

The Digital Divide among Secondary School Students in Benin City Cosmopolis: An Analysis

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ABSTRACT

This article analyses the technological differences among children in secondary school in Benin City cosmopolis and how this gap called digital divide is being widening. Highlights include the far reaching policy and government neglects on reforms for secondary schools as well as the role of libraries in helping to bridge the divide just like that of the western nations. Inequitable access to the Internet in Africa is attributable to the poor state of ICT infrastructure and lack of adequate investment in the society to support the new communication technology. In Nigeria, there is a disparity in the level of accessibility to ICT between private and public sectors of the economy. However, socio-economic status has played a more significant role in the digital divide. More visibly is in the different categories of private schools in the city. The richest schools have sufficient information communication technologies in enhancing the teaching learning process for secondary school students while the public schools run by government and other middle class private schools have no significant item attributable to digital community. Consequently, the libraries which are meant to serve the communities in helping to bridge this divide have done nothing to help their situation as a result of government. Libraries and information centres have a special role in providing information to all in order to reduce the gap between those who have the facilities to access digital information and those who do not. The country needs to improve the infrastructure of public schools and link them with community information centres. Educational decision-makers should act quickly, boldly and share information to build a critical mass of Internet-connected schools and trained teachers and create the African schools of the future.

Keywords: *Digital Divide, Internet, Schools, Benin City, Socio-economic Status, Private Schools, Information Communication Technology (ICT)*

1. INTRODUCTION

The Internet has ushered in the greatest period of wealth creation in history. It has changed education in ways we never thought of. It has been a force that was unexpected. The force that is with us is the force of change (Bracey, 2010). The place where this change makes the most difference is debated, but a child growing up without access, knowledge, or understanding of the use of technology and its importance in today's world is handicapped. School is a bridge for many. Learning places may include telecenters or community centers and libraries. Learning often takes place with a mentor or a peer who is involved in the use of technology.

Society today is characterized and dominated by application of modern information and communication technology (ICT) virtually in all aspects of human endeavors for information access, processing and dissemination. Consequently, the impact of ICT utilization has cut across economics, politics, education,

medicine and other fields of human development (Ani, Uchendu and Atseye, 2007). Through the use of ICT, modern society has been described as an information age and knowledge economy. ICT in overall society is yielding different kinds of transformation. Diaz, Suarez, Belloch, Almerich, Gastaldo, Bo, Gargallo, (2005) opined that the school environment, as part of the social system, is not beyond these transformations derived from the inclusion of the technologies.

This technological environment where information communication technological tools are predominant and the end-users having the capacity to use the tools in capturing, processing, storing and disseminating information can be referred to a digital community. However, there are communities (including schools) whose socio-economic status have a strong influence on those having access and the capacity to use these technologies while there are some who may have not even heard of such ICT, lest the access and applicability. It should also be borne in mind that within a community,

such disparity can be significant, which bring us to the term digital divide.

Digital Divide refers to the disparity between social, ethnic, racial, and economic sectors of society that are fully enabled online versus those which have been systematically neglected by the online revolution. The digital divide is the gap between people with effective access to digital and information technology and those with very limited or no access at all. It includes the imbalances in physical access to technology as well as the imbalances in resources and skills needed to effectively participate as a digital citizen. According to Ani, Uchendu and Atseye (2007), digital divide is simply defined as the gap that exists between those who have and those who do not have access to the modern ICT such as the telephones, computers, Internet and related services. As opposed by Muir and Oppenheim (2002), universal access today is largely discussed in terms of the digital divide, and refers to the ideal that a poor pensioner living in a remote place has the same quality and quantity of information available, at the same cost, as a wealthy individual living in a major metropolis. Hence, the term digital divide is more than simply the gap between those who have, and those who do not have Internet access.

In other words, digital divide is the unequal access by some members of society to information and communication technology, and the unequal acquisition of related skills. The term is closely related to the knowledge divide as the lack of technology causes lack of useful information and knowledge. The digital divide may be classified based on gender, income, and race groups, and by locations, (Rice, 2002). The term global digital divide refers to differences in technology access between countries or the whole world.

2. DIGITAL DIVIDE IN THE NIGERIAN SOCIETY

In Africa, the inequitable access to the Internet is attributable to the poor state of ICT infrastructure and lack of adequate investment in the society to support the new communication technology. In Nigeria, there is a disparity in the level of accessibility to ICT between private and public sectors of the economy. According to Ani, Uchendu and Atseye (2007), in most public institutions: such as universities, polytechnics, primary and secondary schools, and government ministries, access to ICT, if not completely lacking, is inadequate. For example, Nigeria telecommunication systems are poorly developed, thus apart from Internet access by few educational institutions and commercial telecentres (or cyber café); personal interconnectivity by individuals is either unavailable or unaffordable.

