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Digital Divide

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Introduction

The 20th Century brought the world many scientific and technological advances. During the Cold War, the race between the United States and Soviet Union to build up their nuclear stockpiles brought a revolution in research and development. Newer, more efficient methods were developed to satisfy the growing need for better weapons and protection. Modern technology has led to the discovery and mapping of the human genome, continued space exploration, human cloning, and other great achievements. One of the most important modern technological innovations came in 1989, when Tim Berners-Lee's creation of the World Wide Web revolutionized the telecommunications industry.[1]

The rapid growth of the Internet in the civilian sector began with the invention of the first graphical web browser Mosaic in 1993.[2] The number of Internet users worldwide grew from nearly three million in 1994 to almost four hundred million users by 2000.[3] Yet, for all the benefits of the technological advances of the 20th and 21st Centuries, new issues have arisen that the international community must address. While the Internet provides the opportunity to instantly communicate with others worldwide, the benefits of increased communication and information dissemination have not reached the entire international community. The phrase "digital divide" refers to the concept that while technological advancements reach those residing in developed states, individuals living in lesser-developed states are largely unable to access or utilize these

The Digital Divide
The term "digital divide" was coined in the 1990s to describe the perceived growing gap between those who have access to and the skills to use ICT and those who, for socio-economic and/or geographical reasons, have limited or no access. There was a particular concern that ICT would exacerbate existing inequalities…namely that people could be disadvantaged by their geographic location, age, gender, culture and/or economic status.

Source: http://www.digitalstrategy.govt.nz/templates/Page____60.aspx

[1] Norris, Pippa. *Digital Divide: Civic Engagement, Information Poverty, and The Internet Worldwdide.* Cambridge: University Press, 2001. 3.
[2] *Ibid*, 3.
[3] *Ibid*, 5.

developments. The concept of the digital divide encompasses three aspects: the Global Digital Divide (GDD), the Social Divide, and the Democratic Divide.[4]

In 2000, the United Nations established one of its Millennium Development Goals as "[ensuring] that the benefits of new technologies, especially information and communication technologies are available to all."[5] To ensure that both developed and developing states can take advantage of important technology, it is critical to reduce the widening gap between industrialized states and lesser-developed countries (LDC). The work done by the international community thus far has only begun to address the challenges facing the international community. Citizens of all states must share in the benefits of the Internet and other innovations of the digital revolution before it can truly be said that the world is in a new technological era.

Background

The digital revolution of the 20th Century profoundly affected the way people around the world live; however, technological innovation such as the Internet, faster computers, and more reliable mobile phone service have not yet reached people living in developing states, leaving them isolated from the developed world. As of 2002, at least 50 *per cent* of the world's population had yet to use a telephone.[6] This high figure is partly due to the remote location in developing states of Communication Technologies Centers (CTC), which have telephone access, and in many areas Internet access as well. In some lesser-developed countries, the nearest CTC can be more than half a day's walk from many villages.[7]

Prominent world leaders have certainly recognized the growing digital divide. United Nations Secretary General Kofi Annan warned, for instance, said that "people lack many things: jobs, shelter, food, health care, and drinkable water. Today, being cut

[4] *Ibid*, 4.
[5] Annan, Kofi. "On the Digital Divide." United Nations Secretary General. http://www.un.org/News/ossg/sg/stories/articleFull.asp?TID=16&Type=Article
[6] Murelli, Elena. *Breaking the Digital Divide: Implications for Developing Countries.* London, Commonwealth Secretariat and SFI Publising, 2001. xvii.
[7] *Ibid*, xvii.

off from basic telecommunications services is a hardship almost as acute as these other deprivations, and it may indeed reduce the chances of finding remedies to them."[8] Likewise, James D. Wolfsenohn, former president of the World Bank, notes that "the digital divide is one of the greatest impediments to development and is growing exponentially."[9] To address this perilous issue, bodies such as the World Bank and World Economic Forum have launched programs like the Global Digital Divide Initiative to bridge the ever-widening digital divide.[10]

