

AI AND THE THEORY OF KNOWLEDGE THROUGH DIGITAL DEVICES

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Abstract

Epistemology is the study of knowledge. From the philosophical point of view, philosophers try to find criteria for deciding whether certain beliefs are rational or whether inferences from evidence to conclusions are valid. A closely related topic is the study of the systems of concepts required for formulating beliefs of different kinds, for instance, concepts of space, time, matter, cause, and mind. Philosophical studies of concepts and knowledge are closely related to work in Artificial Intelligence. Artificial Intelligence aimed at modelling human minds or designing smart machines necessarily includes a study of knowledge. Knowledge about particular domains is the basis of the expertise of all expert

systems. General knowledge about how knowledge is acquired, represented, and used has to be embodied in flexible systems that can be extended or that can explain their actions. A machine that communicates effectively with a variety of humans will have to use information about what people can be expected to know in various circumstances. This is especially true of a teaching machine through digital devices.

Keywords: Artificial intelligence, knowledge, minds, machines

Introduction

One of the topics in the world of technology is about digital devices. Generally speaking, all smartphones, computers, and laptops belong to digital devices. There is no denying that digital devices have become a significant part of everyone's life, especially students' lives. But how do these devices affect the student's learning process? Much article works on the good and bad effects of digital devices that may affect students' learning performance over the years. For the gain of mankind, technology has always seemed to grow and flourish. The countless achievements of technology have left everyone in every part of the world today enjoying the comforts and ease provided by technology. All the countries are connected and interlinked. Modern technology has greatly improved people's lives in fields such as work, medicine, business, industry, and education. However, technology cannot be all good in itself.

Technology is a two-sided world, and we have to see to what extent it has helped and improved people's standard of living. There are many possible effects of using it. And it depends only on the way the users use it. It is very important for people to know how to use it for their benefit and should not abuse its use. Rather than relying on it totally, technology should be properly used.

Theory of Knowledge and digital devices

Epistemology, in its simplest sense, is known as the theory of knowledge. It is so defined because it attempts to expose the power or ability, or capacity of the human mind to know reality. It is an attempt to acquire knowledge, knowledge about reality. However, in attempting to know reality. Epistemology also attempts to evaluate or ascertain the validity as well as limits of human knowledge to discharge absolute knowledge or a kind of knowledge that is sure.

Epistemologists concern themselves with the puzzles about the nature, scope, and limits of human knowledge. Epistemologists probe into the following: The power or ability of the human mind to know. What the human mind can know. How the human mind comes to know

- i. The limit of human knowledge.
- ii. The proof or validity of human knowledge.

A digital device is a piece of physical equipment that uses digital data, such as sending, receiving, storing, or processing it. To explain further, digital devices are digital technologies that aid in storing and processing information for human development and the acquisition of knowledge. Digital technologies (e.g., mobile phones, tablets, notebooks, iPads, and so on) and social media (e.g., Facebook, YouTube, Blogs, Telegram, LinkedIn, WhatsApp, and so on) have become increasingly popular in recent years. The most common digital technology is a mobile phone. Nowadays, the majority of mobile phones are called “smartphones” as they have more advanced computing power and connectivity than contemporary mobile phones, according to Osman, Talib, Sanusi, Shiang-Yen, and Alwi (2012). It has become popular in a short time among the younger generations (Hakoyama & Hakoyama, 2011). It was observed that most people in the world population own at least one mobile phone. The smartphone enables them to communicate with families and friends in case of emergency, to make connections far and near, and to contribute to their socialization process.

Social media, a virtual platform, was started after digital technology became common (Boyd & Ellison, 2008). This social media allows people to make new connections and strengthen friendly relations with other humans (Coyle & Vaughn, 2008). Timm and Duvén (2008) reported that there are over 200

different social media sites. The most popular of these sites is Facebook. It is believed that there are more than 500 million people with Facebook membership, and the majority of these people are members of other social networking sites, with approximately 250 million of these memberships visiting Facebook sites each day at least once. Therefore, social media has largely affected society. Nowadays, the majority of adolescents, and this are mostly students, exchange views and share feelings, personal information, pictures, and videos on social media according to Wang, Chen, and Liang (2011). Bryant, Sanders-Jackson, and Smallwood (2006) revealed that many adolescents who find it difficult to express their feelings and thoughts preferred technological communication to face-to-face communication.

