

ONTOLOGICAL PARADOX OF COMPUTER-BASED TECHNOLOGIES USED IN EDUCATION AND LEARNING

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Abstract

This study sought to investigate the ontological paradox of computer-based technologies used in education and learning. The argument of this article is that today, the use of computer-based technologies to enhance learning and disseminate knowledge is indispensable; however, this leads to an onto-educational shift in the way we regard intellectual development of learners as a subjective factor in education and the employed learning technologies themselves; a natural human subjective element of learning and knowledge is considered to be ineffective, while technologically stored and transferred facts of knowledge are given higher regard. Computer-based technologies used in education are appraised and institutionalized to the height that learners are sometimes unable to reflect on their own without recourse to the aid of such technologies. It is not enough to employ technology and technologically enhance learning, but also we have to question its impact on the intellectual development of learners. Appropriating Heidegger's phenomenology, the ontology of the human subject provides a philosophical and normative foundation for a comprehensive analysis of the use of computer-based learning in the technological frame since it allows us to rethink more seriously about subjective factors in education in today's growing technological society. This article recommends that the embracement of educational and learning technologies should consider both subjective and technological aspects; a blended education and learning system would be appropriate.

Key terms: Computer-based, ontology, intellectual development, resoluteness, detachment.

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Today, the education of learners is under the transmuting power of technology (Plowman & McPake, 2013). This rise in technology use in education calls for the need to critically examine its phenomenological and ontological implications on the learner's abilities to learn, store, process and transmit knowledge. Considerable research in this field, especially brain-based research, is in its infancy, which often shows the minimal relationship between technology use and learner's knowledge outcomes. Furthermore, most studies and theories on technological education and learning engage in outsourcing technological services (Nonaka & Von Krogh, 2009; Zhou et al., 2010) without a critical look at the embedded challenges that come with it, particularly regarding the intellectual development of learners; technological learning tools are perceived as per se positive without any negative traits (Sadler, 2010).

It is indubitable that the use of technologies, either electronic or digital in learning, allow the processing, storage and transmission of knowledge and is indispensable in today's technological society; however, this has led to an onto-educational and learning shift in the way we regard intellectual development as a subjective factor in education and learning and the medium of technology itself; the natural human subjective element of knowledge is considered to be ineffective while technologically stored, and transmitted knowledge is given higher regard. It is not enough to employ technology to manage knowledge facts and technologically enhance learning; we also have to question its impact on the intellectual development of learners.

Computer-based learning technologies are valued and institutionalised to the height that learners cannot reflect on their own without recourse to the facts and aid of technological instruments. The discussion's fundamental questions to be clarified are: In education and learning, what do computer-based technologies mean in teaching and learning? What are its educational and learning implications? What is the aim of education and learning? Would computer-based technologies diminish the abilities of learners? How properly should computer-based technologies be used in learning? The think piece of these questions is not merely to question for the sake of questioning, or is the issue to leave the answer up to the reader for himself, but more fundamentally to give a profound philosophical reflection on the threatening onto-educational onto-learning implications of a computerized or digitalized process.

Anthropological and ontological issues are faced when technological culture is placed more at the forefront of traditional learning modes. Computer-based learning technologies raise a subjective aspect of education that humanizes learning pedagogy. Today, learning and educational technologies determine human efforts and processes of learning in such a way that the learner's capacity for understanding is gradually diminishing. It should also be noted that the critical analysis of the ontological paradox of computer-based learning should not at any given point be taken to simply imply that we assume a Luddite standpoint to technology.

2.0 LITERATURE REVIEW

Computer-based education and learning refer to technological instruments and programs to support teaching and learning; learners use programs or applications designed for problem solving in education and learning to promote students' literacy. Teachers employ technologies like interactive whiteboards and other learning platforms. Computerized digital devices provide a range of opportunities to students as such devices process, store and make accessible information to learners who need and apply it

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(Blumenberg et al., 2009); it is a technological process of delivering and sharing technologically managed and stored knowledge (Gera, 2012) to enable learners and educationists. It considers the identification and acquisition of existing or accumulated knowledge are available before it is put into use to develop new ideas or improve a prevailing idea to make the process of knowledge acquisition faster, better or safer than it would be otherwise. Narteh (2008) asserts that technological knowledge transfer is an alternative method to traditional hard library knowledge storage, use and transmission to learners that entails much of individual abilities.

In the context of this discussion, computer-based education and learning refer to all forms of soliciting knowledge facts from computer devices or mediums; it is using computer technologies to perform learning and educational functions of the learner rather than the learner performing those functions by his intellectual aptitudes. Therefore, it is an external transfer of human capacity for learning and understanding to the determination of computer technological forms, a breakup from the internal subjective knowledge and educational factors to externalized and computerized management of academic and learning tasks. In such an arrangement, solutions to the problem of education and learning are stored and found in computer technologies and considered a relief to the ineffectiveness of natural human efforts and intelligence. These external knowledge managers (computerised technologies) are perceived to give learners efficient, calculated, designed, and processed information. Thus, the perception that computerized learning technologies are considered a "useful invention" that learners and educationists must take up daily, particularly in using hand devices like smartphones tablets to ease the educational and learning process. Such computer gadgets make education and learning more accessible by helping learners technically manage most aspects of teaching and learning, record and store helpful information they need in a protected and efficient manner, and save time that can further be spent on other activities.