Part of the problem in addressing the issue of a digital divide is the lack of a clear, concise definition of the problem. When the digital divide was first being discussed, it was defined as "an unequal distribution of computers, Internet connections, fax machines, and so on between countries."[11] However, a more narrow definition quickly emerged that recognized not only varying levels of access to technology across national borders, but across racial strata as well. The digital divide was labeled "the lack of access to computers and access to training between racial groups."[12] Conversely, others believe that the digital divide refers to a combination of the lack of physical connections, computers, training, and basic literacy. To address the growing gap between industrialized and developing states, the first step must be to clearly define what the digital divide represents to all states.

The Existence of the Digital Divide

Many predicted that by the 21st Century, people around the world would all benefit from progress made in areas such as telecommunications and the computer industry. Yet, the reality is that many developing states, which contain the majority of the world's population, are not keeping up with recent technological advancements. In fact, many developing states continue to fall further behind industrialized nations in the race to

[8] Norris, Op. Cit., 40.
[9] *Ibid*.
[10] Servon, Lisa J. Bridging *the Digital Divide: Technology, Community, and Public Policy*. Oxford: Blackwell Publishers Ltd, 2002. 43.
[11] James, Jeffrey. *Bridging the Global Digital Divide*. Cheltenham: Edward Elgar Publishing, 2003. 23.
[12] "Scanning the Digital Divide: Understanding and Tackling the Issues – Annex 1: Perspectives of the Digital Divide." http://www.bridges.org/spanning/annex1.html.

develop and implement new technology. A variety of reasons explain this growing gap, which does not only exist in the technology sector. For instance, many developing states cannot afford the high costs associated with developing and maintaining the proper infrastructure required for telecommunications and the Internet.[13] Moreover, many developing states face other pressing issues, such as debt and disease which require more immediate attention. They are consequently unable to blend new technology with the current resources of the state because they cannot afford to implement them.[14]

Developed states have yet to take an active role in reducing the technological gap among states. Maintaining the gap has economic benefits, such as providing broader markets, enhanced productivity, and more stable governments. At least in the short term, spending time and money helping lesser developed countries would be detrimental to developed states. The problem is exacerbated by the fact that industrialized states have a virtual monopoly on the development of new technology. Contributing to this phenomenon is the "Brain Drain," in which top researchers and scientists from developing states are lured to developed nations to continue their work with greater resources. The current superiority enjoyed by developed states, therefore, simply perpetuates limitations on the possibility of technological innovation on the part of developing states.[15]

Another explanation for the widening digital divide is the increasing disparity of Information and Communications Technology (ICT) between developed and developing states. ICT refers to the means used to handle information and communications and also shows the importance of integrated communications with computers.[16] In 2004, for instance, the entire continent of Africa had only fourteen million telephone lines, a paltry number compared with large *cities* such as Manhattan and Tokyo. Although wired telephone lines are being replaced with cellular telephone towers, this statistic is nevertheless telling. Additionally, while wealthy, developed states account for 16 *per*

[13] Murelli, Op. Cit., 2-3.
[14] Norris, Op. Cit., 5.
[15] James, Op. Cit., 16-17.
[16] "MAFF's Role in E-Business." www.defra.gov.uk/ebus/maffrole/annexe.htm.

cent of the world's population, they control more than 90 *per cent* of Internet host computers.[17] While one in two Americans enjoys access to the Internet, only one in every approximately two hundred fifty Africans has the same privilege.[18] Part of this problem stems from the fact that many developing states lack individuals trained to use technology, making implementation difficult or at worst ineffectual.

