

I n t e r n a t i o n a l T e l e c o m m u n i c a t i o n U n i o n

YOUTH FORUM ICT Book

HONG
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HOSTED BY THE GOVERNMENT
OF THE PEOPLE'S REPUBLIC OF CHINA



**ITU TELECOM
ASIA 2002**
Hong Kong
2-7 December



YOUTH FORUM ICT Book

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Ahmad Farhad
Afghanistan

Youth have the basic material and moral power with which they can change situations, and have the power to bring about useful changes for the benefit of their country and people. They should benefit from all opportunities to build up their country and nation and make useful changes in society as well as promote peace and co-existence among people.

Youth must have a strong conviction to resist unfavourable situations in local settings and have sufficient logic to convince other people and to lead them on the humanitarian pathway of life.

Youth must have patience and act carefully, and gain the confidence of people by their good behaviour while listening carefully to the words of their elders and answering their questions courteously.

Youth must acquire the habit of showing leader capacity in order to advise local people and lead them to peace and co-existence as well as explaining to them the importance of peace and co-existence and the benefits and fruits of peace and its role in the development of country.

To these ends, it is very necessary for youth to increase their knowledge.



George Nguyen
Macquarie University
Politics and Law
Australia



A century after the world entered the industrial age, we are once again in the midst of another revolution, which is bringing us into the information age. The previous decade has seen an explosion in the distribution and uptake of new and rapidly developing information and telecommunications technology, most prominently, although by no means exclusively, seen in the form of the Internet and personal wireless communications. As the spread of instantaneous global communication continues to make international borders less relevant, so does convergence blur and break down traditional market distinctions. The global scale of this change not only creates new challenges for both industry and government, but it also opens new doors for development and progress.

It is difficult to speculate precisely where convergence will lead us in the long term, but there is potential for an international economy able to trade and access and exchange information with ease through the Internet and wireless communications. Private enterprise will provide the bulk of the impetus for technological drive, especially as trade liberalization begins to open up new international markets. New regulatory mechanisms then need be established, which are flexible enough to keep up with technological developments, yet balanced enough in order to ensure that the social costs of change are kept in check. Furthermore, international co-operation and understanding among governments and businesses is essential in order to ensure that the benefits of technological progress are not denied in a globalized economy.

What role then does the youth play in all this? Unencumbered by traditional ways of doing things, the youth of today receive their education and base their skills and attitudes surrounded by new and developing technology. It is the youth of today who will become the workers, innovators, entrepreneurs and policy-makers of tomorrow, and thus, it is vital that the creative talents of young people are nurtured with an international focus on technology so that innovation and problem-solving will concurrently evolve with the contingencies of a globalized information age.



Lisa Thurston
University of South Australia
Computing and Multimedia
Australia

What do we really want to achieve by bringing together young people from all the Asia Pacific countries?

We want to plan and discuss a blueprint for future interactions between the youth of these countries. We want to look at ways in which young people may be given the opportunity to use their talents to the benefit of theirs and the other countries of the Asia Pacific region. We must discuss how we can enable young people to find satisfaction and "global-mindedness" in their occupation. We also must address the issue of economic inequality at an international and national level since this could certainly become a stumbling block to discussion between delegates from various countries in the Asia Pacific. This is essential to bringing about fairer economic solutions and conducting truly all-inclusive discussion at an international level.

The role of the government in most of the Asia Pacific countries in bringing about these aims would be to coordinate groups of people to identify and evaluate digital opportunities for tomorrow. In addition to this, the Australian government needs to make Australia an exciting and motivating country for young Australian graduates to work. In Australia joblessness is an ever present problem for a small but important percentage of university graduates.

It is certainly accurate as far as Australia is concerned that capable and clever young people are being lured away from local jobs to interstate and overseas opportunities. This may be partly due to the promise of higher salary but also because there is belief that Australia is not at the cutting-edge of technology and is not adopting emerging technologies fast enough. We need to come up with strategies to counteract this sentiment at a national level to bring about a more cohesive and motivated generation of workers. Australia's young people needs to be made more aware of the benefits of remaining in Australia to work.

