IMPACT OF DIGITAL TECHNOLOGY ON BUDDHIST EDUCATION

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ABSTRACT

Digital technology is transforming every aspect of our life and also rapidly changing the education system throughout the world. People all over the globe are slowly shifting away from the traditional classroom based model of education. Students are also learning more outside of the classroom through various digital devices via modern smart enabled TVs, cell phones, computers, tablets, iPads and all the other multiple platforms. Professors and students are able to communicate more efficiently with each other with the help of digital technology. The advent of digital technology into the Buddhist education brought it into new territory with opportunities for Buddhist scholars, students and practitioners. In this digital age, there is a need for Buddhists to incorporate new technologies into their education systems to keep pace with modern methods. Buddhist education will remain ineffective without bringing about some substantial modifications to educate the young generation with Buddhist wisdom and values. Buddhist academics should use digital tools to promote their scholarly works carefully. Here in this paper, an attempt may be made to discuss how the technology is impacting Buddhist education in this digital age in both positive and negative manners. What are the online resources available for Buddhists to use for their research and practice?

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1. POSITIVE IMPACT OF TECHNOLOGY

1.1. Interactive learning environment

Use of technology such as audiovisual material, and PowerPoint causes classes to become more interesting and creates a more interactive learning environment. New literacy is breaking boundaries by integrating video, images, music, and animation features to the traditional print media (Collins & Halverson 2009, p. 13). As Hamilton points out:

Technology offers ways to deliver content, meaningfully connect with students, and model rigorous academic discourse without the difficulties and challenges associated with assembling five hundred students and their phones, tablets, and laptops in one room to watch a small figure forty rows away read through his or her PowerPoint slides for an hour. (Lupton et al. 2018, p. 113)

Teachers are using different learning management sites, such as Moodle to interact with students. Students are using such site to do their homework and write a reflection on lessons on the basis of what they have learned in the class (Collins & Halverson 2009, p 13).

Most of the schools and Universities are beginning to utilize smart classrooms with digital tools for teachers and students to assist them, and certain schools are turning into smart schools.

As Lupton, Mewburn and Thomson highlight "*the discourse of smart schools is accompanied by that of the 'smart university', a model of tertiary education in which academics are proficient in employing digital media for teaching and research are equipped in accessing data analytics to measure and monitor student learning and their own teaching performance*". (Lupton et al. 2018, p.6)

1.2. Globalization of Buddhism

Technology plays a big role in globalizing Buddhism. Buddhist teachings are transmitted through digital media and the Internet. Many Buddhist TV channels run by various Buddhist organizations are running 24 hours programs which are directed towards disseminating the Buddha's teaching in Taiwan (BLIA TV, Da Ai TV), Nepal (Bodhi TV), Sri Lanka (The Buddhist TV), Thailand

(DMC TV) and other countries.

Another effective way of dissemination of Buddhist teaching is offering online classes. More people outside the classroom are able to attend the Buddhist lectures through online streaming. In the 21th century, distant learning and online education became an internal part of education in Buddhist Universities. It has already made a huge impact globally. Students around the world can enroll in a distance learning course from different Universities and are able to receive credit for the courses.

Recently, some Buddhist academics have started sharing their publications and books at an open platform such as Academic. edu and Research Gate. Such platforms became a good source for scholars to find academic papers and resources for their studies This platform only allows academics to connect with each other and share their works (Lupton et al. 2018, p. 3).

Academics are now using such platforms such as open access publishing, blogs, academic,edu and ResearchGate to promote their research works. Such platforms give them a diverse audiences from both within and outside the academy. It will help the academics to find a better job and there are better chances that others will read and cite their works (Lupton et al. 2018, p. 3-8).

1.3. Network of Buddhist Scholars

H-Buddhism Network allows Buddhist scholars to communicate with each other. It serves as a tool for exchange of information. Any scholar can ask a question on H-Buddhism and post news about his/her publication, new research projects, academic resources and job opportunities for it. Thousands of scholars around the world are benefiting from such a network (H-Net: Humanities & Social Sciences Online, 2018).

1.4. Digital Resources

1.4.1. Digital Buddhist Canons

In the 21st century, a majority of Buddhist scriptures written in Pāli, Chinese, Tibetan, Sanskrit and other languages have been digitized, most of which are freely made available in both CD Rom

and Internet for public use. This digitization of Buddhist texts is said to have begun in the late 1980s (Lancaster 2003, p. 79-86).