Implications of ICT Implementation

Implementation of ICT in developing states generally has a positive effect. It offers an efficient distribution mechanism for government information and news media which can lead to pressure to establish transparency and legitimate democratic governance. ICT also encourages research and development in areas such as education, healthcare, and science. By using the new mediums that ICT provides, chronic shortages of information resources plaguing developing states may be reduced significantly, especially with universal access to the Internet.[19] Additionally, ICT implementation can allow more children to access education. Distance learning programs could be created to ensure geography would not preclude children from learning.[20]

In 2003, Secretary General Kofi Annan discussed the various achievements of the international community in addressing the digital divide. He noted that the UN positively effected change in economic and social development. The World Health Organization helped bring ICT to hospitals in developing states, ensuring that they had access to current information regarding health and medicine. Moreover, the United Nations Information Technology Service, a volunteer corps, was actively teaching people in developing nations how to use ICT and sharing with them the opportunities they had to utilize this new technology. Annan stated, however, that these initiatives "merely scratch

[17] "Spanning the Digital Divide", Op. Cit., 3.
[18] *Ibid*.
[19] Politics and Press. "Bridging the Digital Divide." http://www.ms.dk.uk/Politics_papers/ictdiscussionpaper.htm.
[20] *Ibid*.

the surface of what is possible. If all countries are to benefit, we need more and better strategic public-private partnerships."[21]

ICT implementation does have drawbacks, including its expense. Creating the structural communications network necessary to ensure greater access to education for students in the developing world requires immense funding. Resources and money that would normally go to teachers may need to be diverted to fund ICT implementation. Moreover, bringing ICT to developing states may present a culture shock, and some states may be loathe to allow widespread access to technology that is seen as largely promoting Western culture. Jaron Lanier, the inventor of "virtual reality" technology, notes that "computer programs are one of the worst Trojan Horses of cultural influence."[22] Because most computer programs are designed for use by those speaking English or other major world languages, people who speak obscure dialects may find it difficult to utilize the new technology. ICT implementation also creates a new category of cyber crimes to which government and criminal justice systems would have to adapt. Despite the numerous drawbacks presented by ICT implementation, it is vital that developing states make a commitment to this technology to begin to close the digital divide.[23]

The Internet

The Internet, defined as a worldwide system of computer networks in which any one computer is able to obtain information from and talk to any other connected computer using common Transmission Control Protocol/Internet Protocol (TCP/IP), has revolutionized the way many people live. It has made communication and dissemination of information vastly more efficient, rendering geographic barriers virtually obsolete. The theory behind the Internet originated with "packet-switching," developed by

[21] Annan, Kofi. "On the Digital Divide." United Nations Secretary General. http://www.un.org/News/ossg/sg/stories/articleFull.asp?TID=16&Type=Article
[22] Politics and Press.
[23] *Ibid*.

Massachusetts Institute of Technology researcher Leonard Kleinrock in 1961.[24] Kleinrock believed that information could be broken up into "packets" of information, which could be transmitted along designated routes and reassembled at the final destination.[25] Five years after research and development into this technology began, the United States Department of Defense established a four-computer network located in important sites throughout the United States to develop a secure form of communication in case of nuclear war. By 1971, the ARPANET, developed by the Advanced Research Projects Agency, linked two dozen computers at fifteen sites in the United States.[26]

ARPANET's establishment led to the development of a high-speed network constructed and maintained by the National Science Foundation for international purposes in 1986.[27] Four years later, Tim Berners-Lee, a member of the CERN laboratory in Geneva, Switzerland, developed what is known as the World Wide Web.[28] At the time of its creation, only twenty nations throughout the world, mostly in North America and Western Europe, were connected to the Internet via a network;[29] however, the Internet explosion began in 1993 when the National Center for Supercomputing Applications released Mosaic, the world's first graphical web-based browser for computer systems. Mosaic's distribution allowed the general public to enjoy the benefits of the Internet, paving the way for newer, easier-to-use browsers such as Netscape Navigator and Microsoft Internet Explorer.[30] By 1994, approximately three million people were using the Internet. By 1995 that number had increased to about twenty-six million users, and has doubled each year since. As of 2000, there were nearly 406 million people using the Internet worldwide.[31]