In Australia personal motivation is an important issue. The future, to many young people in Australia, seems bleak according to statistics concerning the mental health of young Australians. It will become increasingly important to consider the long-term cost in humanitarian terms of a world in which communicating may seem less personal and learning becomes less "hands-on" owing to its nature of being delivered via the Internet. So it is important to remember too that the process of improving the Information Technology and Communications sector will involve looking at the coming challenges for talented young people seeking job satisfaction and a sense of their work being worth something and being towards something.

We need to be working together as a collective representative of the Asia Pacific youth to provide jobs which promote a sense of serving the broader community and of technological achievement. Also, current educational programs should have a stronger



focus on teaching young people entering the workforce about the economic issues relating to the Asia Pacific region.

We will have greater cooperation between the universities or higher educational institutions of the Asia Pacific countries for the greater benefit of the region as a whole. The pool of young and talented people will achieve their vision for an active service to Australia and other countries in the Asia Pacific.

Muneera Al-Khalifa
University of Bahrain
Marketing
Bahrain



Information and Communication Technologies (ICTs) and the Youth go hand in hand towards a fascinating development due to the great potential of youth to adapt to these technologies and the creative vision that it has generated. Starting from childhood, a strong and astonishing friendship develops between the human and the machine that seamlessly goes through many phases of their lives. Starting from playing interactive games on the PC or through the Internet, creating a meaning of virtual reality. Then this relationship transforms to a reality of education and gaining a vast amount of endless knowledge through the multimedia channels.

The youth age group is one of the key factors to leverage the potential of ICTs and their development when the technology architects, developers and decisions makers are able to understand the youth needs. Education and long distance, general knowledge, finding jobs, going on tours, participating in events shall require an ICT platform on which to land all these needs and many more to serve the youth and help them to go about their lives smoothly.

ICT development shall be a great opportunity for the youth all over the world, in developed or least developed countries, rich and poor, living in modern big cities or distant villages. It will be a great opportunity to be educated and live decently, sell products and services, get health care, help people, call for peace and equality.

In the 21st century, the youth population must have an opportunity to communicate and express themselves, share information and get facts online. They must develop their knowledge and get data instantly. Social objectives require such opportunities to develop civilized personalities and competencies in many aspects that have never been acquired before.

ICTs develop because the youth is the major stimulating factor of the information society. Through knowing, seeing, listening, feeling, participating, and using, young people will be the future architects of the Information and Communication Technology development.

Sonam Dem
Royal Bhutan Polytechnic



Bhutan

Ideas rule the world and thought rules our life. It is our mind which moulds our destiny. If we probe in depth, we will find that the so-called mind is nothing but a bundle of thoughts. Emerson, the great thinker and writer, said "life consists in what a man is thinking of all day". If we think success the we create a climate in which success is probable. If we think failure, we set the stage for it too. So the spirit of youth all over the world should be optimist.

Our success and happiness is directly related to the achievement of the goal we have chosen. After selecting the goal, we must send the right signal to our unconscious mind. The starting of the millennium is just the kaleidoscope of progress that world has made, a barometer to remind ourselves as to where this progress is leading, an indicator that exhibits every step that world has taken. In the field of overall development, a development is social justice, a development with environmental conservation, human resources development and major priorities and most important the development in modern technology.

The first and foremost things concerned of this technology can be used by the average person (not someone who has been trained specially to use it). If we have trained a person at high level to use it, than that's not appropriate technology that does not reduce the level of technology. Which technology are most farmers are using everyday without realizing it?

As I said, the type of technology we are looking at is the technology that can be used (basic, applied). But that does not mean we don't need the other type of technology. Even if there is twenty-seven per cent of literacy, that doesn't mean all of them are literate enough to use modern technology. Still we have tremendous capacity in the world to use modern technology.

