total support from expert ratings. The scale consists of four- point rating scale ranging from Strongly Agree to Strongly Disagree with a weighted score of 4 to 1. The items were put in a questionnaire format and pre-tested in a pilot study to ascertain the psychometric properties of the 16 items measures. The Cronbach's alpha recorded for the scale was 0.79. However, in the main study, a Cronbach's alpha of 0.85 was reported for the scale.

Administration of the Instrument

Three hundred and twenty- two (322) copies of questionnaire were administered by the authors of the study with the help of a research assistants at the premises of Nestle Nig. Plc and Unilever Nig. Plc Agbara Industrial Estate. The respondents were asked not to indicate their names on the questionnaire so as to make the responses anonymous. All aspects of the questionnaire were interpreted to the respondents. The respondents were assured of utmost confidentiality of their responses. The copies of questionnaires were administered by the authors and the research assistants in each manufacturing company. However, out of the distributed 322 copies, only 297 copies were retrieved and found usable for data coding and analysis

Method of Data Analysis

Two hundred and ninety-seven (297) copies of questionnaires were filled correctly and analyzed using both the descriptive and inferential statistics. With descriptive statistics, this was deployed to provide summary information on the socio-demographic characteristics, the inferential statistics was employed to test the hypothesis of the study. Specifically, the study utilized T-test to test the stated hypothesis. The Statistical Package for Social Sciences (SPSS) version 21.0 was utilized for data analysis.

Results

The results of the study are presented in this section.

Hypothesis One:

Age would significantly influence employee's knowledge of, attitude towards and perception of smart technology in the workplace. This hypothesis was tested by T-Test for Independent measures. The result is presented below:

Table 1: A Summary Table of T-test for Independent Measures Showing the Influence of Age on Employees' Knowledge of, Attitude Towards and Perception of Smart Technology in Manufacturing Industry

Dependent Variable	Age	N	$\bar{X}$	SD	DF	t	P
Knowledge of smart Technology	Older	198	70.59	5.954	295	-2.293	<.05
	Younger	99	72.29	5.643			
Attitude towards smart Technology	Older	198	35.59	4.834	295	-.871	>.05
	Younger	99	36.1	4.608			
Perception of smart Technology	Older	198	50.2	12.587	295	-.114	>.05
	Younger	99	50.37	12.583			

Source: Authors' Fieldwork, 2021

The result stated in Table 1 revealed that age did significantly influence knowledge of smart technology {t (295) = -2.293, P< .05). This indicated that younger employees (x=72.29) were found to report more knowledge of smart technology than older employees (x=70.59).

However, the result also revealed that age did not significantly influence attitude towards smart technology {t (295) = -0.871, P> .05). This indicated that older employees were not significantly different from younger employees on attitude towards smart technology.

Finally, that age did not significantly influenced perception of smart technology {t (295) = - 0.114, P> .05). This indicated that older employees were not significantly different from younger employees on perception of smart technology.

Discussion

This study was meant to investigate the influence of age on employees' knowledge of, attitude towards and perception of smart technology in manufacturing industries in Ogun State, Nigerian. The only hypothesis tested stated that age would significantly influence employees' knowledge of, attitude towards and perception of smart technology in manufacturing industry. The results showed that there was no significant influence of age on attitude towards and perception of smart technology in the workplace. However, the results revealed that age significantly influenced knowledge of smart technology in the workplace.

This result was supported by the study of Hawthorn, (2007) he asserted that managers in this class did not adapt the speed of teaching to the needs of their employees. Older age was left feeling inadequate and incapable of using smart technology and computers something that the older users and their tutors both ascribed to their lack of learning ability, their being too old and their belief that there was just too much they did not know. Also, the findings of Garland & Noyes, (2005) they submitted that a young person's attitude is influenced by the amount of computer and technological experience, and the nature of that experience. They further asserted that the similarities between the influence on younger and older people's attitudes towards computers and technology is reasonable. The finding of the study which revealed that age significantly influenced knowledge of smart technology, expressly indicated that younger employees reported more knowledge of smart technology than older employees.

Conclusion and Recommendations

The findings of the study led the authors to conclude that, age did not significantly influence employees' attitude towards and perception of smart technology in the workplace. However, age was found to significantly influence employees' knowledge of smart technology in the workplace. Clearly, the findings of the study showed that younger employees were found to report more knowledge of smart technology in the workplace compared to older age group. However, it was recommended that recommended that the organization should train and re-train their employees especially the older employees to integrate them into the digital era and equip them adequately for effective use of smart technology.

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