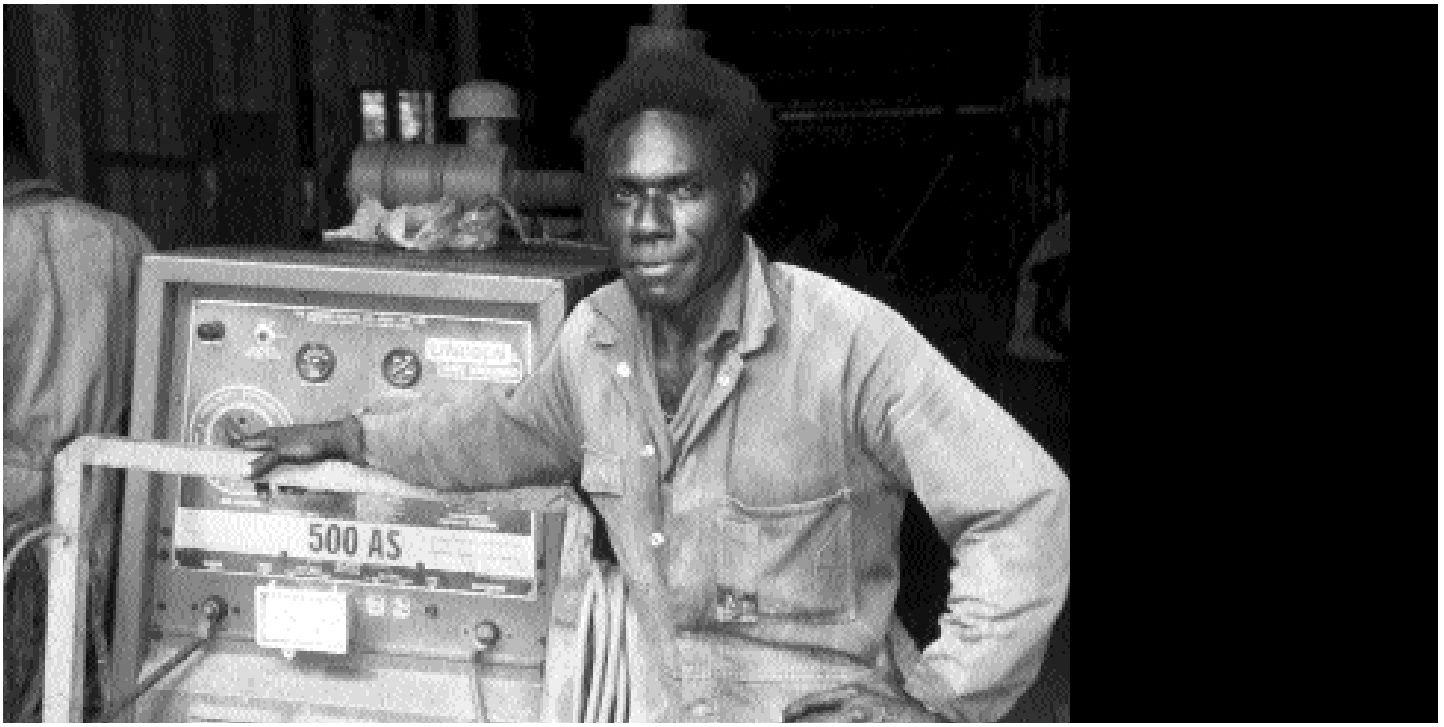

9. YOUNG PEOPLE'S ACCESS TO TECHNOLOGY

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BACKGROUND

BENEDICT ERIGETA > shows an example of appropriate technology, Bougainville Papua New Guinea PIC Damian O'Keefe/OxfamCAA

In the age of globalisation and the information society, access to technology is one of the most critical and controversial subjects. Young people everywhere are faced with the challenge of attempting to broaden their horizons and become global citizens yet often their governments and domestic infrastructure do not support this requirement. Due to financial restrictions, development priorities and cultural differences, the majority of the world's population has limited access to information and communication technology (ICT).

