



REVISITING THE DIGITAL DIVIDE IN THE CONTEXT OF ONLINE TEACHING LEARNING PROCESS IN THE COVID-19 ERA

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Abstract:

The diffusion of the Internet is proceeding very fast but unevenly through out the planet. Major differences remain in Internet access and usage around the world – the so called “digital divide”. This article discusses the phenomenon of the digital divide with special reference to online teaching and learning in the covid-19 era. It describes the challenges associated with access and use of information and communication technology for achieving the desired goal. The article also highlights some of measures to bridge the gap.

Key Words–digital divide, Information and communication technology, internet exclusion, pandemic

Introduction

The field of internet studies grew exponentially in scale and scope in a mere handful of years beginning in the late 1990s. It built on a platform of enthralled commentary about “cyberspace” (Barlow, 1994, p. 26) which would be a new kind of place, perhaps a technological utopia (Dunlop & Kling, 1991, p. 14). The early studies of internet use and gaps in access revealed a digital divide in society (Kahin & Keller, 1995; Kraut, Scherlis, Mukhopadhyay, Manning, & Kiesler, 1996; National Telecommunications and Information Administration, 1995; Wresch, 1996). The internet exclusion issue, which can be viewed on a global (Norris, 2000) as well as national (Cartier, Castells, & Qiu, 2005; Husing & Selhofer, 2004) and local (Li Shu-Chu, 2004) level, has received a great deal of political, scholarly and popular attention recently because of the pandemic.

In the mid-1990s, the term digital divide was used to describe the relative disadvantage of those who do not have access to or are not equipped to use computers and the internet. The differentiation between Internet-haves and have not adds a fundamental cleavage to existing sources of inequality. Social exclusion appears to increase the gap between the promise of the Information Age and its bleak reality for many people around the world. Manuel Castells notes, “Differences in Internet access between countries and regions in the planet at large are so considerable that they actually modify the meaning of the digital divide, and the kind of issue to be discussed.”

The “digital divide” originally denoted unequal access to the Internet because of characteristics such as gender, age, race, ethnicity, education, income, geographic location, English-language ability, and physical and cognitive disability (NTIA, 1995). Gradually gaps of gender, age, and geographic location have decreased. The socioeconomic threshold of Internet access continues to sink with the influx to cyberspace of newcomers from less-privileged social groups (Katz & Rice; Howard, Rainie & Jones; Fong, Wellman, Wilkes & Kew, 2001). DiMaggio and colleagues (2004) were among the first to offer a theoretical framework that accounts for the factors and outcomes related to digital inequality. Their report highlights five aspects of inequality related to information and communication technologies: the quality of hardware, software and network connection, autonomy of use, skill, availability of social support; and extent and quality of use. According to them the demographic and socio economic factors influence the level and quality of the first four factors which in turn influence the types of uses, which then result in differentiated benefits and opportunities, and thus divergent life outcomes.

The fundamental digital divide is not measured by the number of connections to the Internet, but by the consequences of both connection and lack of connection. Internet is not just a technology; it is the technological tool and organizational form that distributes information power, knowledge generation, and networking capacity in all realms of activity.

The digital divide and the teaching learning process

The availability of information on the Internet provides a major learning resource for students of all age group, in terms of awareness of current affairs, training and remote learning. This could help reduce the divide in education and literacy levels between developed and developing regions as well as helping to narrow rural and urban divides. As the children and the youth are generally enthusiastic adopters of the Internet for communication, entertainment and education, certainly internet has become very popular among the learners in recent years.

The spread of Corona Virus (Covid 19) has resulted in temporary closure of educational institutes of all levels. In the absence of physical mode of classroom interactions; learners around the world are dependent on online learning through virtual classrooms. Teachers & facilitators have acknowledged the needs and are trying hard to adopt the new teaching approaches, technologies and teaching skills. Keeping in view the spread of the novel corona virus, the lockdowns and shutdowns, there is a need to revisit the digital divide as Internet becomes a very prominent medium to compensate physical classes.

Various kinds of e-learning solutions are frequently presented as panacea for all problems in education (Bork, 2003). There is a plethora of initiatives that aim at improving education through the introduction of information and communication technologies (ICTs) like different online platforms using mobiles, laptops and desktops, open content repositories, TV-broadcast classes, recorded audio and videos and so on. There are massive online repositories of all kinds of best practices and guidelines for using ICT to support all levels of education, published by academicians as well as government initiatives.

The educational imbalance

Implementation of various e-learning solutions, however, has often turned out to be problematic. Differences in geographical and economic conditions, different educational backgrounds and pedagogical views, language and content issues, usability and technical literacy issues, attitudes and prejudices, and even differences in climate have posed challenges to such initiatives.