In a discussion we had in the university as lecturers, a majority (90 per cent) noted that computer technologies like the internet and other digital technologies boost learning by connecting students to more resources on topics in software content that cannot easily be accessed from physical and traditional libraries, thus augmenting their educational worldviews. Students employ the world-wide-web as the paramount library and the largest public education and learning forum. They can read articles on every area of concern exchange and discuss issues on the same page. This gives them equal access to knowledge, facts and information. It is, therefore, indubitable that computer and internet websites contain text and images that are helpful to learning; electronic texts are malleable and fluid; they are not hard and fixed in the manner of traditional printed materials for learning (Desmond, 2001, 42). In this regard, internet websites take learning needs beyond simply decoding text and individualized experience. Today, public libraries refer to web access as a 'lifeline for learners' where they cybernetically encounter each other, with more valuable and entertaining sites darting up every time (McDermott, 2000, 36). A report by US National Centre for Educational Statistics (2003) indicated that about 72 per cent of Internet school users use the internet to enhance literacy, support educational learning and complete school tasks (Parette et al., 2000).

Thus, computer-based educational learning has become a priority and, more importantly, a need that has led to its internationalization. It is transferred from foreign countries that are the producers of learning technologies to importing ones that are its consumers. This also points towards modernizing education

and learning in terms of use, diffusion of computer-processed knowledge, and control (Bergek et al., 2007). All this reality confirms Borgmann (2005) assertion that we are in the regime of the device paradigm, which has become a determining principle of a technological society, aiming at efficiency as the goal of human operations. As Martin Heidegger (1977) critically remarks:

For us all, the devices, arrangements, and technology machinery are indispensable to a greater or lesser extent. Attacking technology blindly would be foolish. Condemning it also as devil's work would be short-sighted. We depend on technical devices; they even challenge us to ever-greater advances.

With the incontestable truths about the positive influence of computer-based education and learning, any Luddite regard to it, to treat computer learning technologies as damaging to teaching and learning is self-defeating since learners and educators cannot do without it. Reasons to love and employ computer-related education and learning are numerous and pretty obvious; however, the fundamental question, which eludes the concern of many, is: What are the onto-educational and learning implications of this indispensable technological embracement? We all concede to the positive role computer learning technologies play, particularly in transforming education and learning worldwide, as evidenced in the hard times of calamities like the Covid-19, where physical and traditional learning forms are paralyzed all over the world.

As Heidegger (2009) remarked, technology as an instrument represents a distinctive mode of being in which moderns find themselves in the world; it is an indispensable new way of being that is not of our individual choice, though we take it is taken up as our world and a solution to many facts of life (Fraillon et al., 2014). Despite the significant use of computer technologies in education and learning, a little reflection on its ontological implications to learners. A critical approach to teaching and learning technologies research is needed that prioritize refocusing such technologies to properly achieve ends that take into account the person of the learner in the educational process (Amiel & Reeves, 2008).

3.0 RESULTS AND FINDINGS

The Ontological Paradox of Computer-based Education and Learning

It has been demonstrated that computer-based technologies occupy a vital place in learners' thinking and lived experience; they are constitutive elements of education and learning in today's world to the height that it is impossible to envisage teaching and learning devoid of technological systems of influence. In its positive construction, technology has made education and learning more accessible by helping learners technically manage their educational and teaching tasks record and store helpful information that they need securely. This has given birth to a widely held assumption that computer-based technologies used to enhance education and learning are neutral instruments with no negative ramifications in respect to the purposes for which they were developed and applied, as evidenced in the enormous online teaching and assessments (Knox, 2016), technologies associated with mobile internets such as tablets and smartphones (Davies, 2016) which are now universal in classrooms and learning analytic software (Lundie, 2016) great promises to measure significant educational and learning outcomes and efficacies.

This instrumental view and wide-range use of computer-based learning often pass without a critical assessment of its ontological implications, particularly on the ID of the person of the learner. But this neutrality thesis of learning technologies does not hold anymore (Vermaas et al., 2011). Computer resources and tools used to facilitate education and learning are not just neutral means to achieving desired ends and solve learning and educational challenges; their usage does not necessarily translate into the betterment of learners' educational goals, which is to think and transmit knowledge; simply being supplied with learning computer technologies does not imply that learners use them effectively to their benefit. It is essential to recognise that the same technologies constrain the learner's natural abilities. As argued by Lewin, 2016, constant online reliance to address educational and learning issues disrupt mental abilities or the utilization of effortful thinking in the areas of working memory capacity and attention control of the learner. This is why it is essential to understand that whatever enables also disables; technologies used to enhance education and learning would allow students to learn facts, but they also embed grave onto-educational and learning perils in themselves. There is unsettling ontological nature of learning technologies in the learner's life (Lewin, 2016).