The information society has changed the learning, working and social conditions for young people. Physical barriers, once evident, are now blurred and new structures of relationships and modes of interaction have been put in place. Most often it is the younger generation who feel more comfortable using ICT to expand their knowledge. This allows young people the flexibility to take charge of their learning processes in the ways that best suit their individual needs and interests. This new wave of ICT-savvy young people is taking advantage of different technologies, both individually and collectively, to harness their own skills and enhance their learning through self-tuition. The information society has provided young people with the tools to explore worlds otherwise unknown to them for personal, academic and vocational purposes.

There are many initiatives that attempt to address the divide between those who have access to technology and those who do not, including the establishment of technology access centres. Such centres provide access to ICT, and training in its use, to communities where these resources would be otherwise unavailable. Unfortunately, many centres fail to fully engage their users due to a lack of context to the technology. Often, users are unclear how to access local content and resources, and there tends to be a lack of connection to a broader community of people with shared interests.

When compared to health and education, facilitating access to technology seems a secondary priority. However, in an age where technology is closely equated with

access to information, the ability to use information and communication technologies effectively is a practical reflection of the notion of the right to free and open communication. This can be linked directly to Article 19 of the Universal Declaration of Human Rights (UDHR): "Everyone has the right to freedom of opinion and expression; this right includes freedom to hold opinions without interference and to seek, receive and impart information and ideas through any media and regardless of frontiers."

In the context of Article 19, the internet can provide opportunities for people everywhere to explore the world they live in without the barriers of borders. It can be validly argued that access to this world is a right possessed by all.

Within this debate on access there is also the problem of technology and its globalisation. Technology must be appropriate for the society for which it is being built and implemented. The process of globalisation has overlooked this factor and produced a homogeneous brand of technology that is often not culturally appropriate to its audience. This generic application of technology has led to major strains in communities.

Offsetting these problems is the major growth and possibilities for communities world wide that have come from the expansion of technology. This expansion has resulted in major investments in the education of young people in the ICT sector. Young people have become a key driving force behind the creation of innovative technologies. The strength of young people working in not yet saturated labour markets has created a niche for more experimental and creative minds to produce innovative technologies and alternative ICT for different development goals.

A vast majority of the world's population remains untouched by the digital revolution which poses a major concern in terms of development objectives. The existing disparities between those countries and socioeconomic groups that benefit from information technologies and those that do not, demonstrably hinder development goals and planning.

These issues are primarily the ones that need to be addressed when assessing the importance of access and the globalisation of ICT. The need for access is real, but it must be balanced with responsibility and a constant analysis of needs and results.

KEY DEFINITIONS

INFORMATION AND COMMUNICATION TECHNOLOGIES (ICT): An all-encompassing term that refers to the devices used for creating, storing, using, or exchanging information, and to the design and practical application of the devices themselves. In this context, ICTs differentiate themselves from more traditional communication mediums such as TV, radio, etc. The fact that these technologies enable open and free communication amongst people in real time has provided for a more empowered generation of young people with regard to their grasp on issues and information.

APPROPRIATE TECHNOLOGY: the adaptability of technology to be useful and efficient and sustainable, taking into account the purpose of communication and the varying degrees of technological access and know-how. For example, low-technology mediums like community radio might be a more effective means of distributing public health information to a mass audience in developing countries.

DIGITAL DIVIDE: the discrepancy between people who have access to new information and communication tools, such as the internet, and those who do not.

The term also describes the discrepancy between those who have the skills, knowledge and abilities to use the technologies and those who lack them. The digital divide can exist between those living in rural areas and urban areas, between the educated and uneducated, between economic classes and, on a global scale, between more and less industrially developed nations[1].

INFORMATION COMMUNICATION AND SOCIETY (ICS): transcends cultural and geographical boundaries to explore a diverse range of issues relating to the development and application of ICTs, posing such questions as[2]:

- What are the new and evolving forms of computer-mediated human interaction? What direction will these forms take?
- How do ICTs facilitate globalisation; and how might these affect conceptions of local identity, ethnic differences and regional sub-cultures?
- Are ICTs leading to an age of electronic surveillance and social control? What are the implications for policing criminal activity, citizen privacy and public expression?
- How are ICTs affecting daily life and social structures such as the family, work and organisation, commerce and business, education, health care and leisure activities?
- To what extent do the virtual worlds constructed using ICTs impact on the construction of objects, spaces and entities in the material world?