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[24] The Internet Society. A Brief History of the Internet. http://www.isoc.org/Internet/history/brief.shtml
[25] *Ibid*.
[26] Norris, Op. Cit.,27.
[27] The Internet Society.
[28] European Organization for Nuclear Research, What is CERN?. http://public.web.cern.ch/public/about/what/what.html.
[29] Norris, Op. Cit., 27.
[30] *Ibid*.
[31] International Data Corp, "Whose Using It?" National Museum of American History, http://www.smithsonian.yahoo.com/world.html

The proliferation of the Internet has had a significant impact on industrialized states; however, developing nations have not benefited equally due to several obstacles. One of the most important barriers to successfully integrating this technology is the lack of adequate infrastructure needed to implement it.[32] Low education and income levels also hinder the spread of the Internet. The potential uses of the Internet in Africa, where education is not easily attained and money is scarce, may provide significant benefits for states that are trying to develop.[33]

Telecommunications

The digital divide is also readily apparent in telecommunications. Developing states, including many in Africa, have extremely low ratios of phones to people. In Afghanistan, for example, there is only one telephone for every five hundred people, while in Chad and Zaire the ratio is actually one phone per every one thousand people. Compare these numbers to the ratio in the United States with fifty-seven phones per one hundred people, or Europe with sixty-eight phones per one hundred people, and the digital divide is easily seen.[34]

Approximately 80 *per cent* of the world's population has no access to telecommunications networks. Seventy-five *per cent* of the world's telephone lines are located in the eight industrialized states.[35] Lack of communication infrastructure makes it difficult to deal with the humanitarian crises and natural disasters that plague Africa, inhibiting the dissemination of information that can lead to the development of effective solutions. To begin to address this growing problem, a convention of thirty-nine states that control 90 *per cent* of the world's telecommunication traffic was convened in Geneva, Switzerland in February 1997. The delegates ultimately agreed that the World Trade Organization was responsible for liberalizing global telecommunication so that national services could operate in foreign markets, marking the origin of the age of

[32] Murelli, 2-3.
[33] *Ibid*.
[34] *Ibid*.
[35] *Ibid*.

competition in telecommunication between national and foreign services. Critics of this plan believe that the focus of the program will inherently be on towns and cities, neglecting poor and rural villages that need the assistance most in bridging the digital divide.[36]

Current Status

The past years have seen remarkable implementation of technology aiming to erode the digital divide. The lack of land-based communication devices in remote areas, for example, is a much less daunting concern with the advent of mobile phone lines, the number of which surpassed that of fixed landlines in 2002. Worldwide, the price of telecommunications services continues to decline while the number of subscribers increases, though there remain significant gaps in the availability of certain features, such as the small message service (SMS text messaging), in different regions.[37] The availability of mobile infrastructure has brought agricultural pricing systems to Senegal and mobile banking to the Congo.[38] In both instances, private companies have applied innovative solutions to provide services for citizens that would otherwise lack access to such information. Both programs have enjoyed widespread appreciation from their users and may signal that free markets will solve the digital divide problem on their own.

Despite such market forces, the 2006 World Information Access Report, assembled by the University of Washington using data from the World Bank, among other sources, asserts that the digital divide is actually widening. The concentration of computers, Internet hosts, and secure servers, for example, is disproportionately high among a small group of states, and was higher in 2005 than in 1995.[39] While Internet access has increased globally, the study found great disparities between Internet use in developed states and non-developed ones. For example, in New York the cost of an hour of Internet access at an Internet café represents six *per cent* of an American's average

[36] *Ibid*.
[37] International Telecommunications Union, "World Information Society Report 2006," August 2006, 50.
[38] WISR, 16-18
[39], Kristi Heim, "Global Digital Divide Grows Wider, UW Research Finds," *Seattle Times*, 21 March 2006. Online, Lexis Nexis. http://www.lexisnexis.com

daily income, versus seventy-five *per cent* in Lagos, Nigeria. The New Yorker is also able to find significantly more content is his native language.[40]