There is also misconception among the people about the technology that we can do without technology. Technology is what we use every day... a pen or a piece of paper or a computer or a telephone or whatever it is.

The better the technology you are using, the more efficient and productive you are as a people. Where will we be if we are not productive, if our people keep holding back in productivity ratio?

There is a particular type of technology, civilian nuclear power. Our international partner in the crusade against nuclear weapons, yet I read in the Indian press the safety of nucleus reactors in India. These are also some technology, which are for safety of a country, and can at the same time be a danger to a country.



Now, this millennium is the age of cybernetics and computers, the age of purely dimensional cosmological theories. The age of pathfinders and deep space. The age of intense scientific technology and rationality for a value of computers concerning internet, telecommunication and television and also other machines.

Millennium does not come as a surprise neither as something of a university that asks itself to be accepted in having to confront the new century, but as something for which we youth have been prepared and confident. As such, millennium for youth should not be just an empty toast to see a better tomorrow, for time will bear no stamps of difference unless we attach ourselves to these dreams we reserve for our nation.

For example, present Bhutanese youth will also face a grave challenge and responsibility, for His Majesty believes that we the younger generation hold the key to the destiny of our Nation and what His Majesty means by this, as far as I am concerned, is to safeguard the sovereignty of our Nation with those machines that we actually destroy the very concept of human civilization to something more meaning-full like life-affirming, sense-making, self-justifying and distinction and defying concept of what Bhutan stands for to the rest of the world.

We as a youth, our role is to safeguard the world with the of help modern technology. When a new technology is talked about it should become an inseparable part of our lives. We have to look up to those countries like NASA's hope for the world's first space plane and an orbiting hotel by Shimizu corporation. And determine ourselves to be one among them. Now, with their help, space is being looked upon as a source to meet the increasing demands for energy on the Earth. For this we would place a network of solar-powered satellites to generate enough energy to solve the world's power shortages with the help of genetic engineering and tomorrow it should be the youth to continue in the same spirit, and also the agriculture and plant biotechnology should be encouraged. So we should conserve our land and soil; science in the new millennium will open a new window in every field of our life. It is our duty to be aware of these new landmarks in science.

Tsewang Dorji
Sherubtse College
Computer Applications
Bhutan



Technology this technology that. Every cure for every ill seems to have a technology component. Some good. Some not so good. In this modern world, as we construct the "information age", it has become very important to take appropriate decisions by having access to information. It is very important for each and everyone to know how this information is accessed and what information is good and what is bad. As this information is dynamic, it has become a challenge for us to tackle. So we are faced with how to meet these challenges of this dynamically changing information age.

We, the youth of nations, have a very important role to play. We, the youth, are bridging the gap. Enterprises today are continuously transforming themselves into agile, adaptive, fast responding and customer-intimate "solution partners" that can turn on a dime to meet their customer's individual needs. However, somewhere between the corporate re-engineering binge of the last decade and the "destroy your business" fad of dot-coms, a terrifying gap has appeared. This exists in most top executives and senior officers responsible for the IT of firms. So youths today must know that they must concern themselves with technology issues.

A litany of challenges of making progress with IT staffing runs the gamut from internal to external and from operational to systemic. Some of the barriers cited most consistently are:

- Resistance to change.
- Poor communication channels.
- Human resource policies.

The greatest challenge appears to be Human Resource policies, especially those within public institutions. Union policies also present obstacles to be overcome.

Many of the issues surrounding the recruitment and retention of IT staff are the same as for any staff. For example, challenging assignments and the opportunity to learn new skills appear to be the key to the retention of IT staff, as they are for most individuals. So the youth with the knowledge of information technology can overcome these problems.