One area of significant focus is the school computer and Internet access. In the 1990s, rich schools were much more likely to provide their students with regular computer access; and at the end of the decade, rich schools were much more likely to have Internet access (<http://www.ed.gov/news/pressreleases/2003/10/10292003a.html>). In the context of schools, which have consistently been involved in the discussion of the divide, current formulations of the divide focus more on how (and whether) students use computers, rather than simply whether there are computers or Internet connections. Public libraries (Gordon, Gordon, and Moore, 2003) and afterschool programs have also been shown to be important access and training locations for disadvantaged youth.

Bracey (2010) reports that many people ignore the digital divide; they say it is black, versus white, and or rural versus distant. Some say it is minority versus rich, or the US versus the rest of the world and that it will gradually filter down to those who have and have not. Some see the technology as male with some involvement of women. Some define who is involved by age. The market will take care of it say the rich. People philosophy from their upscale Pentiums, and say, let the problem solve itself. The digital divide stretches across the fault lines of society.

According to National Coalition for Technology in Education and Training (2007), the [E-Rate](#) program in the United States (officially the Schools and Libraries Program of the Universal Service Fund), authorized in 1996 and implemented in 1997, directly addressed the technology gap between rich and poor schools by allocating money from telecommunications taxes to poor schools without technology resources. Though the program faced criticism and controversy in its methods of disbursement, E-Rate has been credited with increasing the overall number of public classrooms with Internet access from 14% in 1996 to 95% in 2005. The case is different in Nigeria, where the government has shown little or no interest in equipping the schools with information technologies. Though, they have reduced a high percentage of import duties on information communication technology tools coming into the country but they have failed to understand that each sector of the system especially the learning environment needs assistance towards these acquisitions. It is not until the last two decades that the government started asking secondary schools to teach computer science as a subject. While enforcing private schools to start with the policy, less or nothing was done on the schools being managed by the government. Computer science teachers were not employed and computers were not acquired. Recently in the developed countries, discussions of a digital divide in school access have broadened to include technology

related skills and training in addition to basic access to computers and Internet access.

The digital divide is stretching over a lot of other places of divide in our society. But the technology that it represents is such a powerful force; it can make a huge difference if one understands the use of technology and use it well. The weightless goods that travel over the Internet represent knowledge and information. In just about every country, a certain percentage of people have the best information technology that society has to offer. These people have the most powerful computers, the best telephone service and fastest Internet service, as well as a wealth of content and training relevant to their lives. There is another group of people. They are the people who for one reason or another do not have access to the newest or best computers, the most reliable telephone service or the fastest or most convenient Internet services. The difference between these two groups of people is what we call the Digital Divide.

To be on the less fortunate side of the divide means that there is less opportunity to take part in our new information-based economy, in which many more jobs will be related to computers. It also means that there is less opportunity to take part in the education, training, shopping, entertainment and communications opportunities that are available on line. In general, those who are poor and live in rural areas are about 20 times more in danger of being left behind than wealthier residents of suburban areas.

Technology offers a unique opportunity to extend learning support beyond the classroom, something that has been difficult to do until now. "The variety of functions that the Internet can serve for the individual user makes it unprecedentedly malleable to the user's current needs and purposes" (Bargh & McKenna, 2001). While the industrialized according to Xiaoming and Kay (2004), nations are pressing ahead with the Internet development, some of the less fortunate countries have yet to taste the fruits of this new technological invention. This is especially true for many African countries where "universal access to basic communication and information services still remains a distant dream". The diversity in the economic development of Africa is reflected by the uneven development of the Internet in Asia, where the Internet penetration rate is very low. Nigeria is among these countries where internet access is considered either for only the scholars or for the rich. Consequently, this is highly observed in the private sectors like the private schools where some rich schools tends to acquire most of these technologies while at the same time, ensuring the huge amount of school fees are paid by the students. While the public schools where students do not pay school fees, they are totally distant from having a

connection with ICT, and some of their teachers do not also have the capacity to use the technologies.

