

# The impact of digital technology media essay



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The use of digital devices such as computers, TV, mobile phones and video game has increased substantially over the past few years globally with every corner of the globe having some form of internet available. Technology has helped humanity get things done faster and there is no doubt or shortage of recognition of these increased benefits to humanity.

The most visible effect of globalization is the reach of media of all types. A number of labels have been given to describe this impact which includes 'media society and the information society'. Arguably information and communication mediated by network and broadcast systems of all types have become more important than the workplace that defined the Industrial Age (Holmes, 2007).

How far both Digital media and social media have become integrated in the lives of most of the global population is shown here as at 31st March 2011, with the exception of some third world countries such as Liberia and Ethiopia with only a . 5% Internet penetration rate and St Helena with only 900 users up from zero in 2000. Africa has the lowest percentage of Internet users globally with 11. 5% penetration and makes up 5. 7% of internet users globally. With a population of 1. 03 billion, the total Internet users are 118. 8 million including 30. 6 million Facebook users.

At the other end of the scale Asia has the largest percentage of internet user at 44% of all users globally from its population of 3. 8 billion, a penetration of 24%. China is by far the highest population of users at 485 million and India at 100 million. However China has only 504, 000 Facebook users of its 485 million populations connected to the internet while Indonesia has 38. 8

million Facebook users of its 39.6 million internet users. (Minwatts Marketing Group).

In total the world population estimate now at 6.93 billion with 2.11 billion Internet users and 710.7 million Facebook users as at 28th September 2011 (Minwatts Marketing Group, 2011).

The importance of the Internet in today's society is of such magnitude that Sociologists are calling it a 'post-broadcast, second media age' rising with its questions of democracy, free speech and the public sphere (Holmes, 2007).

A current debate arising from the constantly fast evolving technologies exists between those who believe technologies serve human needs and those who believe technology shapes human evolution. These beliefs arise from a trail of evolving technologies of which will end when technologies can produce more technologies, making humans disposable. Both sides of the debate agree on one factor; historical turning points are marked by technological advances such as labor, trade, transport, medicine and weapons (Carr, 2010).

Further debates on whether the increasing use of digital media are good or bad for new generations have risen alongside the many concerns by parents, psychologists, psychiatrists, government institutions and health related professionals of the length of time young people spend online using either social network sites, video and computer games and cellphones.

This area of concern has risen to the level of seriousness that a near formalized diagnostic mental health classification labeled Internet Addiction

Disorder (IAD) globally by psychologists and psychiatrists is underway. These concerns however are further defined to excessive Internet use of which 'excessive' is still to be further defined while the issue of IAD is so far being identified by mental health professionals when perceived as an interference with other areas of a person's life. A similar case is that of video and computer games where excessive use can be detrimental rather than beneficial to children, alongside the fact that unequivocal evidence shows violent video games are highly negative in their affects. Later in the chapter this research is presented.

Much controversy surrounds the fact that Internet use provides many benefits for everyone, particularly the ability to access information of which was further extended when computers were supplied by governments to third world countries to help educate their people. While this appeared to be of some benefit educationally, on the other hand evidence for long term internet use on academic performance, even though scarce, appears more negative than positive, does not provide any strong evidence of benefits to people and in fact high internet use shows some impairment of performance over a long term.

Moreover, the use of gaming is highly promoted by businesses and government agencies interested in economic benefits particularly as it is one of the highest income producers for the US economy currently. These organizations promote the benefits of the games, while many others believe it is harmful as seen in academic research. It is useful to note at this stage that TV even though not a focus of this chapter has not yet been displaced by the Internet and other new technologies and remains the highest used

digital technology globally. 80% of families have cable or satellite TV and children watch at least three hours per day and four on the weekends. No matter how many new technologies emerge, TV keeps its powerful presence and has become a backdrop to family life and it can now be consumed on computers, mobiles and handheld devices (Gutnick, 2010).