The educational content has also been affected by the internet associated with digital technologies and has become an inseparable part of it (Thanuskodi, 2013). Social Networking Sites (SNS) allow young adults to discuss class materials, share academic information and school-related issues, and plan for a project (Salas & Alexander, 2008). Not only students but also instructors, teachers, and researchers in the education system get used to the internet to obtain information, follow the latest developments in various fields, search scientific papers, exchange ideas, and utilize it for academic assistance (Lusk, 2010). On the other hand, SNS can also make students into

“technocratic or heavy users”. Researchers have focused on social interaction, mobile phone dependency/addiction, psychological effects, behavioral changes, etc., as asserted by Bianchi and Phillips (2005), Billieux, Van der Linden, d’Acremont, Ceschi, and Zermatten (2007), Bond (2010), Campbell and Park (2008), Cholz (2010), Junco, Merson, and Salter (2010), Zulkefly and Baharudin (2009). With the usage of digital devices, communication and research work have become easier for students and researchers to explore and sort out the necessary materials that can give more insight into accessible materials that can help in their research topic.

These problems have inspired the researcher to conduct a study about digital devices. The researcher focused on how students should interact with digital devices to attain positive and effective learning with their help.

The Empirical Knowledge of Science and Technology

Science and technology have played a vital role in human life and in aiding learning progress. We cannot discuss digital devices without diving into science and technology. Fadahunsi's (2003:35) explanation of science is concise and brief. To him, “Science is first of all human activity”. It was not discovered by man but was invented by him to understand nature and himself. It is a human

invention to acquire empirical knowledge of himself and things happening around him, which is nature, and be able to inquire from what is known to things unknown for the development of man and his environment. Through this empirical knowledge, man was able to advance in technology by inventing devices that help make life more conducive for humans. What distinguishes science from other human activities is that it enables man to see the world as it is (Alman 1963:1). This may mean different times. This is so because the world is seen from different perspectives, and this broadens our knowledge and understanding of cosmology.

Science in its widest sense 'is a systematic method of describing and controlling the material world' (Taylor, 1962:2). This is an activity that can be traced to the chronological writings of Egyptians and Babylonians that we call scientific, and it is the principal function of science today. According to Taylor (1962:3), 'science can be understood in two ways. It can be seen as it stands at any moment, a logical coherent account of that order which the scientist of the time finds in nature and the man who wishes to use science or to add to it can, in fact very well without knowing its history, as we can see it demonstrated in the person of many scientists who are evident in their subject, but little acquainted with its past. Science is not merely a coherent system. Here and now, it is also something that has grown and is growing, and that, as it grows, progressively affects man's life.

Taylor argues further that many persons in our day view the extended investigation of science as comprising an activity natural to man, hence as neither requiring nor being susceptible to further analysis. Having said this, technology, on the other hand, has been variously defined but not with precision. According to D.P. Lauda and R.O. Ryan in its simplest terms 'technology is man's effort to cope with his physical environment – both that provided by nature and that created by man's technological deeds, such as cities and his attempt to subdue or control that environment using his imagination and ingenuity in the use of available resources (1971:53). In the popular mind, technology is synonymous with machines of various sorts- the steam engine, the locomotive, and the automobile as well as such developments as printing radio, photography digital devices, and television. Sometimes it is viewed as an attempt by man to control the physical world. This distinction, according to Lauda and Ryan, may be briefly put as "The difference between the 'know-why' and know now'. But technology for much of its history had little relation with science, for man could and did make machines and digital devices without understanding why they worked or why they turned out as they did.