1.4.2 Pāli Buddhist Canon

The Mahidol University in Bangkok first digitally recorded the Siam edition of the Pāli canon (Lancaster 2003, p. 79-86). Then other groups have also followed suit by starting to input the Pāli canon. Currently, there are four versions of Pāli Tipiṭaka publicly available in digital format. They are as follows (Wittern 2000, p. 461-501):

Thai version of the Pāli Tripitaka (BUDSIR)

Pāli Text Society Edition

Pāli Tripitaka in Sinhala Script

Chaṭṭha Saṅgāyana (Sixth Council) Edition

Chaṭṭha Saṅgāyana (Sixth Council) Edition Site: https://www.tipitaka.org/chattha

1.4.3 Chinese Buddhist Canon

Chinese Buddhist Electronic Texts Association (CBETA) Site: http://www.cbeta.org/

The digitization of Pāli Buddhist Canon was followed by the input of Chinese Buddhist Canon. Two scholars, namely Christian Wittern and Urs App in Japan started to input Chinese Zen texts (Lancaster 2003, p 84). Later, in 1998, Venerable Hengching, Taiwan University and Venerable Huimin founded Chinese Buddhist Electronic Texts Association (CBETA) in Taiwan. CBETA made available six volumes of the Taisho Tripitaka on Internet and CD Rom in 1998. From 1998 to 2007, CBETA completed the digitization of Taisho Canon and Manji Continued Canon. Today, CBETA offers the Taisho Tripitaka (2373 titles in 8982 fascicles), Manji continued Canon (1229 titles in 5060 fascicles and Jaixing canon (285 titles 1659 fascicles and other, both on CD-ROM and on the CBETA website free of cost (Tu 2016, p. 321-335). Korean edition of Chinese canon on CD-ROM and the Internet are available for use (Lancaster 2003, p. 84). The International Dunhuang Project has been instrumental in digitization and preservation of significant amount of rare manuscripts found in Dunhuang caves. Those collection of thousands of manuscript images are available online for use (Lancaster 2003, p. 84).

Besides CBETA, there are another two projects which have been digitizing Chinese Buddhist texts:

i. The Tripiṭaka Koreana

The Tripiṭaka Koreana or *Goryeo Daejanggyeong* in Korean, is a Korean collection of Tripiṭaka consisting 81,258 wooden printing blocks in the 13th Century carved during the Goryeo Dyanasty of Korea (918-1392 CE). It is kept at Haein-sa Monastery, South Gyeonsang Province, South Korea. The Tripiṭaka Koreana project (http:www.sutra.re.kr) was started in 1992 and completed the digital input of the Tripitaka Koreana in 2000 and were made available on a CD-ROM and the internet (The Research Institute of Tripitaka Koreana, 2019).

ii. The SAT Daizōkyō Text Database

The 2012 edition of the SAT Daizōkyō Text Database provides the online Taishō Shinshū Daizōkyō. The users are allowed to view the image of the original pages with the zooming feature. This SAT database is widely used by Buddhist scholars in Japan. However, it is slowly getting popular outside Japan (The SAT Daizōkyō Text Database, 2008).

1.4.4 Tibetan Buddhist Canon

The Asian classic Input Project has been undertaking the input of Tibetan Buddhist canon since 1988 (Asian Classics Input Project 2018). The Asian classics Tibetan Digital Library provides the entire Kangyur (nearly 1000 ancient books containing teaching by the Buddha, the Tengyur (3700 commentaries on Kangyur) and the Sungbum (5000 additional commentaries texts) for free download (Asian Classics Input Project 2018).

Asian Classics Input Project Site: https://www.asianclassics.org/
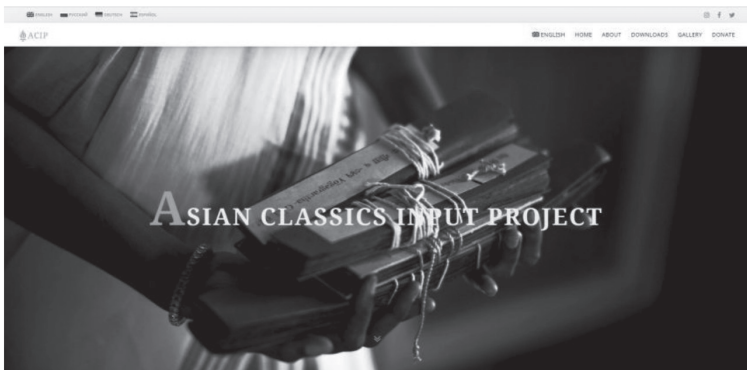
Another ground breaking project called the Buddhist Digital Resource Center (formerly Tibetan Buddhist Resource Center) has been digitizing Tibetan Buddhist canon since 1999 by E. Gene Smith (1936-2010). BDRC has already completed digitizing over 15 million pages of Buddhist works. It has been used by academic scholars, translators, practitioners and students in the world (Buddhist Digital Resource Center 2019).

1.4.5 Sanskrit Buddhist Canon

In 2003, the University of the West, California, in cooperation with Nagarjuna Institute of Buddhist Studies (NIBS) in Nepal, initiated the Digital Sanskrit Buddhist Canon project. Ven. Master Hsing Yun, founder of Fo Guang Shan, Kaohsiung, Taiwan and founder of the University of the West, kindly consented to be sponsor of this worthy project under the joint leadership of Dr. Lewis Lancaster and Mr. Min Bahadur Shakya.