KEY PLAYERS

YOUNG PEOPLE: The generation of young people that have been raised in the Information Age is unique. Their capabilities and knowledge with respect to technology is extraordinary. The drive young people have to not only use new technologies, but to create it and experiment with it has managed to position them as leaders in the field of innovation.

By virtue of being so involved in the medium, younger generations are able to provide insight for companies, governments and other key stakeholders in influencing market trends. These aspects serve as factors that affect policy on the globalisation of ICT and reform the current views held by key stakeholders on the issue of access and the investments made in this area.

PRIVATE INDUSTRY: Industry plays a key role in the commercialisation of new technologies by providing financial capital for investment in its development and marketing.

GOVERNMENTS: The public sector is active in determining the regulatory framework for technological advancement and implementation. Governments are also one of the largest consumers of new technologies through implementations in areas such as education and health care.

NGOS AND CIVIL SOCIETY: Such organisations are primarily charged with the provision of small funding, capacity training, educational instruction and development of community-based resources which either provide or enhance already existing access points.

UN AGENCIES: Carry the responsibility of developing multilateral agreements between various nations regarding access and the growing need for ICT in addressing development issues.

VOLUNTEERS AT IYP2004 >
PIC Claude Sandler

MAIN ISSUES

Although access to ICT cannot be considered a basic human right, it has earned its place in the discussions of governments, major corporations and civil society groups as being a crucial component to the successful development of any given society. Thus, the need to properly investigate the need that societies have for building their ICT infrastructure is real and growing. Coupled with the need to develop solutions for providing access, societies must also determine to what degree and for what purpose they are implementing ICT in their societies.

1. CHANGING LABOUR MARKETS AND EMPLOYMENT

While globalisation is said to create opportunities in 'knowledge based economies', it has also created a more mechanised work environment often reducing the need for both human interaction and manual labour. The need for information, and the rapid propagation of that information, has led to a requirement for technically skilled jobs in the IT environment. Fulfiling these jobs requires formal training and a somewhat developed infrastructure to support this training. In contrast, unemployment for young people around the globe is on the rise. In Zagazig, Egypt "119, 000 graduates are unemployed; young [people] are now getting trained at technology access community centres on new skills that will help find jobs."[3] One may therefore conclude that investment in equalising access to ICT may in fact reduce unemployment, increase the technical skills of the labour force and contribute to the eventual growth of the economy.

According to Richard Curtain's (2002) report on the generation of youth employment through information and communication technologies, there are more opportunities to be had in ICT for a cross section of the world's population than ever before. Youth entrepreneurship for both low and middle-income young people is a real possibility that has proven effective. Young people from low income areas have initiated a number of entrepreneurial projects such as the selling of telephone based services (cellular and land line), information intermediaries creating simple web pages in local dialects and languages and community radio facilitated by the internet. These are all cases in which low-income young people have been able to change their employment options and create benefits for the communities in which they live. There are countless examples around the world of young people taking the initiative to change their futures by using ICT.

One creative and successful example is Ecosandals.com. This project began as a sandal company in a poor area outside Nairobi, Kenya in 1995. When Ecosandals took its project online in 2001, the orders received online doubled the orders they had received in the previous six months (Curtain 2002). The project has grown exponentially, employing more young people and creating a community development project that combines ICT with traditional methods to develop goods and distribute them globally. This has been achieved in an area of high violence and poverty.

For middle-income people, opportunities such as the creation of mobile telecentres, where a truck is equipped with personal computers and satellite connectivity to the internet, are an excellent way of bringing internet access to rural areas in an affordable manner (Curtain 2002). Such mobile centres have been implemented in communities in Nigeria and India and have already proven to be very successful.

