

Introduction

[Countries](#), [India](#)



Introduction At the present time, people are living in a world where they have Google to answer all their questions, Facebook and IMs to connect with their networks, YouTube to watch things happen all over the globe, cellphones and laptops to makes their lives easier. However, there are still people out there that don't have the capacity to have these privileges. Thus, building the Digital Divide: a gap that separates the rich and the poor, a gap that is still widening up to this day and a gap that definitely needs to be bridged. This research paper defines and discusses the issues with Digital Divide. It then enumerates the various efforts that have been made to bridge the gap. It also highlights on the importance of improving the digital divide between socioeconomic countries. Lastly, it includes a recommendation and a conclusion on how to decrease the gap further and how decreasing the gap can benefit both the developed and developing countries. Digital Divide The digital divide has a wide range of discrepancies. It could pertain to the gap between those who can use information technology effectively and those who cannot, the gap between the rich and poor or between rural and urban, all of which afflicts people with low income in developing nations.

Furthermore, Digital Divide can be viewed from two angles: “ the existing gap between countries that have sufficient access to electronic information and those that don’t, and (2) the difference in Internet literacy between developed and undeveloped countries" (Brooks, Donovan & Rumble, 2005). This gap creates digital inequality and can widen or narrow down depending on the pace of a country’s growth. Unwin & de Bastion (2009) discusses that the digital divide can further be shaped through the main structural factors: connectivity, accessibility, literacies, content and information, and networks

and communications. Connectivity pertains to the presence or absence of appropriate infrastructure to enable the use of ICTs. Accessibility relates to the gap between those who have access and can effectively use ICTs from those who cannot. It is mostly reflected from the socioeconomic inequalities among different countries. Literacy is described as the inability to understand and use ICTs. Content and information highlights the importance of relevant information as it gives meaningfulness to ones access to ICTs. This issue is seen from the relevant languages available among ICTs, which are usually dominated by the English language and limited to other languages. Lastly, networks and communication pertains to the formation of new ways of communicating to one's network. This factor is evident through technologies like the Internet, which enables people from different geographic locations can communicate easily (Unwin & de Bastion 2009). In Africa, there is an average of 1. 74 PCs per 100 inhabitants, while in Oceania has an average of 50. 84. For telephone subscribers, there are 11. 50 per 100 inhabitants in Africa, 32. 98 in Asia, 76. 66 in America and 111. 72 in Europe on average (Unwin & de Bastion 2009). It can be seen that Africa is the least well-served part of the world in terms of Information & Communications Technologies (ICTs). In developing countries, such as India, the rate of access to the Internet of the urban households in 2008 was 10 times that of rural ones (Singh, 2010). The research also stressed the evident inequality with regards to the portion of female Internet users with 51% in USA and Canada, 43% in Norway, 37% in Germany, 35% in Malaysia, and 19% in South Africa (Unwin & de Bastion 2009). Moreover, digital divide isn't only seen between rich and poor countries; it can also be evident within

the social divides of within countries. The UN e-Government Global Readiness Report accounted that although middle-class UK suburbs had the highest percentage of broadband users, 40% of UK households still don't have Internet access. Furthermore, China added 3.6 million new broadband lines but it was mainly placed only in Beijing, Shanghai and Guangdong, leaving rural areas to minimal connection (Unwin & de Bastion 2009). This highlights that even G8 countries have evident socio-economic differences and makes it even worrying to think how worse the situation is in poor developing countries, where more people don't have access to these technologies. The growing need for ICTs makes it important that access to these technologies be assessed as it greatly affect rural and urban areas, particularly the lower-socio economic groups. It also raises concern with the increasing divide in education, commerce, safety, transportation and other issues. Bridging the Gap After discussing the key aspects of digital divide and the growing need for ICTs, this report will now enumerate the various efforts that have been made to reduce inequalities and bridge the gap of digital divide. It particularly focused on four main actions: developing ICT infrastructure, use of ICTs to promote better learning, improvements in e-commerce, and implementation of government policies. Main issues with the ICT distribution include economic wealth and level of infrastructure, which may influence the supply and demand of ICT diffusion (Billon, Marco & Lera-Lopez 2009). This is because supply of new infrastructure is expected to be located in urban areas with a greater level of infrastructure and there's also a higher demand in these areas (Billon, Marco & Lera-Lopez 2009). Various developing countries have responded to this issue and are now driving