Internet-based and internet mediated learning are not only a matter of technological proficiency. It changes the kind of education that is required both to work on the Internet and to develop learning ability in an Internet-based education system. The critical matter is to shift from learning to learning-to-learn. Since most information is on-line, it is necessary to acquire the requisite skill to decide what to look for, how to retrieve it, how to process it, and how to use it for the specific task that prompted the search for information. In other words, the new learning is oriented towards the development of the educational capacity to transform information into knowledge and knowledge into action (Dutton, 1999). The education system as a whole is awfully inadequate in the use of this new learning methodology as there was no preparedness to face the crisis in the pandemic situation. Even if the technology was already there, it was supplementary to physical mode of teaching and learning. The system lacks teachers able to use it effectively, and it lacks the pedagogy and institutional organization to induce new learning skills as well as learner proficiency. The process of developing adequate online education facilities for all will definitely have success stories along with some challenges till each and every learner's needs are addressed.

This educational imbalance relate to the digital divide at four levels. First, because educational institutes are territorially and institutionally (public/private) differentiated; there is a substantial gap in terms of technology adoption and usage among the institutions. Secondly, Internet access requires trained teachers, and yet the efficiency of the teachers (in spite of their individual motivation, often very high) is unevenly distributed among institutions. Thirdly, the differential pedagogy adopted contrasts those systems that focus on the intellectual and personal development of the students with those essentially preoccupied with the ability to maintain discipline, warehouse them, and process them through their graduation. These opposing pedagogical styles tend to correlate with the institution's social status, and with the cultural and economic ability of the parents to put pressure on them. Fourthly, in the absence of adequate training of teachers, and pedagogic reform in the educational institutions, families take over much of the responsibility for instructing their children, and helping them in the new technological world. Here the presence of Internet access at home, and of relatively educated parents with the cultural capacity to guide their children makes a substantial difference.

The cumulative result of these different layers of inequality will certainly impact educational performance of the students. Studies on the matter are scant and do not allow firm conclusions. But in a context where the ability to process information on and with the Internet becomes crucial, learners from disadvantaged families fall farther behind their class mates with greater information-processing skills that they obtain from their exposure to a better-educated home environment. Differential learning capacities, under relatively similar intellectual and emotional conditions, are correlated with the cultural and educational level of the family. If these trends were to be confirmed, in the absence of corrective measures, the use of the Internet, in academic life, could amplify the social differences rooted in class, education, gender, and ethnicity. This may be the most fundamental dimension of the digital divide emerging at the dawn of the Internet Age even though it is argued to have a positive impact on educational achievement and employability.

Bridging the digital divide

Bridging the digital divide inside and outside classrooms is necessarily and increasingly a must if we have to keep pace with the changing scenario in the whole world in the context of the present scenario. Connectivity through wiring or wireless mode, hardware at an individual level and institutional level, interactive blackboards – on lower levels of the educational system – and overhead projectors – on higher ones – are increasingly supporting the interaction between teachers and students. Of course software makes computers run and it also extends the classroom to far beyond its walls and its courses. It is a powerful tool to bridge the digital divide in remote areas, provided connectivity is ensured. Hence, there has been a great deal of debate on the topic of Free/Open Source Software (FLOSS) and FLOSS for educational purposes (FLOSSE), its flagship being the virtual learning environments (VLE) and personal learning environments (PLE) which allow for more and better educational programs.

Digital literacy is the concern as acquiring digital skills and, more importantly, turning them into digital competences are indispensable to bridge the gap. The digital skills are needed for both teachers and learners, because, as new educational patterns and theories emerge, neither group completely masters the digital arena. The new educational patterns, methodologies and theories have emerged both to provide education with a context in the digital era and with a new type of content and services with an emphasis to provide free and flexible content to all students, and to provide free, flexible and cooperative content to their teachers. The focus is not on mere access or usage, but their impact on access is to be measured in terms of returns on investment made in digitizing classrooms; educationally, as the increase or decrease of quality in learning and /or better academic performance, etc.

Conclusion

The divide if not addressed well, can but only make 'the digital divide' even deeper and wider, rendering large cross sections of societies as dangerously crippled and primitive. Without an Internet-based educational system, there is little chance for any country to generate resources necessary to cover its learner's needs in the present context of the covid-19 situation. Of course, these ultimately depend on both teachers and learners. The success of this alternative to physical classroom interactions certainly depends on knowledge and adoption of technology, which are indispensable conditions for any alternative course of action to bridge the gap. It depends on the extent of the digital divide in the country, on the ability to generate a process of social learning in parallel with the building of an information and communication technology infrastructure. It also depends on the managerial capacity of the system to manage the crisis to prevent the broadening of the digital divide, a divide that may ultimately engulf the very purpose of education and the future of the youth. The call for an Internet-based education system, powered by learning and knowledge generation capacity, will be able to operate within the networks of age old value, and supported by all the stakeholders. There is a good chance that these inequalities will shrink gradually resulting in an ameliorating effect in the development of the learners and the society as a whole.

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