2. ACCESS TO TECHNOLOGY

Allowing young people to connect to peers around the world via the use of ICT is an important factor in the fortification of informed and productive youth. By sharing

experiences and knowledge, young people are able to connect to opportunities, information, networks, communities and creative outlets that contribute to their continued growth. With over 544 million internet users world wide, the possibilities for cross-cultural communication and empowerment are higher than ever before. It should be remembered, however, that access and connectivity are still very much an issue for the majority of the world[4].

There may be significant differences in the scale of enabling technology between developed and developing nations. While connectivity in developed nations may comprise high-powered internet connections, small rural areas in developing nations, may utilise a single cellular phone for an entire village. Connectivity even of this small scale may provide a portal to the outside world and access to crucial information for the community.

Another issue surrounding the ability to increase connectivity is the development of low-cost high-efficiency ICT. Leading software packages are generally cost prohibitive for developing nations seeking to grow their ICT networks. The ability to increase connectivity is thereby severely curtailed by the lack of access to leading software. Brazil's government took the innovative initiative to create stripped down desktop computers known as "popular PCs", which retail for around US$300. This cost has been significantly reduced by the use of Linux free open source operating systems instead of Microsoft as well as using free software. In India, rural farmers now use hand held computers that allow them to benefit from information technology without the need to be literate, by using symbols to communicate their needs. By minimising the cost involved in spreading ICT, these initiatives prove that appropriate and cost effective connectivity can be achieved that addresses specific ICT centred community needs.

3. A CONNECTED WORLD

Connectivity also encompasses the idea of a 'Global Village' - a term coined in the 1960s by Marshall McLuhan. Its use, like the global technologies which help achieve it, has been widespread. McLuhan (1964) wrote, "our speed-up today is not a slow explosion outward from centre to margins but an instant implosion and an interfusion of space and functions. Our specialist and fragmented civilisation of centre-margin structure is suddenly experiencing an instantaneous reassembling of all its mechanised bits into organic whole. This is the new world of the global village".

This illustrates the idea that a connected world is indeed here, and its arrival has been all but silent and revolutionary. The idea of a global village is a concept that envisioned a world without barriers. The internet has shown itself capable of eliminating the physical barriers, but economic barriers have left many with no access to this global village.

4. EDUCATION

As the need for access increases globally, so too does the need to improve and incorporate ICT into educational frameworks. Increasingly, schools, communities, governments, teachers, students, vocational training centres and rural communities are realising the need to invest heavily in education which implements ICT and new technologies. Such is the case of the 21st Century Virtual Schoolhouse; "a virtual high school involving students from around the world who collaborate over the internet to address environmental challenges…both locally and globally"[5]. This innovative project aims to link schools in the first and third world and provide

services such as curricula to educational institutions worldwide. This cross cultural communication and the understanding generated by the formation of an online educational community, serves as a powerful tool for access for young people everywhere.

This is very much on par with the mission of iEARN.org[6]. This New York based organisation created a website that empowers teachers and students to work online using ICTs to build global classrooms. There are over 120 projects in their database, any of which can be chosen by the students and teachers to use as their classroom project. Based on the project selected, students can then engage with other classrooms worldwide that are also working on the same project. This type of global collaboration initiative stimulates learners and enhances their research and critical thinking skills as well as exposing them to new cultures, ways of doing things and new technologies.

Another important factor with respect to education and access is that online education can be taken to any part of the planet with agreed standards implemented. Students of the 'global classroom' share in the same type of education thereby helping to eliminate bias, elitism and weakened expectations. The challenge is to make the access to this type of education less of a novelty and more of a reality for the most marginalised communities.

According to Frick (1996), technology is a means not an end in education. It is best used in education for teaching and learning activities that are not possible without it. With respect to education, young people are taking charge of their learning processes by introducing ICT in their educational pursuits. Due to the fact the young people are using various methods of ICT they are learning on many levels. For example, word processing and email promote communication skills, while database, spreadsheets and web page design promote organisational, mathematical and science skills.

5. ENVIRONMENTAL IMPACTS OF TECHNOLOGY

The effects of globalising ICT have been detrimental on the environment. The promise of more access and less paper waste has not been fulfiled. With the development of high-tech copiers, and the amount of information floating in cyberspace, the amount of paper being used to print and copy has increased enormously. The globalisation of ICT has also created a major strain on the environment by producing massive amounts of disposable computer parts made of insoluble metals and toxic components. These components predominantly end up in landfill and have been responsible for many environmental hazards (World Summit on the Information Society 2002). Thus, the environmental concerns with regard to increasing access continue to mount.