This project is not only a digitization effort, but at the same time an ambitious attempt to devise a Buddhist "canon" in Sanskrit. The project was named the "Digital Sanskrit Buddhist Canon" even though the complete tripiṭaka in Sanskrit, the "Sanskrit Canon" proper, had disappeared from the Buddhist world long ago. The DSBC project has already digitized over 630 texts (about 53000 pages). Currently over 400 scriptures are freely offered on the DSBC project's website at http://www.dsbcproject.org/ (Digital Sanskrit Buddhist Project 2018).
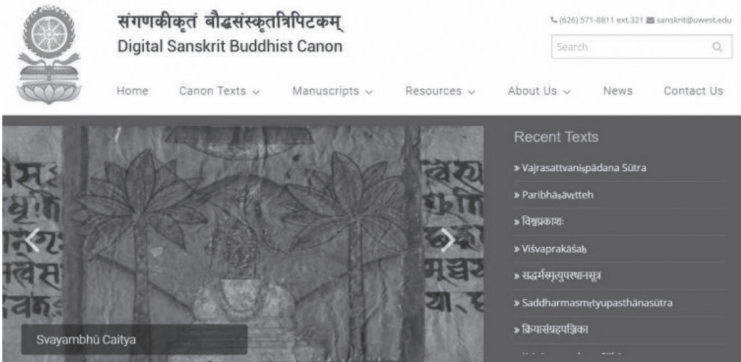
Digital Sanskrit Buddhist Canon Project Site: www.dsbcproject.org

These valuable resources of Buddhism Canon can be copied to our computers and the identical versions of any digitized canon can be reproduced whenever we want. A student or scholar who has access to these resources, is able to develop comprehensive research on the particular text or word and he or she will able to compare it with various editions in different languages on the same platform. As a result, their research goals can be achieved in a short span of time without defraying any cost whatsoever. The latest technology can extend their research far beyond what used to be previously possible.

1.5. Digital Archives of Journal, Books and Dissertations

The Journal of Buddhist Ethics has been available online since July 1994. It is quite successful in drawing an audience. Currently, it has over six thousand subscribers around the world. There are various online line resources like Buddhanet.net of Buddha Dharma Education Association Inc., Australia, and Buddhist Studies WWW Virtual Library at the Australian National University, DharmaNet International, and Access to Insight: Readings in Theravāda Buddhism site which freely provide a large amount of information in the fields of Buddhism and Buddhist studies to all (Prebish & Keown 2010, p. 271-72).

2. NEGATIVE IMPACT OF TECHNOLOGY

There are certainly some negative impacts that the development of new technologies has brought together with them. These technologies cause a number of problems for teachers. It demands a lot of new skills that the teachers may not have received in their academic studies. The teachers do feel that their expertise in the field has become redundant or limited due to the students having free access to unlimited amount of information (Collins & Halverson 2009, p. 6).

Online materials are not always trustworthy, and may cause some problem when they are used for the students' research. Nevertheless, there are some authentic academic sites which the students can visit like J-Stor digital library of academic journals, books and primary sources or google scholar and any other site run by authentic education organization. Some of the tools and platforms for sharing scholarly work became commercialized and

have been controlled by corporate enterprises. There is a danger that such sites will turn into commercial sites and make a profit on the material that academics are sharing free of charge (Lupton et al. 2018, p.5).

2.1 Lack of hand-writing skills

With the excessive use of desktop and laptop computers, students feel paralyzed if they have to dispense with those devices. Furthermore, many hand-writing skills have also become seriously limited from lack of use. As a result, the students are feeling reluctant to write even a few sentences. This has slowly led them to forget how to write. What is more, they even tend to misspell words when they start writing. This has emerged as a big problem today. Heavy dependence on the computers is growing faster and faster.

2.2 Distraction

Students are constantly using cell phones and other electronic devices, which often distract them from the instructor's lecture in the classroom. The students should not be allowed to use such devices unless necessary. Some schools have even started to make their classrooms mobile free zones.

2.3 Health issues

Computers, Internet and social media have become an integral part of our daily life. Regular physical activities of people have reduced dramatically due to increased usage of screen time among the new generation. It is causing a negative impact on individuals' health to some extent. It is very important to moderate the use of such device and increase the physical activities to prevent health issues in the future.

2.4 Misuse of social media

The growing usage of social media has some negative impact on people. Some employees or faculty of University have caused problems by posting some sensitive material to social and other digital media outlets. In such circumstances, there is a question about ethical concerns. It has caused the loss of some teacher's job (Lupton et al. 2018, p.11).

In some jurisdictions teachers are banned from becoming friends with their students on social media or giving them access to their profiles. Some universities have instituted policies for staff's use of social media, but many provide little or no guidance to their employee. (Lupton et al. 2018, p.11)

These social media platforms are extremely vulnerable in terms of controversies and involving the blurring of boundaries between students and teachers. Academics who use these platforms should be extra cautious when they post anything on social media to prevent such mishaps in the future (Lupton et al. 2018, p.12). Now explicit materials are also freely and easily available on the internet which leads to growth of crime like rape, sexual violence, and aberration etc. It has tremendous negative impact on the growing population of children and adults.

To sum up, the new technology has definitely helped us to enhance the capabilities of learners. It has changed the study of Buddhism in a good way. The digitization of various editions of Buddhist canon has expanded the scope of researchers. However, scholars and students are still not properly taking advantage of these digital resources. There is a need to offer more preparatory classes to students so that they can utilize these digital resources more efficiently.

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