Potential solutions have emerged to alleviate the digital divide in the face of problems such as low incomes, isolated rural populations, illiteracy rates, and the multiplicity of language. In Nigeria, for example, one can find the Lagos Digital Village, a joint initiative of government entities, an NGO, and Microsoft designed to train Nigerian youth in ICT use.[41] Other education initiatives throughout Africa include establishment of ICT training facilities on a large scale. In Burundi, these efforts include mobile training stations that travel between communities over two week periods to train inhabitants in ICT literacy.[42] Many of these programs, like the one in Lagos, are part of larger efforts to improve conditions for youth living in impoverished regions in Africa.

Education centers alone, though, cannot fully erase the digital divide. A survey of initiatives in Ethiopia reveals other interesting and innovative attempts at removing gaps in information access. In Ethiopia, the United Nations Educational, Scientific, and Cultural Organization (UNESCO) and the United Nations Development Programme (UNDP) have worked cooperatively with the British Council to establish Community Multimedia Centres (CMCs) to strengthen community access to information.[43] Communities share ICT equipment, dividing the benefits among citizens who could not previously afford such devices because their only means of acquiring them was through private ownership. Additionally, the Ethiopian Information and Communication Development Authority is working with other governments, private corporations, and civil society to develop mechanisms for incorporating Ethiopian languages and dialects into software.[44] In this manner, the transition for Ethiopians who do not speak a well-known language to the use of information technology will become much less difficult.

[40] *Ibid*.
[41] WISR, 84
[42] *Ibid* 88-9.
[43] *Ibid* 80.
[44] World Summit on the Information Society, "Report on the WSIS Stocktaking," November 2005.

At an infrastructural level, the Ethiopian Telecommunications Corporation has begun work on the "Rural Connectivity Process," which seeks to expand telecommunication access to 15,000 villages by 2015. This initiative will reduce the average distance between communities and access points from fifty kilometers to ten.[45] It also provides information services to communities that simply cannot afford individualized ICT services, allowing them to reap the benefits of the information society without requiring substantial portions of their time and income. Moreover, in Ethiopia and elsewhere, a lack of information access is a compelling problem for computer manufacturers to solve, as it represents not only a chance to exercise corporate social responsibility but an incredibly large market that is as yet untapped. Microprocessor-manufacturing corporations such as Intel, AMD, and VIA Technologies all are developing low-cost personal computing devices (PCs) for use in developing nations.[46] These computers operate in the absence of electricity and have other features designed to adapt the PC to the conditions in such states. Civil society, too, is working to provide PC access. One Laptop Per Child (OLPC), a group whose leader sees "digital access for kids as a human right," seeks to produce a portable computer at a cost of fifty US Dollars by 2010.[47] In October 2006, the group reached an agreement with the government of Libya to provide its devices to all schoolchildren there. This represents a dramatic increase in the availability of ICT there and a lofty goal for developing nations; however, the program's feasibility remains to be seen.

In opposing the efficacy of the limited-function OLPC computers, though, Microsoft chairman Bill Gates has argued at the World Economic Forum that a new generation of cellular phones represents a more realistic approach to eliminating the digital divide.[48] The leader of the World Information Access study agrees with Gates that the infrastructure in developing nations lends itself better to the proliferation of mobile

[45] WISR 84
[46] Bruce Einhorn, "In Search of a PC for the People," *BusinessWeek*, 12 June 2006.
[47] *Ibid*.
[48] John Markoff, "U.S. Group Reaches Deal to Provide Laptops to All Libyan Schoolchildren," *New York Times*, 11 October 2006.

phones than PCs.[49] Africa in particular has been very responsive to mobile phones. Two years ago, there were 63 million subscribers. As of July 2006, 152 million subscriptions existed across the continent, making Africa the fastest-growing region in terms of mobile phone usage.[50]

