DIGITAL CULTURE AND DIGITAGOGY: A LIFE OF A DIGITAL CULTURALIST AND A DIGITAGOGIST

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Abstract

Digital culture has been permeated into the minds and souls of all of us: the teachers, the parents, the community and also our students. Some of us still in our second industrial revolution era, the printed culture, and others are in the third industrial era still framed by the electronic gadgets, and now our students are in the digital culture where each digit of the culture is regulating our life. Many of our teachers, should they be aware or not of this change, are trapped in their own era while students are moving towards the digital life where each part of our life is regulated by digits. These digits inform us on our current blood pressure, the beats of our heart, what to eat, what to drink, what to wear, when to rest and how many hours of sleep are needed to maintain good health. Thus, teachers then should move faster since the digital culture keeps changing with higher paces of speed. They should be provided with the early childhood education, pedagogy, andragogy, gerontology, peeragogy, digitagogy, cybergogy and heutagogy. All of these 'gogies' will make the life of teachers easier if they are competence in using and understanding the digital system that regulate our educational life in this 21st century. The life of a person with digital culture is entering into our classroom, house, environment and community. The choice for us is to adapt or to adopt, and there are no ways to escape.

Keywords: Digital Culture, Peeragogy, Digitagogy, Cybergogy, Heutagogy, Digitalist

INTRODUCTION

A Digital Culturalist

Digital Culture is a culture that is shaped and influenced by the contemporary phases of communication technologies (Gere, 2002). The oldest phase of communication and method of teaching was the '-lore' culture where we transferred our knowledge through verbal ways using the '-lore' that were uttered by the 'knowers' to the unknowers'. This is known as "folklore"; the longest form of teaching and learning in human history and communication. By tradition, folklore as the oldest form of storytelling echoes the culture of a country where the learners sense the values, humor and lifestyles of its people (Krapp, 2005).

The second phase is the phase when human started inventing alphabets and numbers without 'zero', known as the print culture. Print culture represents all shapes of printed texts and other forms of visual communication (Frank, 2018). The third phase is the 20th century filled in with electronic broadcasting culture that send messages from one place to another across the globe using electronic modes, followed by similar modes but with pictures. Kumar and Dangi (2016, p. 70) explain broadcasting as "the distribution of audio and/or video content to a dispersed audience via any electronic mass communications medium". Our life is now amplified and accelerated by the

popularity of network computers, personalized technologies and digital images. We are regulated by the digital system that was initially invested by Imam Al-Khawarizmy, now known as "Algorithm" using the Arabic numeric, 1-0 (Sasser, 2000).

The presence of digital culture is mostly associated with a more intensive use of communication technologies. Digital culture is defined with all kinds of changes that are brought about by the presence of digital, network and personalized media that are changing rapidly within our society. For those who grow up through different phases of communication, it comes as normal, changing from one mode into another. We have experienced the change from communication phases that were centered on print and broadcasting media, to a more personalized network media. Now we are in the era of digital compressing and processing capacities at their core with the speed that were never imagined before this era.

Furthermore, digital culture can also be defined as a blanket concept that describes the idea that technology and the internet has significantly shaped the way we interact, behave, think, and communicate as human beings in a societal setting. It is the product of pervasive technology and limitless access to information—a result of disruptive technological innovation within our society (Li, 2012).

Digital Lifestyle

Digital culture is now a lifestyle, and each of us will be with it. Digital culture is the Internet, the trans humanism phase of our life. It is a cyber-life with advantages and disadvantages. Tun Mahathir Muhammad, the prime minister of Malaysia today, developed a part of Malaysia in the Sepang District, Selangor, and calls it Cyberjaya. This small town with cyber technology is adjacent to, and developed along with Putrajaya.