Technological advancement has affected every sector in Nigeria after the national lockdown. The educational sector is affected as well. Schools are to equip students with the use of digital devices for

efficient performance of learning. Technology has come to stay; students should be able to use technology effectively to live and work successfully in an increasingly complex and more knowledge-driven society. Schools that do not use technology adequately cannot increase students' academic achievement. Many studies indicate that technology has a positive contribution to the academic achievement of students (Sezer, 2017; Sivin-Kachala & Bialo, 2000; Weathersbee, 2008). When educational technologies are used correctly, they increase students' self-confidence, motivation, and classroom participation (Passey, Rogers, Machell, McHugh & Allaway, 2003; Sivin-Kachala & Bialo, 2000). The use of technology in student-centered teaching positively affects student performance, according to Brown (2007), Machin, McNally, and Silva (2007). In the learning environments where technology is used, student achievement increases, and students' high-level thinking skills develop (Becker, 2007; Ebuara, 2012; Simpson, 2010). Educational technology does have a positive effect on the graduates' professional life (Cradler, McNabb, Freeman, & Burchett, 2002). Technology alone is not enough for the development of education. The use of technology when teaching does not mean that it is integrated (Koehler & Mishra, 2005). It is only possible to realize the potential of technology by integrating it into the educational environment (MuirHerzig, 2004; Voogt & Knezek, 2008). Technology integration is achieved by making

technology a seamless, routinely used, and almost invisible part of the learning environment, such as a board and pen. If technology is effectively integrated, then it will provide opportunities for students to search and find available information and apply their academic skills to solving problems. Traditional educational practices, on the other hand, do not provide students with all the necessary skills they will need in today's world environment. Many researchers like Brenner and Brill (2016), Njiku, Maniraho, and Mutarutinya (2019), and Tosuntaş, Çubukçu, and İnci (2019) focus on technology integration in education. However, research (Estapa & Nadolny, 2015) that investigates the effect of technology integration on student achievement is scarce. Because “the use of technology with the aid of digital devices in the classroom is not a critical issue facing education in the 21st century. The issue of foremost importance is to develop thinking skills in our students so that they will be able to utilize the power of technological tools to solve problems and do useful work” (McCain, 2005:84).

AI and the knowledge control

Science and technological devices (digital devices) like knowledge are not only the object of a human intellectual quest, but also power, this is an acronym associated with Francis Bacon in *Novum Organon* when he discusses the empirical knowledge of power. Knowledge is power; it is power to create and destroy, power loaded with promises and threats

(Paul, 1979:22). Digital devices are overwhelmingly evident in contemporary society; this is a result of human creativity. Humanity develops digital devices to achieve human purposes. Christians regard them as an expression of God's gift of creativity and responsibility, which humanity exercises before God and about the created world. It has helped in making information easier, and the acquisition of knowledge easy to comprehend, and develop the human mind. It made a lasting impression on the mind. According to John Locke, he calls it '*Tabula Rasa*'. According to human understanding, he sees the mind as a white paper, like empty cabinets, as yet unfurnished. The mind is *tabula rasa*, a blank state. Epistemology gives more explanation of how we acquire knowledge, but this is a brief explanation of the theory of knowledge about digital devices.

With the increase in knowledge, science, through its contribution to understanding, liberates people from many forms of ignorance and superstition. Technology liberates them from any physical constraints and insecurities. Medical technology has removed the terror of many diseases and epidemics. Agricultural technologies increase the production of food, and when related to adequate social structures, such technologies can remove the age-old threat of famine. Machines can liberate people from any type of drudgery. They make possible communication, travel, leisure, and access to the arts. Civilization is possible only with a technological base;

the kind of civilization that most people desire is possible only on a very elaborate technological base. A digital device is a technological device that has helped in making communication, learning, and the discrimination of information very easy and convenient at every point in time. It is, therefore no wonder that most people in societies crave digital devices, science, and technology. The developing nations seek technology to lift the burden of poverty and hardship.