## **What are the effects of digital technology to us?**

Anecdotal reports have highlighted the sometimes dramatic effects both good and bad that digital media, the internet, social networking and online recreation appear to be having on the way our minds work, both physiologically and psychologically Carr, 2010, Greenfield, 2010; Wolfe, 2010; Price, 2011; Lanier, 2010) and there are a growing number of scientific studies that suggest changing patterns of brain function which have been attributed to the use of digital media. On the positive side these include improved complex reasoning and problem solving (Small et al., 2009). On the negative side they encompass difficulty in concentrating on books or long articles, becoming more easily distracted, impulsiveness, thinking that has a “ staccato” quality and lack of concentration in general (O’Conaille and Frohlick, 1995).

Then there are reports, particularly those that explore heavy web usage, of addiction to second life and on-line games (Chak and Leung, 2004). Support services, such as On-line Gamers Anonymous, have been set up to help people addicted to online activities. Meanwhile, experts from a range of disciplines, including neuroscience, education and technology, are often in stark disagreement about the long term benefits and costs of digital technologies to our mental functioning. Disagreements arise, not only

between, but also within, disciplines. For instance, the neuroscientist Johan Lehrer dismisses concerns that digital technologies deplete our brains and regards loss of some mental functioning as “cognitive trade-off” (inside-the-brain.com/tag/johan-lehrer). He describes how dramatic decreases in working memory, self-control and visual attention result from simply walking down a city street and points out that while this activity may temporarily affect attention and memory,

It is also an essential part of everyday life. Equally, he refutes claims that internet usage develops “shallow thinking” (Carr, 2010b). For Lehrer, the benefits of modern technology far outweigh the costs. By contrast, Professor Susan Greenfield, an eminent neuroscientist, former Director of the Royal Institution and author of several books on brain function, believes that repeated exposure to screen based technologies may “re-wire” the brain. In Greenfield’s view this issue is “almost as important as climate change” (Greenfield, 2010). She believes that excessive use of digital media may even threaten the quality of our existence if, for instance, social networking sites shortening attention spans, encourage instant gratification and make young people more self-centred and lacking in people-skills” (Greenfield, 2003). Yet other neuroscientists, such as the team at the Semel Institute for Neuroscience and Human Development in Los Angeles who conducted some of the first studies on the effect of the digital technologies on the brain, claim that internet usage can help improve some brain functions such as complex reasoning and decision making but disrupt others, such as “people skills”, including empathy (Small and Vorgan, 2008).

Of course the behavioural changes caused by technologies are not restricted to our brains. We have all have direct experiences of the ways in which technologies have changed our lives both at work and home as indeed have our research participants. Digital media have been credited with improving communications, efficiency, availability, flexibility, speed and so on. On the other hand, studies show senior managers working harder and having longer hours than in the past. They are often expected to be available at all times; they have less status, fewer “ perks” and stress is common (Price, 2011). According to the Chartered Institute of Personnel and Development (October 2011), stress is now the main reason for long term absence from work and it is rising. As Ian Price says in his excellent Digital technologies 335 book *The Activity Illusion* (2011), “ for a number of reasons, we risk becoming enslaved by a series of work innovations that, paradoxically, were introduced in an effort to ease life in the office (2011, p. 26)”. We are all aware of our own or our friends’ changes in behaviour; the inability to turn off our mobiles, to go 24 h without checking e-mail, to ignore Facebook, resisting the urge to check e-mails in meetings, and so on. “ Being connected” is the norm but it can be a two-edged sword.

Some of our expectations of technology have been confounded. In the 1970s and 1980s, when computers heralded a new age of efficiency and the future was envisaged as paper-free, hypertext was heralded as liberation.

Introducing hyperlinks into text displayed on screen would, it was claimed, facilitate critical thinking by enabling students to compare different viewpoints. It would free up the mind. It has not worked out like this. Carr (2011) cites a number of studies that contradict these expectations. Readers

of hypertext often clicked haphazardly through pages rather than reading them carefully, they were unable to remember what they had or had not read. One study compared two groups of people in their ability to answer a series of questions; one group searched online, the other searched through paper documents. The latter group outperformed the former. Research continues to show that people who read linear text comprehend more, remember more and learn more than those who read textcontaining links.