There is no doubt that learners use computers and the internet daily to aid them in their education and learning (Durkee et al., 2012, 29). The Pew Research Centre in the United States reported that 92 per cent of young people go online daily, with 24 per cent saying they go online "almost constantly" (Lenhart, 2015). Statistics from the United States suggest that youth between 8 and 18 years of age, on average, spend seven and a half hours per day engaging with media content either in learning or other activities (Rideout et al., 2010). The philosophical hypothesis of the discussion has been that we are so accustomed to technology to the level that if it were to disappear tomorrow, then education and learning would be in disarray; we are so used to having computer-based technologies to enhance teaching and learning to the point that we feel utterly disconnected when we do not receive the learning 'hit' of what is happening in the cyber-space.

This dependence on technology has deeply incentivized a massive desire to outsource learning abilities to technology for "efficient" performance. But, this raises a fundamental philosophical question: Aren't the technologies we use to enhance education and learning destroying the learners' abilities? Do we need natural education and learning abilities, or are they obsolete? These questions should also be looked at from the susceptibility of developing the learner's brains or experience-dependent education and learning. Structural and functional magnetic resonance imaging studies have demonstrated extensive operational alterations in the adolescent brain in attention, memory, and other areas due to over-reliance on technology (Crone and Konijn, 2018).

Attention and Memory

A general basic memory test was done on fourth-year university students' ability to remember their family members' phone numbers and those of their friends without looking at their phones. The results were astonishing such that 80 per cent of the class noted that they are unable to remember or even know their friends' phone numbers, while only 20 per cent could do. About 90 per cent of the students in the class admitted that they depend on the internet and mobile computing devices in most of their academic tasks, including remembering the content of their studies. The students, further, asserted that their smartphones

contain almost everything they need to recall, thereby serving as a substitute for their natural memory. This was similar to the study conducted by Sparrow and Wegner (2011) on the effects of Google memory.

The participants were asked to type out a series of issues on given facts. One group was informed that the material would be kept in software and could access it later. The other group was assured that it wouldn't be saved. Afterwards, they did an assessment. The results were impressive in that participants who know they have access to the information stored somewhere else performed dismally, with multiple spelling and grammatical mistakes. While those who were assured that their content would not be accessed anywhere else performed well. The study demonstrates that when people rely on stored information elsewhere, they do not need their memories to store information. The profound implication is that reliance on computer-based technologies to store and outsource fully remember the study content will reduce the learner's memory abilities to remember. How many of us, today, know the facts of the phone numbers of friends and family members? How often do we realise that the shop assistant does not know how to change her needs when the cash register fails or the calculator has broken down? Computers, cell phones, iPods, iPads and tablets are wonderful technological calculative inventions that aid learning, but the learners' abilities to think individually is being compromised or diminished.

A study by Mueller and Oppenheimer (2014) on taking lecture notes by typing on a laptop or by hand. In the experiment, 67 students participated and were asked to take notes on a lecture. Afterwards, they were given a test on the content of the lecture. The results showed that those who typed could take notes faster than those who did by hand. However, there was a significant difference in test scores based on conceptual understanding (comprehending the meaning and significance of the facts). In addition, students who took notes on laptops did not learn as much as those who wrote their notes on paper.

In contrast, those who wrote out their notes by hand had a greater conceptual understanding of the material and could integrate and apply them than those who took laptop notes. This implies that using technology to take notes affects the students' ability to remember and understand important ideas about what they learn. For example, in typing, a student can do it faster but without thinking about the content of the notes since the processing of information is quite shallow, and it doesn't transfer to their natural memory. But taking notes by hand obliges the student to think about what is being written, which is better for memory in the long run. Furthermore, even though writing by hand is slower than typing, the students' brains are trained to listen, process, and write down the relevant information. But typing on the laptop is more of a transcription of the teacher's presentation, with very little intellectual processing of the information being typed (Patterson & Patterson, 2017). Thus, the usage of a keyboard inhibits those students' cognitive abilities.

I once asked my students to choose takeaway and a sitting-in continuous assessment test. Most of the students (90%) preferred the former, and only 10 per cent opted for the latter. The test was administered as per their preference. But those who did a takeaway test went to google and copy-pasted the answers without any personal reflection on the content being asked in the test; they performed poorly. While those who did a sitting-in test performed better, they could reflect, understand and synthesize well their responses.

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Learners rely on computer-based learning technologies to store knowledge and information long-term and have everything they need to know instead of relying on their brains. They are concerned about the external memory stored in computer and internet devices while losing natural internal memory and intellectual abilities to examine the learning content critically. An experiment published in Science Magazine in the US demonstrated that students remember less information when they know that they could easily access it later on the computer (Sparrow et al., 2011). This reliance on the web and computer-stored learning content appear to increase plagiarism, as demonstrated by the capability of searching for the answers online instead of learning how to complete the assignments or problems using their natural abilities.