Digital devices are the product of technological development. Through digital devices, conferences and seminars are easy means of educating developing nations on how to eradicate hardship or reduce poverty with the aid of digital devices in passing across research findings that can boost the economy of the developing nation. The wealthiest and most powerful societies push ahead with business and industrial technologies in the transplantation of organs, new cures for old diseases, and discoveries in genetics that promise to overcome hereditary ailments with the use of earth satellites to discover new information and transmit words and pictures around the world. Almost as soon as a problem is defined, a research and development project is launched to work towards a solution. This is made possible through the use of digital devices. Health seminars and conferences, even teaching and learning aids, and decimation of research findings

and result is easily passed across through digital devices.

Yet these technological devices appear to some people as threats. A look at the contemporary world shows several reasons for the threat.

Firstly, the power of digital devices is available for purposes, good and bad human experience; power is often the power of some people, some classes, and some nations to dominate others. In many societies, the first experience of advanced technologies has been the experience of military technology of a foreign exploiter. For that reason, the developing societies, which have the most reason to want new technologies for their promise, also have the bitterest experiences of the threat of technology. They know well that science and technology, which can be liberating powers, are often oppressive powers. The power of humanity over nature, which is a sign of human 'dominion', quickly becomes the power of some people to control others. The use of digital devices to develop programs through artificial intelligence to manipulate and take instructions that can destroy lives. Digital devices can be used to control deadly weapons through satellites to capture a particular location for massive destruction. For instance, the terrorist attack between Israel and Hamas.

Furthermore, there is a strong tendency in social structures to acquire technological devices in ways that accentuate inequality. One reason is that newly developed digital devices are built upon preceding technologies; those who have the most technology are in the best situation to acquire more. Another related reason is that complex technological devices or digital device innovations, even if they are the means to economic gain, are costly to get started. So those with the most wealth can buy or develop the most advanced technological devices or digital devices, while the poor struggle painfully to catch up, the rich and powerful are leaping further ahead

Even if digital devices are considered to be 'value-free' (a frequent and enormous assumption), they operate within social structures that embody values and organize power. So their use serves the purpose of those with the power to pay for them. Perhaps even more ominous is the fact that much of the direction of research and development is determined by the structures of power and society. Even the most idealistic researchers are likely to find themselves devising and working on projects that can be funded. The sources of massive funds are corporations and the government. Corporations spend huge sums on research and development to persuade people to buy new digital devices. They spend very little on research on the social consequences of the value-implication of the new products. Governments are less likely to sponsor research and development for

profit. They direct research and development to goals determined by government officials who may or may not represent the real needs and values of society. Often, they merely replace the corporation's goals of profit with the goal of national advantage

Digital devices used by military technologies are a special case in point. The pacifist, Albert Einstein, went through a real struggle of conscience in deciding to alert the world to the possibility of building an atomic bomb that could be controlled through the use of digital devices. Many scientists who worked on the project have done profound soul-searching about the meaning of that work. Some scientists have engaged in ethical crusades connected with nuclear weapons and the use of nuclear energy.

The increased awareness of the consequences of the misuse of digital devices in fraudulent acts, crimes, and scientific power has brought about a change in public moods. The World Council of Churches-sponsored consultation on the ideological and theological debate about science, which took place at Cambridge in the United Kingdom from June 20-26, 1977 assert that 'the is surely one of the most striking features of our own time that science and technology have come under sharp attack both in the Western and the third worlds. There has been a shift in science's self-image and the authority of the scientist, with the general public no longer going unchallenged'.

Christians, who regard science, technology, and digital devices as part of the divine gift of human creativity, have a reason not to join the forces that want to demonize science, technology, or digital devices. But they have equal reason to show concern for the social structures that so often turn the promise of digital devices into a divine gift of human creativity, and have a reason not to join the force that wants to demonize science, technology, or digital devices. But they have equal reason to show concern for the social structures that so often turn the promise of digital devices into a threat.

Secondly, not only do destructive human purposes turn science and digital device technology from promise to a threat. Even well-intended uses of technological gadgets have unintended consequences that frustrate the purpose of the people who invented them

There are many kinds of examples of such unintended effects. They are:

1. Digital devices affect the human environment. Many efforts to increase human power in the natural order have ended in the destruction of nature and a turn to human life. The manipulation of digital devices to explore natural resources through sophisticated equipment has led to the destruction of ecosystems and endangered human lives. People who are not using digital devices feel

they are not included in the trend of contemporary technological development.