Cyber has been permeating into our life without us being aware of it. It has its own cyber ethics, cyber security, cyber privacy, and cyber policy. Meanwhile, the cyber-crime can be in the form of hacking other privacy, social engineering, and has become a part of the modern psychology. More contextually, digital culture is using social media as our main mode of interaction with others. We are sharing almost every moment of our life on the internet. The *selfie* is another phenomenon of our life and with the combination of the streaming obsession, we reveal ourselves to the world to the anonymity provided by online communities in our computer, in our smartphones and other innovation in media and communication technology.

Digital culture is applicable to multiple topics. It all boils down to one that is the relationship between humans and technology: humanistism and digitalism. We have taken the humanistism and digitalism as ideas that are often overlooked, as technology becomes the second mode of life in our society. In this digital era, we have entered the life of modern technology where we enhance or alter the quality of our living to accommodate our changing environment, communication and ways of fulfilling our needs. The paces that we naturally use, now have become "electronically and digitally on-demands", i.e. movie on demand, food on demand, clothes on demand, etc., using the computing system in our life.

The technology moves so fast and there is no way to avoid it, but we have to innovate ourselves to adapt and finally adopt. Teachers must bear in mind that technology will never pause, with more to go using the Moore's law. Moore's law is the observation that the number of transistors in a dense integrated circuit doubles about every two years. The observation is named after Gordon Moore, the co-founder of Fairchild Semiconductor and Intel, who described a doubling every year in the number of components per integrated circuit, and projected this rate of growth would continue for at least another decade (Moore, 2006).

TEACHING WITH DIGITAL APPROACH (DIGITAGOGY)

Digital Culture

The history of "pedagogy" can be traced back to the period of 1350–1400 when this science was introduced by the name of "pedagogy", most commonly known as a science on how to teach. Pedagogy is the study of how knowledge and skills are exchanged in an educational context. They vary greatly, as they reflect the different social, political, cultural contexts from which they emerge (Li, 2012). In this context, teacher acts as a facilitator and the students are the agents that make the changes. Freire (2006) sees the process of education as a banking system, where the teachers are the knowledge holders and the students are the recipients of the knowledge.

The pedagogy for pupils learning at a kindergarten is known as "early childhood education" (Bertram & Pascal, 2016). When children are about to mature, it is known as "teaching for adolescence" (Girod, Pardales, Cavanaugh & Wadsworth, 2005). The science of teaching for the mature and older adults is called "andragogy" (Knowles, 1988), and when these adults turn into the "elderly", the way to teach them is altered to "gerontology" (Formosa, 2002).

We used to live in an oral way of communication, the way to teach was "talk and chalk", then proceeded to the printed media, and we used different kinds of textbooks and other kinds of literature. Decades after that, we moved into an electronic world and we transmitted information electronically. Two decades ago, we left the electronic era and now we are in the digital era.

Digitagogy

Teaching now becomes easier for teachers and students who are literate with the digital world. Many of our graduates could not pass the last CPNS (*Calon Pegawai Negeri Sipil* or the Candidates for Civil Servants) tests due to having high illiteracy in this digital world. Similarly, many of our university graduates cannot pass the entry exams, interviews and tests using the digital computing system in order to become employees of private and state companies or even to be government employees. There are also incidents that airplanes crash into an ocean due to the illiteracy of the airport operators who are not well-familiarized with the digital world that we live in today. And thus, many of us are now "alphabet literate" but "digitally illiterate".

In order to survive in the Digital Culture, we must be literate in it. We have to teach children using the approach in this culture, that is the Digitagogy, a method of teaching where digital systems are used by teachers in transferring the KSAs. KSA is known as Knowledge, Skills and Attitudes (Winterton, Delamare-Le Deist & Stringfellow, 2005). The students should also use similar techniques in acquiring the

KSAs from their teachers and from other learning providers available on line. Moreover, Digitagogy is also process of teaching by using a variety of apps available in the internet. ASEAN Miniteries of Education has developed a "cloud", known as SEAMOLEC Innovative Educational Resources for Remote Areas (see http://mooc.seamolec.org/) where thousands of teaching materials are transferred and transmitted through and by using the digital technology. The materials and the networks are free for all teachers in Southeast ASEAN nations.