When learners use the information stored in their natural brains, it enables them to understand and interact with the world of education and learning. We live in an age where we do not need to know terms of our direct engagement as long as we identify how and where to "find" it – google is perceived as the way and a place of knowledge. But this is erroneous since it is artificial and lacks the human touch. Relying on Google to store knowledge makes learners lose an important part of their engagement with the reality of education and learning; the externalized stored memory is perceived to augment internal subjective memory but does not necessarily help students learn the course content better. Learners rely on computer-based devices to store information and have everything they need to know. Kandel (2006) affirms that for a memory to persist, the incoming information must be thoroughly and deeply processed by the recipient or learner. This is achieved by attending to the data and associating it systematically and meaningfully with well-established knowledge already in memory.

It is also critical that high levels of available information traded through computers and the internet and other platforms that are internet related expose students to incorrect information that unfavourably boost false memory formation. Related to this assertion are Fenn and Ravizza's (2014) claim in their study, which found that people exposed to false information through the pseudo-twitter and Whatsapp platforms demonstrate less confidence in the false information presented than those exposed to the same information in the non-social media platforms. This finding submits that people familiar with social media platforms think that the multiple information presented to them is reliable not because it is truly reliable but because they have difficulties sorting through all the information accessed to them. A study by Ferguson et al. (2015) on the internet and students' confidence found that having access to the internet decreased an individual's confidence in knowing the content of the information and the answers to required issues. Students are diverted to other irrelevant topics because of the much available related information and the inability to filter the information provided. As a result, they have difficulty staying focused on substantive and how students process and store information. Reliance on the internet and related technologies affect students' confidence levels in their obtained knowledge.

Therefore, the ontological paradox is that the widespread use of technology has both positive and negative effects on the learners' attention and memory systems. With memory delegation to learning and storage technologies that lead to attention deterioration, learners' brains become adapted to forgetting, which consequently causes them to become inept at remembering the content learnt; they are confined in a vicious cycle in which the use of the web makes it increasingly difficult for them to keep information stored in biological memory, and they are equally forced to increasingly rely on the web's external memory

banks while depending less and less on the information stored in their biological minds. The disappearance or threat of natural memory is an important subjective factor in learning which the sad part is.

Learners' Critical Thinking

One of the aims of the education of learners is not mere mastery of the course content or facts but rather developing students' thinking skills, which is achieved through critical thinking. In the history of education, Socrates established the importance of pursuing evidence, closely examining reasoning and assumptions, analysing basic concepts, and outlining the implications of what is thought and what is done through critical thinking (Chiarini et al., 2015, 132). Since students are not passive but active agents in the learning process, critical thinking enables them to analyse facts presented to them from whichever source to form judgments of their own (Elder & Paul, 2008); it enables them not only to think by the rules of logic and probability but also the ability to be creative and apply learnt skills to real-life issues.

Bloom (1987), in his famous book, *The Closing of the American Mind*, criticized today's liberal higher education claiming that it has impoverished the minds of students since it undermines the philosophical quest for truth or knowledge. In line with the Socratic Method, in my teaching career, I always give students assignments that require group discussions and application of the concepts learnt in class, questions that probe them profoundly into thinking before they could write down the agreed-upon ideas. But, to my dismay, because of the avalanche of the information provided to students through various online learning technologies, students go to the internet and print whichever information they find related to the assignment and consider it "done" when in reality they should read, think, analyse, and reassess whether that information is relevant or not. Of course, indeed, what they read is not content-independent (Can & Kaymakci, 2015), but it is equally important to take into account that authentic learning requires students to analyse, evaluate, interpret or synthesize information and apply it creatively as they solve a problem, or reach a conclusion (Rudinow & Barry, 2007; Phan, 2010; Stanlick, & Strawser, 2015).

The information volume online can be overwhelming for some students. They often do not have time to sort it; learning information on the internet may make academic research much easier for students, but they find it demanding to 'sift and winnow' out what is not serving. Students accept the validity of online information too quickly without a critical look. They go to Wikipedia and other related sites to copy and paste whatever information they find on given topics. To these students, 'research' means looking up a topic using the minimum number of resources and either directly copy-paste or paraphrasing what they find. Students do not understand the importance of critical personal valuation of the topic they are researching because of the easy nature of learning technologies (requiring only their technical management). They locate one site or source and write down their paper to read the information. The internet has made gathering information instantaneous and way too easy to plagiarize.

True learning means having the ability to direct and take responsibility for the acquired knowledge, keeping oneself up-to-date, knowing where to look for knowledge. This is different from procuring itemized codified and stored information or factual knowledge found in computer-based learning technologies. Reliance on information and learning technologies tends to erode in the students the independent evaluative and critical skills to determine if the information is available to them is accurate or

not; sometimes, they do not have the patience or resolve to check the information with another source; when they find whichever information. Reliance on Google stored information and knowledge condition students in their approach to learning and reduces education to mere mastery of facts obtained and not has a critical assessment of the content of learning; they resort to a more memory-based approach rather than a comprehensive one that requires efforts to elaborate ideas on their own (Brady, 2008). The profound implications are that lacking critical thinking leads to shallow thinking and more instrumental regarding educational and learning technologies. Thus, uncontrolled access to technologically stored learning information removes the subjective place to engage in a more cognitive and engaging learning process.