2. Digital devices affect social structures: The investment in massive technological gadgets has led to the re-ordering of cities and nations, both in their visible physical organization and in their functioning. Digital devices have influenced human life, including work habits, recreation, housing patterns, and the saving and destruction of human lives in ways beyond the reckoning of their original intention, which was to improve lives. Through the use of digital devices, one can make an order of goods from any part of the world. Even at that, people have been defrauded by the same means. People tend to acquire digital devices to store their belongings in society.
3. Digital devices' efforts sometimes develop a momentum that is hard to resist, even when it needs human restraint. Large-scale technology means big investment and organization. Many people come to have a stake in the success of the enterprises.
4. Digital devices affect human self-understanding of when people complain that they are merely cogs in a machine", they show how organized technological gadgets have affected their self-image and even the language they use. Digital devices originate as a means to human ends. Its unintended

effect is often to make people mean by the success of specific technologies.

Because of these unintended effects of technology, people sometimes experience it as a fate, even a demonic force, beyond their control. Others reply that digital devices are a human invention and creation, it has no will of their own, they are being directed by the operator, which means that the experience of it as fate is illusory. But even if this experience is illusory, it is a powerful experience for some. It points to the necessity of conscious, thoughtful, resolute efforts to subordinate technology to human purposes and to examine that human purpose in the light of the highest human faith

Thirdly, the transfer of technological devices from one society to another. Part of the world's technological problem is that too many owners (government and corporate) regard their technological devices as possessions to be sold only for their advantage and not to be shared at all with potential competitors. Countries acquiring new technological devices or digital devices sometimes complain that other countries sell only their substandard technologies, retaining the best ones themselves. There is an ethical case to be made for the increased transfer of technologies and digital devices.

The transfer of technology is never the transfer of technology alone; it brings with it something of the

culture that produces it. A society adopting a foreign technological device or digital device adopts something of the foreign culture. To introduce digital devices into any society is to modify traditional habits, sometimes in unexpected ways. Since culture is never static, the changes accompanying new digital devices may bring genuine benefits. This may frequently become an agent of cultural disintegration, not only deliberate but also inadvertent. Hence, the transfer of technological and digital devices may put an ethical responsibility on all parties to the agreement. A society transferring a technology has a responsibility to offer not simply the device it no longer wants to those it can sell at a profit, but the devices that the other society wants. The society acquiring technology has a responsibility to think through its consequences and to make a judgment as to whether it will enhance life for all people in the society.

Fourthly, the success of digital devices in solving certain problems has led to unrealistic expectations. Popular hopes frequently assign technological devices or digital devices through statistical records, through checks and balances has increased economic production and consumption beyond all expectations of past centuries. This achievement has led many to hope that it would eliminate poverty and bring widespread happiness. But human misery, degradation, despair, and starvation persist. By this, it is evident that no quantitative increase in

production solves the problem of poverty without attention to basic moral concerns for justice. It is also evident that, in the face of overwhelming alienation and dissatisfaction among affluent people, extravagant consumption is no assurance of happiness.

Conclusion

AI can think about people and take decisions about them, or give advice about them, which will need to use mentalistic concepts, especially if they are to be able to explain their reasoning. In theory, they might function, up to a point, by simulating physical and chemical processes in human brains. When people think about and reason about other people, which we all do in our everyday lives. It seems unlikely that we unconsciously simulate the brain processes of other people. Rather, we function with abstract descriptions of their mental states.

In the same vein, AI gives answers to every question about life and human existence, making it easier for the human race to venture from the known to the unknown. Through the aid of digital devices, AI has enlightened many minds in the attainment of knowledge in schools, institutions, hospitals, businesses, and every walk of life. It serves as a means of knowledge acquisition in order to ease and give answers to so many questions raised by people, and by giving suitable answers they were able to acquire

knowledge. he dishes after dinner and washes them in the sink, which is much harder.

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