The effect of digital technology has been determined for several causes that technology will affect human being. It is Cultural Forms, Visual Arts, Literature, Music, and Interactive Multimedia.

### Cultural Forms

Artists working in visual art, literature, and music have begun to incorporate digital technology into their creations. In each case, they have either appropriated existing technology or created new technology to suit their particular needs. The result has been new cultural forms that have called into question the nature of the fields within which they are created, as well as the nature of the artists themselves and the roles and responsibilities of their audience.

### Visual Art

In the field of visual art, new forms have included both two- and threedimensional works produced on computer, collaborative online art, and World Wide Web or CD-ROM-based galleries. Many artists have chosen to use the computer as merely another tool in their creative toolbox; these artists



often combine traditional and digital techniques in their work, such as scanning a traditionally created watercolor and then manipulating it digitally. Many of these works are retained digitally, but often they are printed to paper (or another support, such as canvas or vinyl) and displayed like traditional artwork. Other artists maintain a similar approach, but produce threedimensional instead of two-dimensional images, and these must necessarily remain digital. Three-dimensional images are technically “interactive” in that viewers can rotate the image to see it from different angles or zoom in and out on details, but viewers often cannot make any lasting changes to the image. Artists working in two- and three-dimensional digital art have found online collaboration to be a useful tool. An artist can upload the beginning of a piece to a common server (often the World Wide Web is used), and then other artists are able to access the piece and add to it (Lovejoy 223). While artistic collaboration has certainly existed since the beginning of art itself, online collaboration gives artists physically located vast distances from one another the ability to work together as if they were in the same studio. And in a sense, they are; it’s simply that the studio they are occupying is virtual, rather than physical. This has provided opportunities for collaboration that might never have occurred due to physical logistics. Both digital and traditional art can now be found in virtual galleries on the World Wide Web and in CD-ROM format.

## Literature

In literature, the involvement of digital technology has produced the cultural forms of word processing and hypertext. Word processing is, quite literally, the processing of words, in that the user inputs his or her choice of letters in <https://assignbuster.com/the-impact-of-digital-technology-media-essay/>

order to form words and sentences. Today, users have a great deal of control over the processing of their words; they can change fonts, type size, style, and even the layout of the page if they are so inclined. These changes can be quickly applied to the entire document and modified at will. Also, entire blocks of text can be rearranged to suit the author's purpose. Word processing has changed the way literature is written. Fragments of ideas can be quickly input as the author thinks of them, and then later expanded and moved around with a few mouse clicks. An author no longer needs to interrupt his or her train of thought in order to deal with the structure or mechanics of the writing; changes can always easily be made later. However, while digital technology does allow the author to compose his or her thoughts in a non-linear manner, the final document, whether printed to paper or retained in digital form, almost always assumes the linear format of traditional written or printed text. There is a definite beginning and end, and the document is designed to be read linearly. Hypertext, unlike word processing, is a completely non-linear format. It requires the reader to navigate through linked blocks of text, creating a unique path that may or may not be retraced during subsequent experiences with the work. Often the reader is also able to add his or her own links to the existing hypertext structure. Other readers can then incorporate those links into their own paths if they so choose. The World Wide Web, in itself an important piece of digital technology, is essentially a gigantic hypertext. In its initial incarnation, the Web was solely text-based.

The traditional novel's digital counterpart is hypertext fiction. Authors such as Stuart Moulthrop, creator of *Victory Garden* (1991), have used hypertext

to produce fictional works that allow readers to choose their own path through the story, starting at any of a number of entrance points, and encountering a different story line each time they experience the work. Readers find themselves “empowered in a way never before possible. In hypertext there is no primary axis, no clear road in or out, no coordinates that have priority over any other coordinates except as the reader determines. Thus lacking an authority or guide, the reader is thrust back onto his or her self” (Gaggi 103). By empowering their readers in such a manner, these authors have expanded the possibilities for literary creation.