Learners' Experience

The relation between experience, knowledge and learning is of utmost importance in the education of learners as education prepares learners for a better life. Meaningful education and learning should consider the qualitative, subjective experience of the learner, where a learner puts hands-on learning. The renowned Greek philosopher, Aristotle, accentuated that experience plays an important role in learning knowledge. Direct experience grounds learning in the person and makes it lively and interesting; every experience is a moving force for the learning environment and process (Cranton, 2006). Experience outlines the learners' practical unmediated engagement with the meaning and world of education. Education and learning are not interpreted as mere factual data found in technological learning tools but as practically meaningful. Failure to take the learners' experience into account detaches them from the very meaning of education and learning.

The most unfortunate thing is that the direct experience of learners is today substituted and managed by the mediating power of learning enhancement technologies such that education and learning are no longer perceived as a matter of human determination (Clive, 1983, 146.). Educationists Kemp et al. (2015, 4) contend that teaching and learning are tattered from the realm of human endeavors and transformed into a technological leviathan that is slowly usurping the essence of education and learning. Learning technologies alter and mechanize human elements in the learning process; they delink the learner from his determinative role and internal relation to it – personal engagement is profoundly dissolved; learners are alienated from their own basic and determinative engagement with education. They are distanced from their efforts to understand have skills and capacities that permit them to own the technologically accessed facts and information. But education is not about learning facts presented by various technologies; rather is the training of the mind to think.

The annihilation of unmediated learner experience in education and learning means the destruction of the experiential aspects of the same process, making it a series of learning events occurring outside of the self of the learner; events which impact or determine the course of learner's personal experiences without their influence leading to the loss of a primal unity and wholeness of life (Heidegger, 1977, 27). Disregarding direct experience in the education and learning process is one of the fundamental characteristics of knowledge transfer to technology. When education and learning are determined by cybernetic or technological mediations, experiential, subjective aspects and the learners' theoretical reflection are compromised; learners lose their subjective abilities or willingness to think and memorize the content of the disciplines undertaken. However, to do away with human experience or make it anything like a

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mediated reality and therefore a representation of the mind is tantamount to doing away with the human subject factors in the entire meaningful education and learning process (Ibid, 19). It undermines the very fact of experiential knowledge that accounts for human engagement for meaningful and holistic regard to education and learning.

The general and indisputable assertion of the claims made above is that we are under the unsupported control of educational and learning technologies, which undermines the learners' subjective factors (natural gifts, talents, Labour-power, values, and ways of thinking) in that they become subsidiary objects of individual intellectual development. This whole technological process generates the learners' "inability to perform anything" without technological mediation; it generates a crucial separation of the formal process from the informal and the subjective engagement. The solicited techno-educational and learning functions jeopardize the learners' subjectivity, situating and narrowing down everything in the learning process to their mechanical spheres.

As once claimed by John Dewey (1960), education should not be the teaching of mere facts rather the skills and knowledge that students learn to be integrated wholly into their lives while taking into account their personal experiences. Computer-based educational and learning technologies question the learner's subjective abilities to short-circuit the self-directing learning abilities. They tend to undermine them while causing an existential tension or waging war against the individual subject in the learning process. These technologies treat human subjective educational factors and learning as merely formal and external manifestations. The outsourced cognitive and volitional ends of education are integrated into a process that works for a technological end of consistency and efficiency to the degree that human subjectivity has no part to play. This whole misguided process disconnects the meaning of education and learning from human subjectivity. The basis of meaning is no longer the human subject but the technology employed.

The excruciating ontological implications of this, without amplifying, are that we operate under a sub-human level in education. Disgracefully, learners are being swallowed up by the general technological learning facts devoid of their reflection. Education and learning are no longer disclosed to learners as a meaningful part of direct human engagement. Learning technologies form the agents by mediating the interactive and interpretive relationships with techno-educational facts. Thus, when direct and immediate relation or personal experience of knowledge is obliterated by technologies, the individual is equally removed from his meaningful contribution to education and learning and knowledge in terms of reason, memory, intuition, introspection and testimony.

It is, therefore, erroneous to think that we can successfully walk the path of technological progress in the education and learning division without considering the apperceived and presented realities it has on the person of the learner, particularly in the aspect of his intellectual development. It is imperative to consider that as we interface with learning technologies, it equally and constantly challenges the ontology of education and learning. Learners are in most cases misguided to think that relying entirely on external brains through outsourcing meant they become more knowledgeable. Still, the ground's reality is that this makes them no less since it reduces their personal efforts and possibilities for knowing and engagement with their practical life as the goals of education. Unreflective engagement with learning technologies provides learners external cognitive and acting help that embed silicon memory systems, collaborative

online filters, consumer preferences and networked individuals that serve as springs of the technological rule while undermining the individual subjective experience and autonomy in learning. Emily Carr criticizes this whole situation, claiming that it is a reversal of the early trajectory of civilization to the height that we are developing from personal knowledge cultivators to hunters and gatherers in the electronic data jungle.