What challenges lay ahead in terms of addressing these concerns and finding plausible solutions? This is where the link lies with young people. Young people around the world are looking for feasible alternatives such as recycling computer parts, using innovative strategies to create more from less and make do with the resources that have already been designed and acquired. Environmental concerns are very much a part of the globalisation dichotomy but, as such, will also fuel the innovative spirit of young people to find practical solutions.

6. ACCESS TO INTERNET PORNOGRAPHY

Increasing access to ICT also carries with it the challenge of opening the floodgates to massive amounts of information which cannot all be filtered and screened for appropriateness of content. This is the case with pornography. Due to the accessible and often private nature of the internet, pornography has become one of the major catalysts for internet use. The issue that one must confront then is the issue of rights

and privacy and the legality of viewing pornography indiscriminately online with no real legal implications. Child pornography is outlawed, but one might argue that the sheer enormity of cyberspace means that this can never be appropriately monitored. This is the dilemma: does increased accessibility to the internet lead to more incidences of pornography and fuel the underground industry of pornography, which often bases its revenues on exploitation of women and minors?

The internet is a free space that has only recently faced its first legal battles in terms of censorship and online ethical responsibilities. Freedom of expression and the open and free space on the internet are essential to maintaining the integrity of the medium. However, safeguards must be put in place to ensure that the exploitation and trafficking of young people and children does not take place in this medium.

7. CONSUMERISM

The massive growth of ICT has also caused an increase of consumerism on a global scale. The use of cellular (mobile) telephones, which now dominate the developing world as the leading method of communication, and the rise in online purchasing of everything from household durables to groceries, has made it difficult to envision a world where young people are empowered by things other than their purchases.

This is not necessarily the case however. Young people are also becoming consumers of wide sources of information, such as subscribing to online bulletins and mass media outlets. They also find themselves purchasing items necessary for personal and professional growth and the internet serves the purpose of acting as a global portal for all the products of the world to be made readily accessible. Increasing access to ICT may encourage consumerism, but given that the world is in fact driven by capitalism, this consumerism is merely an effect and not a symptom. One might be encouraged that increased access to ICT has led developing nations to view their purchasing power over the internet as an opportunity to make trade more equitable for their own goods as well as to improve their livelihoods by purchasing ICT to further community needs.

8. ANTI-GLOBALISATION MOVEMENTS

One of the most significant consequences of the improvement in access to ICT has been its ability to serve as the bridge for global networking in building movements such as the 'anti-globalisation' movement. Indeed, globalisation of ICT may eventually lead to a more responsible and active global citizenry who, empowered by mass communication, will be able to address the issues of globalisation with more knowledge and depth. Access in this scenario is a catalyst for change and growth. For young people, the need to access a larger, mobilised, global society indicates a need to create spaces for them to converge on issues and participate actively in the day-to-day makings of their societies.

The so-called anti-globalisation groups have indeed used the very technology that unifies the world in order to express their concern with the globalisation of culture, economic trends and mass production. This ability to produce mass mobilisations such as the anti-G8 protests of Washington D.C, Seattle and Quebec City have all been significantly orchestrated in the online environment. Planning, converging and sharing of documents and information has all been achieved through the high speed, one-click world of the internet. The recent anti-war protests that took place on the same dates in several different major cities in the world were arranged by massive anti-war initiatives that were able to organise on a global scale and unify their message via the use of technology.

KEY RIGHTS AFFECTED

Although there is no such thing as the "Right to Access ICT", there have been attempts to address the need for a free environment in cyberspace. The right to access does not exist, but the internet is still a free and open space which allows for great diversity of information, opinion and content. Another way of addressing the right to access has been issued by the Right to Communicate which sees access as a natural right and a prerequisite for other rights. The organisation recognises that the right to communicate is "a fundamental and inclusive human right [that] enriches the common heritage of humankind."[7] This idea is now being disputed, debated, and seriously considered by major policy stakeholders.