Post primary (secondary) and primary schools owned by federal and state governments, missions and private individuals abound in the state. Significant among them are Federal Government Girls College, Benin City; Federal Government College, Ibillo; the Edo State Model Secondary Schools at Ubiaja and Ebvoneka; Technical Schools at Igarra, Uromi and Benin City and the university /polytechnic staff schools. While private school has continued to flourish in the cosmopolis since the early 1990s. Some of these include: Auntie Maria Group of Schools, University Preparatory Secondary School (UPSS) and Greater Tomorrow Group of Schools to mention a few.

Presently, the state government has handed over thirty two secondary schools to the Catholic, Anglican and Muslim Missions. The Word of Faith Schools established by Church of God Mission and the Igbinedion Education Centre, both in Benin City, is an epitome of the role of the private sector in educational development of the state. Many people like to go to private school in Nigeria because of their facilities and consistencies in school calendars. The city offers many private schools, which can cater for those who want to be educated at the Nigerian private schools. The works of Ukpebor (2010) revealed that out the three main local governments in the metropolis, two have 331 private secondary schools in the metropolis. Some may want to go to these schools for the standard of education or for the networking link, which some may feel they are able to build up by attending private school. Some may want the status or the value from attending private school which indirectly reflects their socio-economic status. Some may want a school that is top ranked or high in status or both. They may want a quality education or the status may be more important to them. While at the other extreme, the parents who have a low income resort to taking their children/ward to low status private schools or public schools which are run by the government.

More often, the students in the public school suffers poor learning environment, strike actions by teachers, lack of effective teachers as well as total lack of ICTs. These challenges are mostly minimal or totally free in the private schools. Access to technology is further divided within schools according to socio-economic status. The upper socio-economic status maintains access to technology at home, whereas the lower socio-economic status children are limited to technology access only at school. With the non-equitable availability of technology outside of the classroom, there will continue to be a divide among student groups. This however, is a prevailing circumstance in the Nigeria schools system. Only a handful of public schools, which are being managed by

the government, can boast of computer with no internet connections. Unlike the private schools who are the pioneer in the acquisition of computers and Internet access.

Research by Ukpebor (2010) shows that no Internet connection is present in any of the public secondary schools while very few private schools could boast of these connections. Although, the socio-economic levels of these private schools also differs as some are wealthier than some. In the acquisition of Information Communication Technology facilities, these schools operate at different levels because of their socio-economic status. Now, the concept of digital divide is imminent between the private schools and the public/government owned schools. Notwithstanding, there are also disparities among same private schools as not could also pride themselves of these technologies.

3. BRIDGING THE DIGITAL DIVIDE IN BENIN CITY

Benin City is cosmopolitan, multi-language and multi-religion city with complex socio-economic conditions. The growing population, insufficient funds, and delays in implementation of government policies and programmes have been some of the challenges that have lead to unequal development in the society. While some people are rich and have many resources, others do not. The educational system in the city also has been slow to achieve the set target framed by various commissions and committees and schemes launched from time to time. Although the state has increased its literacy rate to an encouraging percentage according to the 2006 census, more needs to be done. The government has made encouraging steps to improve the lives of common people through several infrastructures and other IT-oriented projects.

In bridging the divide, with powerful instructional models, the NCSA (America) creates a bridge across the digital divide in that it provides powerful models that teachers and school administrators can use to understand the effect that technology can have if properly used and created with the student and teacher in mind. They develop and test leading edge computer tools, tools, visualization and modeling and methodologies that are created in collaboration with members of the educational community that have shown potential for enhancing or transforming educational practice (<http://www.ncsa.uiuc.edu/EP/html/prototypes.html>).

Most recently, Microsoft announced on 24th January, 2012, that it was partnering with the British Council in Africa to deliver their Africa Digital Schools Project aimed at assisting in “bridging the digital divide”, in six African countries. The aim is to bring new technology to

African schools as part of a boosting of education experiences through Microsoft's technology Called “BADILIKO,” the Swahili word for change; the aim is to bring new technology to African schools as part of a boosting of education experiences through Microsoft's technology.

According to a statement, each company contributed \$1-million as well as technical expertise to accelerate the implementation of this innovative project that seeks to embed ICT in learning. Microsoft and the British Council stressed that the Africa Digital Schools Project will “enrich e-learning while improving ICT skills among teachers and students to boost their competitiveness in a global village.” The \$2-million seed money availed by Microsoft and British Council will be spent on the establishment of eighty digital hubs across the six sub-Saharan countries which includes Nigeria.