We should not underestimate the perils and complexity of the ontological shift embodied in educational and learning technologies as asserted by American scientists and champions of artificial intelligence Herbert Simon and Allen Newell, "in the digital world there are machines that think, that learn and that create, and this is going to increase rapidly until in the future the range of problems handled by technology will be coextensive with the range to which the human mind applies them." It is important, therefore, to seriously consider that when technological device paradigms are deeply entrenched into the vision of education, it not only informs most of our decisions to outsource our natural capabilities but it also patterns/structures our entire organisation: the daily experience, the structures of human development and even how we interpret nature. Human reality is structured according to the technological paradigm, transforming it into the usual standard for human operations.

Failure to understand the ontological paradox of computer-based technologies in learners' intellectual development and education threatens the very goals of education and learning. True education is not about technology-driven, but knowledge, creativeness, experience, independent thinking, development of curiosity, inquisitiveness, understanding, imagination, rationality and autonomy, and the development of the sense of self and other-care expressed through concern and associated educational attitudes of learners (Siegel, 2007). It should promote the winning of technological gadgets and not technological gadgets to win those employing them. We cannot doubt the benefits of computer-related technologies to enhance education and learning. Still, they cannot certainly replicate subjective factors since such gadgets are only good in storing and producing stored facts of knowledge that lures learners to think like them.

Learners need to know that education is not around stored facts but rather a learner's subjective engagement that entails and enhances all his development in the learning process. In his advocacy for perennials in education, the American Philosopher and educator Mortimer Adler (1902 - 2001) argued that education should be about principles, not facts, since specifics of facts change continuously. Educators and learners mustn't lose their subjectivity in an attempt to unreflectively embrace educational and learning technologies. Any educational and learning technologies should be used in a system that does not disassociate learners from their practical engagement with educational reality that defines their meaning in life. Learners and educators should express themselves as over and against technological manipulation.

Philosophical Solutions to the Paradox of Computer-based Learning Technologies

It has been argued that technology is so fundamentally important that learners in the technological society cannot do without it. As they captivate and chain learners, these technologies also embed ontological risks to the same learners in that their direct subjective engagement in the learning process is undermined. This paradoxical nature of educational and learning technologies creates a dilemma whether to embrace or simply bush them off. Without damaging the place of technology in education and learning, the philosophical question is: How can this dilemma be resolved? The question looks for a critical assessment of the en-framing nature of educational and learning technologies while searching for appropriate ways of

relating with them. Both educators and learners require taking into account the following philosophical regards:

Resoluteness or Self and Technological Consciousness

Resoluteness in the technological frame of influence signifies a continuous awareness of the enflaming nature of educational and learning technologies with the ardent desire to grow out of it. It considers the importance and recovery of human subjective abilities that play a central role in determining the ends of education and learning. But this can only occur not by trying to escape the potential dangers of employed technologies for fear of their negative impacts and condemning it out-rightly, but by acknowledging their embedded mishaps and to transform them into an empowering force of consciousness that will motivate a profound reflection on the condition of education and learning while searching for appropriate answers concerning the problems of technological enflaming (Ichuloi, 2015). Heidegger once claimed that "where danger is, the saving power also" (Heidegger, 1977, 28). Under such claims, resoluteness is not merely a matter of making careful concrete decisions on which technologies to be used, but more deeply as a possibility projected ahead of the learner, a kind of open awareness of education and learning in the determining force of technological learning devices.

In their negative visage, computer-based learning technologies tend to serve the technologisation of education and learning; they reduce teaching and learning, including human subjective abilities, to intrinsically meaningless resources in the learning process. Learners become mere observers of their intellectual development and promoters of technological learning devices, but not regarded as ends of education and learning. Users (educators and learners) of learning technologies are challenged to be resolute in their interface to address this mishap. To be resolute in the use of educational and learning technologies is to relocate those technologies to their proper places of serving the ends of education, where learners have a responsibility toward their intellectual development; it is a kind of openness to the disclosure of their subjective factors to enable education and learning.

In the words of William James, an American psychologist and philosopher credited for his pragmatic philosophy, the value of any truth should be entirely dependent upon its use to the individual who holds it. When technology is looked at from its contribution to the person, learners begin to listen to the unsettling nature of employed technologies that undermine their input in their intellectual development, thereby enabling them to make choices that consider the contribution of such subjective factors in education and learning. In resoluteness, learners and educators run ahead of the possible reconstituting dangers of the technologies they crave to use before deciding to employ them. Failure to embrace resoluteness eventually complicates meaningful compartments to learning technologies, resulting in an inauthentic relationship with them.