One attempt to address the need for a document outlining the independent and unregulated nature that cyberspace should have is the Declaration of Cyberspace[8]. This declaration was drafted in order to create a background document on the characteristics that makes the internet an ungovernable space, where people anywhere can meet, exchange ideas and information and are not governed by any national law. This document is not meant to be considered legal or binding in any way, it merely points out the essence of internet culture, its uniqueness and what it needs to maintain in order to remain a free and open space.

Another major concern with regard to the need for increased access is that of technological 'know how' and 'expertise' becoming a right and not a privilege. The International Telecommunication Union (ITU) believes that the right to communication should in fact be considered a basic human right[9]. Although the ITU does not actually define the right to communicate, it does specify the need for a society that understands and appreciates the implications of making ICT more accessible to all. This is very much coupled with the right to technological training and expertise, which is also highly debatable. Should people be endowed with technology and its benefits if it is not an innate need? One could argue that in today's globalising world, technological know-how, even at a very basic level, is necessary for the proper development of a productive society that can also promote better health and education. Basic technology is less costly and more transferable for developing nations. However, those skilled enough to use even this basic technology are few. Gaining access to technological skills and training will empower young people to create innovative resources that will work for their communities.

POLICY RECOMMENDATIONS

GOVERNMENTS. We urge governments to:

9.1 recognise literacy and education capacity building as crucial to the effectiveness of information and communication technology (ICT) strategies and development projects (World Summit on the Information Society, PrepCom I, Youth Caucus Declaration of Principles and Priorities).

9.2 recognise young people's technological expertise and innovation by involving them in the development and implementation of ICT policy. For example, governments should encourage and fund projects such as the Youth Creating Digital Opportunities Coalition, which facilitates young people's use of ICT for sustainable development through online community building projects, technological innovation, research, information sharing and vocational training projects.

9.3 meet the UNDP's (2003) recommendations to the Millennium Project Task Force 10 on Science and Technology, which include:

- a clearer strategic focus and deployment strategy of ICT (making the time framework of most e-strategies more in tune with the Millennium Development Goals).
- benchmarking Development Impact indicators, in order to focus on the impact of ICT strategies, so as to increase their effectiveness and viability.

9.4 recognise the critical importance of increasing access to technology by working to "ensure that the benefits of new technologies… are available to all" (UN Millennium Declaration 2003). Infrastructure must be developed which gives young people the ability to produce technologies, and use them in ways that are locally relevant and suited to linguistic variances.

MULTILATERAL INSTITUTIONS. We believe that multilateral institutions should:

9.5 assist governments to achieve the above recommendations, especially so as to build the proper foundation necessary for the effective utilisation of ICT for sustainable development.

9.6 work with governments to establish the conditions necessary for the successful implementation of ICT strategies, such as a stable political environment, satisfactory healthcare system, a sustainable environment and the consistent reduction of poverty (World Summit on the Information Society, PrepCom I, Youth Caucus Declaration of Principles and Priorities).

CORPORATIONS. We recommend that corporations:

9.7 ensure that the technologies being made available for low-income nations are appropriate for their needs.

9.8 enable the use of "low-tech" technologies which in many cases may bring about more positive outcomes than attempting to implement high-end technologies.

NON-GOVERNMENT ORGANISATIONS. It is recommended that NGOs:

9.9 utilise ICT's capacity to facilitate the creation of networks of young people, so as to build strong campaigns which work toward upholding human rights and achieving sustainable development.

CASE STUDY: TAKING IT GLOBAL

The mission of TakingITGlobal (www.takingitglobal.org) is to empower young people by connecting them to opportunities, organisations, projects and creative outlets. The organisation is now in the process of developing an innovative educational component to its already powerful website. This component, entitled "Understanding the Issues: TIGed" will address 15 major global issues by providing summaries, links, background and content questions. Based on this unit, educational kits specifically designed for teachers will be added which can be implemented globally. This type of initiative has been taken on by several organisations in an effort to provide the global community with online educational resources that will eventually aid in increasing young people's access and control over the education they receive.

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