Providing schools across the different socio-economic status with technology is not sufficient to close the digital divide. Teachers must receive the appropriate training in order to use technology effectively and to increase student learning. Although education could be used as a tool to close the "digital gap", closing this gap will not completely close the achievement gap between students from lower and higher socio-economic status backgrounds.

Perhaps the greatest concern over the relation between off and online worlds concerns the so-called digital divide. Several conclusions regarding social differences within and between households can be tentatively drawn: Most obviously, financial circumstances limits the quality of Internet access parents could provide, for it seemed that children and young people used the Internet more successfully if they had a reliable up-to-date computer and a speedy Internet connection. According to Livingstone and Bovill (2001), most of the families studied were at that time paying by the minute for time online, adding an additional pressure. However, financial disparities are likely to continue to be important, as long as the cost of the necessary hardware and software remains.

Variation in knowing how to make the technology work and to encourage young people, ‘Internet literacy’ can be attributed to inequalities in cultural capital. Variation in levels of education and knowledge of parents affects their children’s ability to use the Internet constructively. Middle-class children are considerably advantaged in terms of what is often termed ‘social capital’ or social support (having friends and neighbours to help and advice). Reports from Livingstone and Bovill (2001) stated that among small sample of families from ethnic minorities, it was found something of a disjunction between the educational and financial circumstances in a number of sampled homes. In these families, particularly

those with well-educated parents living in deprived areas with many social problems and poor local schools, the parents appeared particularly motivated to provide their children at home with all the support they could – including access to PCs and the Internet. A similar situation was apparent in some single-parent families.

The introduction of computers and networking technology in all the schools can appear daunting in the elementary and secondary school settings; because this is not an environment that traditionally has been technology rich. However, the combination of communications technology and approachable computing is changing this thinking. Through the Internet, teachers and students are gaining access to information and people resources that can easily be integrated into all areas of the curriculum. Consequently the many projects offered on the Internet can be used to enhance a classroom theme or supplement required coursework. Against this background, the schools without such technology are meant to suffer such immense benefits. Hence, the students from such schools can only claim to have heard about these technologies but do not have the capacity to use them.

4. ROLE OF LIBRARIES IN BRIDGING DIGITAL DIVIDE

Libraries with their commitment to freedom of access to information and promotion of life-long learning are central to bridging the digital divide where all services are provided to all regardless of age, race or language (Singh, 2007). In the developed world, libraries have played a role in helping to bridge the divide in the communities. According to Worthington (2009), digital access is essential to first class citizenship in our society. Without digital, one lack full access to information, others are second class economically and even socially,” said Alberto Ibarguen, president and CEO of Knight Foundation. Libraries in India, like those in other developed world countries, have been changing their role from traditional storehouses of information to providing access to information from any part of the world. Today the professional librarians are being better recognised as information disseminators or communicators rather than custodians of information. Libraries are not just places for the poor. People can access research databases through the public library that would otherwise be unaffordable, and some libraries are wading into digital lending. Although digitization has been a slow process in the country, the public library and school libraries can take up the role in providing affordable services that can break the gap of people in different socio-economic status. Digital Mobile Library can be an encouraging step taken by the government to bridge the digital divide. With this necessary step, a wide audience with the challenges of meeting up with the digital community can have access to the information technology world.

In Nigeria, many academic libraries are striving to have full digitized system. In Edo state specifically, about 60% of the academic libraries are automated and of which access to Internet is to some extent guaranteed in few of the libraries. But apart from serving the academic community which is the gown, the town is still faced with the problem of the digital divide. This is because they are supposed to be more dependent on the public libraries. However, the public libraries or the state chapters of the national libraries are traditional ground for the dumping of worn and obsolete books. Technology is almost totally lacking. Consequently, the national and public libraries can help bridge the divide just like those of the western nations because it is the last hope of the poor who cannot meet their basic needs lest acquisition of information technology tools.

5. CONCLUSION

The unequal access to information and communication technologies has led to the digital divide not only in Benin City but globally as well. Although Nigerian private sectors has made encouraging efforts to bridge the gap by initiating a number of projects and programmes for urban and remote locations, a lot more needs to be done to bring the people into the information society. All that is required is strong determination among administrators, school policy-makers and political support to bridge the digital divide. Libraries and information centres have a special role in providing information to all in order to reduce the gap between those who have the facilities to access digital information and those who do not. The country needs to improve the infrastructure of public schools and link them with community information centres.

Educational decision-makers should act quickly, boldly and share information to build a critical mass of Internet-connected schools and trained teachers and create the African schools of the future.

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