It is regrettable that most of the time, particularly in our day-to-day use of technology, we seem not to be committed or conscious of our condition in technology; technology is presented 100 per cent well and therefore should be embraced by all means. The mistaken issue is that we drift along, think and do what the minds behind the technologies we use to think and do for us, giving ourselves up unconsciously to technological manipulation without thinking of its effects. We think that those who make the technology also make decisions on our behalf, and we only need to fulfil or implement them. Worse still, it only

becomes an issue for us when we realise the technologies we use to make our lives comfortable do not go as well as we expected when the technologies do not serve us the way we want.

A resolute acceptance by the learners and educators of their fallen condition in the technological determination requires them to open themselves up and to trust in the power of their subjectivities in education and learning; promote a careful and free inward and self-engaging relationship with learning technologies, where the learner and educator turn deep into themselves and participate actively and intelligently in rechanneling learning technologies to serve human purposes rightfully. However, this does not mean they disengage from the technological usage rather carefully evaluate the reality of technologies used to facilitate and enhance education and learning.

Questioning Attitudes towards Technology

Questioning is a significant tool and form of developing a meaningful philosophy of technology, which encourages analysis, evaluation and synthesis of the meaning of technologies used to enhance and facilitate the education of learners and the interface with them. It is a starting point in the attempts to address the ontology of technologies used to facilitate the education of learners. Today's most significant problem lies with the naivety and uncritical attitudes learners and even educationists interface with technology; they tend to relate with learning technologies from merely instrumental regards, without ever pausing to critically understand its complex ontological operational structure.

Learning technologies are regarded as merely external instruments that do not have any ontological implications on the users. In questioning the attitudes towards technology, naïve and instrumental stances that chain us to technology are equally interrogated. As remarked by Heidegger, "everywhere we remain unfree and chained to technology" (Godzinski, 2005). Being chained to technology creates a dependency syndrome that incapacitates the learner's ability to affect anything without the aid of technology. At the same time, he continues to function with relatively uninformed conceptions of its impacts. It further leaves learners with virtually no alternative place to take a critical stance toward technological manipulation and monopoly of education and learning reality. The uncritical instrumental approach to technology prevents learners and educators from knowing or understanding the technical implications of different appealing technologies employed to aid learners' education. Questioning, therefore, helps to free us from the persuasion of being chained to technology. Heidegger (1977) remarks:

We shall question technology, and by doing so, we should consider preparing a free relationship. This relationship will be free if it opens our human existence to the technological essence. Then, we shall experience the technology within its bounds to respond to this essence.

Technology is an elusive and captivating phenomenon, any connections between educators and learners with technology demand a proper and alert relationship. However, it would be wrong to question our attitudes only when technological instruments, tools or gadgets employed in the education of learners technical malfunction, but also when we use them transparently since even good technologies have reconstituting effects on the users. Ellul (1972, 96) remarked that "man must be capable of questioning at every step his use of his technical goods, able to refuse them and to force them to submit to determining factors." Questioning, therefore, leads to the treatment of learning technologies as more than just a matter

of technical considerations. This is fundamental because "questioning is the piety of thought" opens us up the mind for technology's complex structural operations and implications (Heidegger, 1977, 35).

Thus, the objective of questioning is not to remain fixed only on the instrumental and technical nature of educational and learning technologies and their benefits but to keep watch over what comes out of learners' interface with technology. The more we critically question and engage ourselves to think upon the multifaceted essence of learning technologies, the more we develop viable ontological ways of relating with them, ways that empower human subjective factors over technological stored learning facts (Ibid., 35). Moreover, having a comprehensive knowledge of the ontological implications of learning technologies helps us use them in a watchful and appropriate way that opposes their underlying, overwhelming and manipulating power. Therefore, critically questioning should be considered indispensable since it helps understand the mysterious operations and perils embedded in the learning technologies.

Detachment or Releasement

Detachment is a particular comporting mind-set about taking a practical approach in using technologies (Rojcewicz, 2006, 214.). It is to take responsibility and care for the self and to be able to know when to use and not to use specific technologies in education and learning. It also means using respective technologies and devices as they ought to be used while letting them alone as entities that do not have the power to dominate and determine the destiny of education of learners (Feenberg, 1999, 185). In Heideggerian phenomenology, detachment refers to comportment towards respective technologies, which expresses itself through YES and NO such that one can say NO to technology (lets technology go of); and b) to say YES to technology (lets it go on) (Godzinski, 2005).

To let the technology go of (NO to technology) fundamentally means to give up or renounce the use of a particular learning technology when it is consciously deemed to impact the learners' education negatively or when there is a possible alternative to it. By declining to use technology, releasement allows for diverse open subjective possibilities. The learner prepares himself to make more or less a complete break with whatever constrains his intellectual development and ponder other better ways of using it, ways that do not lead to further technological manipulations. This approach of self-care does not imply embracing a Luddite and conservative stance on technology. Still, it deeply means standing for and taking responsibility for how one's intellectual development is affected by technology. It is not to be cynical about the reality of technology, but to be conscientious and responsive, capable of saying no to some reconstituting technologies and forces that undermine subjective elements in the learning process.