towards eliminating this inequality. The 2nd annual IT infrastructure Africa Summit held in July 2012 at Cape Town, South Africa focused on developing world class infrastructure to improve Africa's ICT sector (kineticevents. net 2012). Nigeria is also driven to improve its ICT infrastructure, including an upgrade of technological equipment in its Stock Exchange (NSE), to work on boosting its economy and competing with international standards (ICA 2011). In another note, there have been a lot of efforts to provide better understanding of ICTs to those who have limited or no access to digital technology at their homes. In the United States, ZeroDivide is a non-profit organisation that works on closing the digital divide through community investments. It has set-up " Generation ZD Digital Literacy Program" which targets low-income, minority, disabled and deprived youth to undergo a digital literacy skills program (www. zerodivide. org 2012). This helps boost computer literacy, promote better learning and improve quality of education. The One Laptop per Child Program (OLPC) is also one initiative that has aimed to bridge the digital divide by providing inexpensive computers with network capability to children who don't have normal access to ICTs (Mansour 2012). It's a low-cost laptop that includes a software that allows interaction and access to information via the Internet and has been especially designed to cater the low power supply in poor urban and rural areas in developing countries. This project aimed to engage the students with innovative learning to improve their educational performance and narrow down digital divide (Bhatta 2008). Development of ICT is also an important factor for the growth of E-Commerce. Rao (2001) pointed out that business around the world are most likely to E-Commerce front-ends to its

traditional business. East Asian economies, such as Philippines, Malaysia, Thailand etc., have been progressing in high-tech areas and taking a large share in the market for data processing equipment and semiconductors (Rao 2001). Taiwan has also put-in efforts to help Central American and Caribbean countries with ICT to enhance these countries' e-commerce capabilities (Hsiu-chuan 2010). The final issue comes down to whether a country's government has set out the right policies and regulations that enable accessibility and affordability of technological infrastructures in order to deliver all initiatives towards developing ICT infrastructure, education, e-commerce, and eliminating the digital divide overall. Rao (2001) reports that countries should provide training to its digital skilled workers and create policies that encourage retention. On the other hand, evidence show that developing countries in Asia have implemented reforms in their telecommunication policies, which has boosted ICT diffusion for mobile networks (UNCTAD 2008). In Germany, its national government guaranteed the access of low-income citizens by providing all households, even the ones in remote areas, telecommunication services (Unwin & De Bastion 2009). This idea might be difficult to implement in developing countries because of weak financial resources. However, alternatives like telecenters and providing computers in rural and remote villages are provided in some developing countries. Furthermore, funding from developed countries is provided to resolve accessibility issues in developing countries (Unwin & De Bastion 2009). Importance of bridging the gap In developed countries, the access to computers and the Internet and the ability to effectively use this technologies have become very important for its people's economic and

social life. These skills have been the norm and made a big impact in people's lives. People use these technologies for higher effectiveness at work, better teaching and learning in schools, online shopping, being self-informed with their health and other needs, and a main tool for communication with other people. The importance of improving the Digital Divide between countries of different socio-economic climates is to promote equality in the economy, society, gender, democracy and improve economic growth (Mansour 2012). First significance is for economic equality. There should be equal access and expertise in ICTs. Increased access to ICTs will improve the potential of having future expertise in using these technologies and result to higher productivity and earnings (Mo et al 2012). Having access to the Internet would also enable everyone, rural or urban, to acquire relevant information they need (Mansour 2012). For example, having a simple telephone or a mobile would be beneficial for communication, sharing of information and be useful in times of emergencies. Bridging the gap would also resolve social mobility, particularly for education, health and gender. Initiatives like the ZeroDivide and OLPC work to raise the educational level of children from developing countries, especially those living in remote and rural areas. (Mo et al 2012). It not only improves the quality of education for the children but also improve the ' digital literacy' of the teachers, facilitators, and other people involved. Funding from developed countries also increase the capacity of specific sectors such as healthcare to provide more availability to information that is vital for people's medical needs (Unwin and De Bastion 2009). This would also mean reducing the social inequality amongst women and increase their capability to have access to