Women are still disproportionately unable to access information as easily as men. Currently, many socioeconomic factors prevent women from receiving equal opportunities in the information society. Many programs have begun addressing this aspect of the digital divide, with the help of domestic organizations and the international community. The Czech Republic, along with several NGOs, has helped establish training programs for female high school students and teachers in Nairobi, Kenya.[51] These programs help change social perceptions, allowing women the opportunity to utilize ICT resources and benefit from them without fear of prevailing social stigmas against such behavior. Additionally, the BBC World Service created a program fostering the creation of original Internet content by young women. Collaborating with local NGOs, this program is in place in Egypt, Saudi Arabia, Syria, and Yemen.[52] Each of these programs represents a step towards removing inequalities of opportunity, access, and content for women in developing states. If left unchecked, however, societal attitudes in favor of gender inequality will preserve divisions between men and women in these respects.

Key Positions

Africa

Africa is plagued by poverty, illiteracy, high unemployment rates, and significant health care issues, most notably the HIV/AIDS crisis, which have hindered states from bridging the digital divide. According to the organization African Renewal, Africa "has the fewest telephone lines, radios, television sets, computers and Internet users of any

[49] Heim.
[50] Kevin Sullivan, "In War-Torn Congo, Going Wireless to Reach Home; For Poor, Cellphones Bridge Digital Divide," *Washington Post*, 9 July 2006. Online, Lexis Nexis. http://www.lexisnexis.com
[51] WISR 88
[52] *Ibid*.

part of the world."[53] Yet, some progress has been made. According to the United States Internet Council's "State of the Internet" report, there are at least fifty-four states that have some Internet access. South Africa has about 2.5 million Internet users out of its population of 45.5 million, and maintains seventy-five of the 575 internet service providers (ISPs) on the continent. The northern and southern regions of Africa tend to have greater access to these new technologies, than states located in central Africa that generally lack telecommunications infrastructure.[54] Moreover, while some states have failed to effectively integrate ICT, others have made tremendous strides in utilizing the technology. In areas such as rural Togo and Ghana, farmers and entrepreneurs increasingly have access to mobile telephones. These devices are extremely useful in determining prices and conducting business with areas that are separated by a great distance.[55]

Latin America

Latin American states are rapidly falling behind in the drive to close the digital divide. The biggest obstacle to bridging the gap is the lack of an advanced telecommunications infrastructure, largely due to cost. Some progress is, however, being made in exposing more of the population to Internet technology. A November 2001 report by the US Internet Council noted that the number of Internet users rose from 10.7 million in 2000 to 25.3 million a year later. Though a considerable jump, these numbers are misleading, as new users were largely concentrated in Brazil, Argentina, Mexico, and Chile while other Latin American states continued to fall behind. Increased Internet users do, nevertheless, represent an opportunity for corporations to continue developing telecommunications infrastructure to allow for more widespread Internet access. Internet access points and centers must also be improved for the region to benefit from ICT.

[53] Gumisai Mutume,. "Africa Takes on the Digital Divide: New Information Technologies Change the Lives of Those in Reach." *African Renewal*. http://www.un.org/ecosocdev/geninfo/afrec/vol17no3/173tech.htm
[54] Borkowski, Adrianna and Sharon Foster. "Defining the Digital Divide: Views Vary About What It Is and Whether It Exists." http://www1.soc.american.edu/students/ij/co_3/digitaldivide/africa.htm
[55] Mutume.

Moreover, excess computers shipped from the United States and Europe will benefit Latin American states as they attempt to implement these new technologies.