Under the consideration of detachment as letting technology go, human, authentic subjectivity and self-understanding in the phase of technology become a project for which humans are accountable, leading to their being at home with technology itself. By this, I mean it is not just what technology tells us. Still, we are also answerable to what we make of ourselves, consciously or unconsciously, in every moment of our lived experience with technology. Therefore, to let the technology go demands that we relinquish its use when necessary, according to its possible effects in our lives. When we recognise this accountability to ourselves and how a particular technology can affect our lives unconstructively, we choose to let go of both technology and our will to use it.

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Let the technology go on (YES) is the reverse of saying No to technology. It means that educators and learners should use technology in a manner that serves and respects their subjective factors in the learning process for their intellectual development; that is, to properly serve the learner, not in terms of stored technological facts but his whole life (Scheibler, 1993, 127). It is to use technological learning technologies and devices diligently to serve human purposes and still be free from bondage, denying them an exclusive and manipulative claim over them. This is remarked by Heidegger (1966, 54):

We can adequately use technical devices and keep ourselves so free of them that we may let go of them at any time. We can confirm the use of technological devices unavoidably and deny them the 'right' to dominate us, pervert, confuse, and lay waste our nature.

In letting technology go on, the basis is not to regard it as the ultimate and final value or destiny that defines the education of learners; it is not the antidote to all learners' subjective inabilities. Rather, learning technologies should be treated as an internal relationship that constantly calls for conscious human awareness of the field they belong to and in which educational structure they operate. It is the awareness of the horizon of technological devices rather than regarding them as determinants of the learner's intellectual development. Somewhere else, Heidegger (1977) asserts:

Our relation to technology will become wonderfully simple and relaxed. Letting technical devices come into our daily life, and simultaneously, leave them outside, that is, allowing them alone, as things that are nothing absolute.

As Rojcewicz contends, a relationship exemplified by detachment continually uses technological gadgets and places them in their ontological significance avoids the danger of being taken as a standing reserve (2006, 220). This is reiterated by Ellul, who asserts that "as long as man does not learn to use technical objects in the right way, he must remain their slave" (Ellul 1983, 96). The provocation to say no and yes to technology is fundamentally for self-care as the self-responsibility of learners in their attempts to attain educational goals. Instead of keeping a disconnected distance from technology in the sense of avoiding it or simply thinking of it as a transparent instrument used to realise particular ends, detachment opens our attitude of openness to technology and ourselves, recognizing technology as a reconstituting phenomenon that should be carefully chosen, particularly when the situation dictates; it is waiting (Graham, 2007, 151).

But to attain the levels of saying yes and no to learning technologies, learners and educators must first recognise that they are hooked into technology and must be willing to let go/get off of that reconstituting hook. As Zimmerman (1990) argues, this demands individual maturity or enlightenment. The individual no longer conceives himself as merely needing technology as an external instrument to augment and realise the calculated learning facts. Instead, he should consider technology as an internal relationship imbued with the power to unconstructively reconstitute his being in a manipulative manner (Zimmerman, 1990, 219). Zimmerman further remarks that we can be "released" from the grip of technology only to the extent that we recognise that we are in its grip – which in itself is the paradox.

Proper use of learning technologies demands the users to have the ability to employ them and still say no to their attempt to be glued to them in terms of possessing and turning them to be helpless without them,

thus, the embracement of resoluteness, questioning and detachment/releasement as ways of relating to educational and learning technologies calls those engaged with them to adopt flexibility and reflexivity. By flexibility, I mean the ability to adjust the superficial, naïve and conventional regard to technology (as a mere instrument), which sometimes, if not in most cases, frustrates critical regards to it. Educationists and learners should not be chained to remain in the technical and instrumental regard to learning technologies (which focus only on the efficiency of such technologies in calculating and storing learning facts), but instead, adopt alternative and open stances to them beyond mere technical considerations (Feenberg, 1999, 185). This calls for reflexivity, which involves a conscious ability to have an inward-looking and critical loom that leads to the understanding of the way technology works in reconstituting the education and learning process. It is in recognizing that education and learning technologies and devices tend to affect the ontology of education and learning. It is improper to let learning technologies run their course independently in the learner's life without a personal inward-looking and reflective involvement.

4.0 CONCLUSIONS AND RECOMMENDATION

Conclusions: The article affirmed that technology has become the foundation for understanding and determining education and learning concerns. Learning technologies are important as they contribute to the enhancement of the education of learners. For without them, there will be no learning in today's digital society. However, the same technologies are bound up with self-alienating dangers to the point individual subjective comportment is substituted by device engagement; they are also noted to constrain the intellectual development of learners, and it is impossible to walk through the way of learning technologies without paying a critical assessment of what is presented in the implied technologies. Learning technologies constrain important subjective factors like attention and memory, critical thinking, and learners' experience in the educational process. When education and learning are completely determined by computer technologies, it makes the learner's self, identity and individuality externalized and mechanized, thereby creating disillusionment with natural human resources and capacities in education and learning.

Recommendation: The embracement of educational and learning technologies should consider both subjective and technological aspects; a blended education and learning system would be appropriate.

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