this technologies. The Internet could also be one way of exercising one's freedom of speech. This shows democracy that enables citizen to be more informed, which can increase public participation in elections and be engaged in other political issues (Internet World Stats 2012). However, it should be noted that although it's important to bring transparency and accountability, there's also a need to monitor censorship and avoid sharing and misuse of relevant information. Finally, the increase in use of ICTs and development of information infrastructures would all lead up to economic growth, especially for the developing countries. Having more access, more expertise would increase efficiency and effectivity of one's performance at home, school, and work. It could also give them a boost for competitive advantage (Internet World Stats 2012). Digitization has a very important positive impact. Vollmer (2012) stated that " economically, more countries are able to move up the digitization index and actually improve their GDP performance, job growth, and innovation". Recommendation It is good to see the large number of organisations, governments, and individuals that are all working towards reducing the Digital Divide. However, the gap is still widening up to this day and this calls for more effective efforts that can create bigger impacts to help eliminate the digital divide. One recommendation would be to improve ICT infrastructures for developing countries, as this would enable higher capacity, increase the quality of work performances, and encourage more investors to put money in their market. Next, a solution for " digital literacy" would include efforts of distributing affordable voice recognition software that could help people to understand and use ICTs even if they're illiterate. Increasing the number of languages

available for ICTs would engage more users to improve their skills. Overall, initiatives from worldwide organisations like UN, ZeroDivide, OLPC continue on, as their programs have already made an impact to lives of many people in developing countries. Hopefully, more organisations become more engaged in helping reduce the Digital Divide and promote equality amongst ICT users.

Conclusion This research paper has discussed issues concerning the Digital Divide and the different situations of countries from different socioeconomic climates. It was found that the gap is most evident between developed and developing countries with Africa being the least served continent. However, various initiatives have been made to reduce these inequalities. These efforts mainly focused on developing ICT infrastructure, education, trade, and government policies. The importance of implementing these initiatives is to promote equality in the economy, improve social mobility, increase democracy and improve economic growth; And although there are numerous efforts implemented to reduce the gap, there is still need for programs that would develop ICT infrastructures, improve digital literacy through availability of voice recognition software and more languages be made available for ICTs. Overall, ICTs have the power to eliminate inequality and transform the lives of people, especially the deprived ones in developing countries. It has the capability to help children have better education, aid disabled people, improve productivity of the workforce, and increase the knowledge of everyone else. Eliminating the Digital Divide will enable everyone to share relevant information, communicate with one another, and be empowered to live in equality.

Appendix Figure 1. Telephone Subscribers per 100 inhabitants in 2004. (ITU

2005) Figure 2. Internet users per 100 inhabitants in Africa in 2004 (ITU 2005). Reference List Books Unwin T and De Bastion G 2009, ' Bridging the digital divide', International Encyclopedia of Human Geography, Amsterdam: Elsevier, 191-97. Journals Bhatta, SD 2008, ' Tackling the Problems of Quality and Disparity in Nepal's School Education: The OLPC Model', Studies in Nepali History and Society, vol. 11, no. 1. Billion, M, Marco, R, & Lera-Lopez, F 2009, ' Disparities in ICT adoption: A multidimensional approach to study the cross-country digital divide', Telecommunications Policy, vol. 33, no. 10-11, pp 596-610. Brooks, S, Donovan, P, & Rumble, C 2005, ' Developing Nations, the Digital Divide and Research Databases', Serials Review, Vol. 31, no. 4. Singh, S 2010. ' Digital divide in India: Measurement, determinants and policy for addressing the challenges in bridging the Digital Divide', International Journal of Innovation in the Digital Economy: vol. 1, no. 2. UNCTAD 2008, ' Science and technology for development: The new paradigm of ICT', Information Economy Report 2007—2008, UNCTAD, Geneva. Unpublished works (Theses and working papers) Mo, D, Swinnen, J, Zhang, L, Yi, H, Qu, Q, Boswell, M & Rozelle S 2012, ' Can One Laptop per Child Reduce the Digital Divide and Educational Gap? Evidence from a Randomized Experiment on Migrant Schools in Beijing', working paper presented to Rural Education Action Project (REAP), Stanford University, California. Rao, R 2001, ' E-commerce and digital divide: impact on consumers', thesis presented at Regional Meeting for the Asia Pacific, India Institute of Management: Center for Electronic Governance, India. Webpages Developing world class infrastructure to improve Africa's ICT sector, 2012, Kinetic Events, viewed by 7 November 2012 from . Generation ZD Digital Literacy Program, 2012,

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