THE NEW GOGIES

Peeragogy

With an easy access to open education resources, free and inexpensive communication platforms available twenty four hours a day, seven days a week and 12 months in a year, groups of people can now learn together outside as well as inside formal institutions without any time boundaries. They learn and teach each other. This mode of teaching and learning is called "peeragogy" (Rheingold, 2014, see Figure 1). The word peeragogy comes from two words, 'peer' and 'agogy'. The Latin word it is calld "pearagogy", with similar meaning in English.

Once a group is formed, formally in a classroom or informally using the "virtual floor", they become "peer" or friends with different age groups or, in many cases, it may be within the same age groups. The internet system helps these peers to learn from each other. The facts proves that the learning is more escalating from regular classroom meeting. And so, when a teacher is familiar with the system, he or she can teach the students at school and at home using the online digital system available on the internet. In many cases, it can also be in the spare time of the teachers with the readiness of the students. This is the advantages of peeragogy. Either learning individually or in group, the student can pace him or herself in learning.

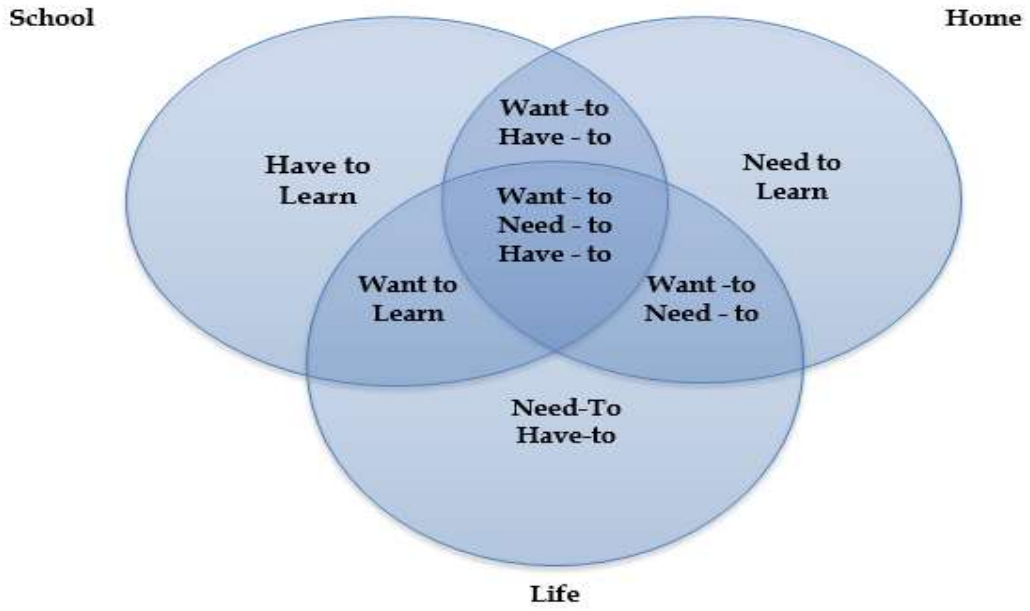

Figure 1. The peeragogy model by Howard Rheingold (2014).

One a group is formed, formally in a classroom or informally using the "virtual floor", they become "peer" or friends with different age group and, in many cases, it may be within the same age group. The internet system are helping these peers to learn from each other. The facts proves that the learning escalating from regular classroom meeting. When a teacher is familiar with the system, he or she can teach the students at school and at home. In many cases, it can also in the spare time of the teachers with readiness of the students.

In digital learning, students are motivated to learn based on their needs to improve their KSAs. These include:

i) directly related to his or her life,
ii) improve the chances of getting better in my life, and
iii) a will of yearning to do something that serves a purpose of bigger that just for themselves because they are also teaching others through the "peeragogy".

Another fact about digital learning is that students are learning, not only from their peers, but may also be from well-known and world-famous educators through websites, personal blogs, etc. Admiring is another form of motivation for learning. Through this learning, they are also forming a network with similar interests with their members. The tasks of a teacher is to guide them to collect positive information from the "cloud" that provides the services.