Asia

Asia is largely cut in half by the digital divide, as some states have made rapid progress in integrating new technologies while others continue to fall further behind. Eighty *per cent* of Chinese citizens do not have access to the Internet due to a lack of ICT in the country. Seventeen *per cent* of the population does not have any kind of telephone service. Yet, the number of Internet users grew from 26.5 million in 2001 to an estimated 51.2 million in 2004. These statistics are misleading, however, as the Chinese government heavily regulates and controls the content its citizens are able to view. By taking action such as closing down Internet cafes, the Chinese government has effectively created a "cyber-wall" between itself and the rest of the world.[56]

South Korea and Japan have actually made great progress in bridging the digital divide. South Korea has the world's highest rate of broadband or high-speed Internet usage at 57.3 *per cent*. Japan is one of the leading countries in the region in terms of the sheer number of Internet users, and has the highest number of mobile Internet users, with 42.2 million people.[57] While India appears to have made great strides in developing ICT, the developments have only affected a small proportion of the population. Seventy *per cent* of the population resides in poor rural villages with limited or no Internet access. Indian students are increasingly being exposed to computer technology, especially in major cities, and the creation of India's "Silicon Valley" ensures that new technology will emerge from the country.[58]

Europe

Western Europe has long been at the forefront of technological advancement, and has used this position to aid states in areas such as Latin America. Europeans have

[56] *Ibid*.
[57] *Ibid*.
[58] BBC New UK Edition. "India's Digital Divide." http://news.bbc.co.uk/1/hi/programmes/from_our_own_correspondent/2932758.stm

donated or sold excess computers to these states, an initiative that could potentially be utilized in Africa to allow people residing there to gain access to new technology. In many areas of Europe, the digital divide is shrinking. According to a USIC report, Western Europeans constitute 22 *per cent* of the world's Internet users.[59] The Forrester Research firm in Cambridge, Massachusetts found that Internet usage in Europe has climbed approximately 39 *per cent* to a total of 116 million users. These users are primarily men and women thirty-five years of age or younger. A further report published by the firm predicts that by the end of 2006, the number of users will rise from 39 *per cent* to almost 67 *per cent*. Although these statistics are obviously favorable, many European states still lag behind international ICT standards. Eastern European, post-Soviet states specifically need help developing and maintaining contemporary technology if they wish to remain viable in many areas, especially economics.

[59] Borkowski. Op. Cit.

Summary

While it has been impossible to develop a wholly acceptable definition of the digital divide, the phenomena generally refers to the gap in technology implementation between develop and developing states. This problem affects many states around the world, and is particularly devastating to many aspects of life in developing states. In an era heavily reliant on technology, especially telecommunications and the Internet, the widening gap leaves many states lagging behind. Developing states that cannot afford this technology are not able to use it to help their often poor economies, hurting the global economy. They also miss opportunities to acquire new information and spread ideas via the Internet.

The inability to afford or maintain new technology has led the United Nations, as well as the G8, to attempt to aid states in developing and using this technology. Yet, problems such as poverty, illiteracy, high unemployment rates, and rampant disease have precluded these bodies from effectively bridging the digital divide. Moreover, some developed states simply do not see the necessity or benefit of helping developing states create the strong infrastructure needed to maintain new technologies. Nevertheless, thanks largely to international, regional, and national initiatives, the use of new and advanced ICT has increased dramatically in some developing states over recent years. However, many states that lack the money and infrastructure to create advanced telecommunications and Internet networks are no closer today than in the past to creating and maintaining effective communication tools. It is therefore imperative that the international community continues to explore measures that seek to bridge the digital divide and extend ICT access throughout the developing world.

Discussion Questions

- What has your state done to bridge the digital divide?
- Is it necessary to define the digital divide? If so, how would your state define it?
- What has your state done to gain access to ICT technology? How successful have these measures been?
- What has the international community done to try to bridge the digital divide in Africa?
- Have measures been implemented in other regions to address the digital divide that may be applicable to Africa? If so, which ones?
- What harm is caused to societies that lack ICT?
- How can the international community develop the infrastructure needed to create and maintain ICT? What is the most appropriate infrastructure for a particular region?
- How can developed states be encouraged to assist in creating the conditions necessary for ICT implementation?
- What are the best ways for government, the private sector, and civil society to collaborate on solving the digital divide?
- Have regional efforts been undertaken to address this issue? How effective have they been?

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