## Music

Musicians have been working with digital technology since its inception, and have found the computer to be a useful tool for everything from generating random sounds to controlling a sophisticated digital symphony. In recent years, a new musical genre, called “techno” (or more broadly, “electronica”), has emerged. Essentially, techno music can be defined as music that consists of mostly digitally created and sampled sounds and beats, or “grooves,” arranged in a repetitive, rhythmic manner and usually played at clubs and parties for the purpose of dancing. While there are myriad subgenres in the broad category of techno (drum ‘n’ bass, jungle, ambient, and trance, to name only a few), they all share one common element: the involvement of digital technology in their production (hence the name techno). Techno music is created by mixing together clips of sound, known as samples. These sound clips can be culled from existing sources, such as a music CD, or they can be created from scratch using specialized computer software. Also, mixing can be done in the studio or live at an event

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such as a rave. Artists who mix in the studio often burn their creations to CD for distribution purposes, but many are turning to the popular MP3 format, which allows music to be compressed into a small file with virtually no loss of quality. The artist can then distribute these files via the Internet and reach a much larger audience.

Mixing sound samples together is not a new technique exclusive to digital technology; hip-hop artists have been manually mixing beats for years using only two turntables and a mixing board. In fact, many techno DJs today still rely exclusively on analog equipment. While vinyl, for the average person, has all but disappeared in deference to the CD, in the specialized world of the DJ one finds entire stores devoted exclusively to vinyl, and most techno artists (as well as a surprising number of artists from other musical genres) release their albums in both CD and vinyl format. Despite the ubiquity of analog equipment in DJ culture, most techno artists who produce their music in the studio do use digital technology at some point. Herein lies the essential difference between a techno

### Interactive Multimedia

In addition to affecting the cultural fields of visual art, literature, and music, digital technology has also produced a hybrid cultural form known as digital multimedia. While multimedia did exist before the advent of digital technology, digital multimedia is quite different from its predecessor. One major difference is that most digital multimedia works exploit the interactive aspect of digital technology. Viewers are able to travel through virtual space and interact with the digital forms they encounter, thereby creating new

forms and pathways that they and other viewers can experience. Interactive digital multimedia is most often encountered in CD-ROM format, since the bandwidth issues of the Internet in its current state make Web-based interactive multimedia impractical for all but the most high-end user. However, new technologies are currently being developed in both file compression (i. e. Flash for animations and MPEG for streaming video) and bandwidth delivery (i. e. cable modems and DSL) that promise to greatly improve the capabilities of the Internet and make Web-based interactive digital multimedia commonplace in the near future. It is within interactive digital multimedia that one finds the traditional roles of artist and audience most in question. One is no longer strictly a visual artist, writer, or musician, but rather a “ critical cultivator, first searching to comprehend the possible meanings that emerge from this accumulation of nanocircuitry and indeterminate layers of code, then trying to reconstitute those emergent phenomena in such a way that they can become part of an evolving cultural discourse” (Shaw 165). Even the genre-neutral terms “ producer” and “ creator” are troublesome, since the aspect of interactivity in digital multimedia makes the audience as important an influence on the development of the work as the so-called “ creator.” While these issues do occur in other digital cultural forms as well, the very nature of interactive digital multimedia provides the most fertile environment for the exploration of these issues by both artist and audience.

In conclusion Digital technology and its increasing prevalence have impacted human life radically in the last few decades. From the advent of the digital society, spawned by the invention of the computer and ENIAC, one of the

first digital computers in 1946, to the present day, digital technology and computing have worked their way into more areas of life, from communications to finance to social interaction. You can see the impact daily in homes, schools and offices. The impact of computer technology on our lives makes much sector change in word of work. Computer technology is such a big factor in everyone's lives today. In my own life I cannot leave my house without my mobile phone I feel secure when I have my mobile phone with me so I can be contacted or if i was ever to be in trouble I could ring my family. Also social networking is another great form of communication. people who live in different countries and want or need to contact with friends or people from across the world, they can just set up a personal profile on a social networking site and work from there doing this safely and securely for them. Computer technology is also in schools for basic training for computers themselves as people can now do online courses to further their education, fitting this into their own schedules. Skype is also a great invention as I have family who live abroad so I and my family can always talk to them and see their faces its great as you wouldn't see them for months at a time.