Cybergogy

Cybergogy is a process of teaching where teachers direct the students to learn online using programs and materials developed by thousands of providers available on the internet. It is a descriptive label for strategies for creating engaged learning activities online (Wang, 2007). Cybergogy focuses on helping adults and young students to learn by facilitating and technologically enabling learner-centered, which are mostly autonomous and collaborative learning in a virtual environment. The core of cybergogy is the awareness on the strategies use, in which it is not the same with face-to-face learning compared to virtual environment.

This mode of pedagogy has been intensively used lately by teachers who are literate on the uses of computing platforms available online. One of the main problems in applying these methods are to the teachers who are digitally illiterate. In the case of Aceh, many teachers are not able to use even a simple media available around them. In the visits from senior staffs of the *Majelis Pendidikan Aceh* (Aceh Education Council), it was found that many of the simple cybergogy modes available at the school are not properly used and some are not even touched since they were installed at the school.

Heutagogy

Heutagogy is the study of self-determined learning and applies a holistic approach to develop learners' capabilities with the learning services as the major agent in their own learning, which occurs, as a result of personal experiences (Hase & Kenyon, 2007). In Peeragogy and Cybergogy, the two modes of learning and teaching require students to work together to achieve the goals that have been set for them. In Heutagogy, students progress themselves using their own personal paces on the understanding of the lessons.

With the use of technology, especially the skills of using the computing machine, a student may find it interesting to move forward to achieve the goals that have been set by the teachers, by the school and by the curricula. By understanding the three different new pedagogies, teachers should be sensitive to differences among the students. Some may prefer it to learn personally and others may tend to learn together with their peers. Having collaborative works will result in bigger innovation and technology for human development (Maffey, Homans, Banks & Arts, 2015).

It can be concluded that Heutagogy encourages students to become and more self-directed, at school and or at home. Peeragogy encourages students to work together in co-learning and in co-creating. The Cybergogy encourages students to engage in online environments. Being selective is recommended when using this three "modern gogies" among the teachers in this digital culture because studies have found that students are more advanced than their teachers with digital skills in the classrooms today (Muslem, Yusuf & Juliana, 2018; Silviyanti & Yusuf, 2015).

Andragogy and Gerontology vs. Heutagogy

Andragogy is the ways of teaching adults, while the Heutagogy can be used for both adults and children as well. Gerontology, however, is exclusively used when teaching the elderlies within our society. The following are the differences between the three gogies.

Table 1. The differences between Andragogy, Gerontology and Heutagogy

No	Andragogy	Gerontology	Heutagogy
1	Focus on contents	Focused on direct application	Focused on process
2	Instructor/learner coordinated	Instructor/learner Coordinated	Learner directed
3	Single-loop learning	Single loop and immediate application	Double-loop learning
4	Linear learning design	Linear learning design	Non-linear learning design
5	Competency development	Leisure directed	Capability development

DIGITAL CULTURE AND HIGHER ORDER THINKING SKILLS (HOTS)

By using the digital network, students are driven to develop their capacity of HOTS (Higher Order Thinking Skills) (Ali, 2012). Their motivation to search through thousands of network and Internet providers will lead them to develop HOTS that are essential for innovation and technology that are useful for developing our nation. Their thinking will be more organized because they will bank their ideas and opinions based on the structure of the knowledge. Students are trained to find, analyze, evaluate, curate and act on the best available information available in the Internet and other sources. Rheingold (2014) explained the skills needed for digitalists are:

i) critical thinking,
ii) developing collaborative networks,
iii) finding ways to solve conflicts
iv) have the capacity to make proper decisions
v) tolerance towards the differences of others,

vi) have patience in solving problems, and
vii) passionate to achieve goals.

If students are guided properly by teachers, students will become thinkers with higher levels of capacity. With the influences of the "known figures of the world", it will assist them to be critical and more advanced in thinking and working.

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