The critical role of the youth was underscored repeatedly in working group conversations. It is the Human Resource staff that ensures that the compensation structure is in alignment with the organizational goals. The youth with IT knowledge can maintain consistency for technology positions across the institutions, so the competition for IT staff within the organization does not become a problem in the future.



The youth with the understanding of Information Technology can stimulate much development for a country like Bhutan, which is still at a developing stage. Bhutan entered this information age or cyber world just five years ago when this information system was widespread in countries like USA, Germany, etc. So it still has a long way to go in order to reach or match countries like USA and Germany. So the youth can play a very important role in this information age.

So like any epic journey, we have only taken the first few steps. We are convinced we are on the road to bridging the gap of understanding in Information Technology. With such a powerful vision, any destination is possible. It has become such a dynamic field that flexibility appears to be the key in this area. The ability and willingness to modify organizational structure as often and as quickly as necessary are important elements in a successful life for an IT professional.

Theany Ngin
Institute of Technology of Cambodia (I.T.C)
Electrical and Energy Engineering
Cambodia



The development of International technology (IT) has been providing both opportunities and challenges in this era of globalization. The opportunities include much faster, wider and cheaper communications in such areas as business, commerce, administration, research and daily interactions. These advantages of IT promote rapid development in these areas as information and capital are moved and transferred more easily, freely and quickly from institution to institution and from country to country. Meanwhile, many challenges of the information age occur, especially in countries where technological development is slow, far behind the universal trend of IT development. Then, what are the challenges of the information age? And what is the role of youth in meeting the challenges and in promoting development opportunities?

The challenges of the information age vary from institution to institution and from country to country in their socio-economic context and needs. In Cambodia for instance, the challenges include lack of human resources, lack of materials and facilities, lack of research and development (R&D) inequalities in IT education and utilization, among many others. As IT has been introduced to Cambodia for just over a decade, the training and usage are currently limited. Despite the shortage of human resources, training and education have been provided based on the limited knowledge and experience of the teachers. In addition to this, the lack of IT material and facilities has impeded training and education in this field. As a result, R&D has been almost inactive.

These factors contribute to the inequalities in education and utilization due to expensive service of a few providers and relatively costly taxation in the kind of investment. Not all students, for example, have access to Internet. E-mail and Internet services are provided mostly in a few urban areas. The challenges impede development opportunities of the youth and the country as a whole. Therefore, the role of youth in meeting the challenges and in promoting development opportunities is very important in the Cambodian context. A key to this end is training and education of the youth in this IT field, so that they can fill up the gap in human resources as they are the next generation responsible for the task. In doing so, the youth will be the supporting pillars of the socio-economic development if they are to be able to catch up with the global trend of IT development.

In conclusion, the youth play a very important role in meeting the challenges of acquiring information and in promoting development resulting from this IT development. By providing sufficient and equitable IT skills and knowledge to the youth, the foundation of socio-economic development of a country will be strengthened and sustained. Failure to do so results in delay and backwardness.

Sorphalla Sean
Institute of Technology of Cambodia
Electrical and Telecommunication Engineering
Cambodia



Nowadays, in the 21st century, we cannot talk about the civilization and humanity without mentioning communication and exchange of information. From the beginning, men have needed to communicate with each other to avoid the evil of nature and animals. Until now, people have communicated and exchanged information to cooperate on their society's improvement. With the fast pace of technological change, especially in the 20th century, we find that we need to know more and more about our lives, our problems, present and future...

The information and communication technologies (ICT) have become an essential part of life. The Internet has reduced the distance between people and made the world into a "village". The coming deployment of third generation (3G) networks represents a sea change of unparalleled significance. 3G technologies would offer advanced, broadband and high bit-rate services. Against this background, what are the development opportunities and the role of the youth?

The role of the youth in the development and communication opportunities lies largely in the consumption of final ICT products. Development opportunities are most clearly soon among young people in the education system. They are the ones who use computers in universities and joining the labor market, and if young people were to be given greater opportunities to learn and resourcefully use information technology, their countries would greatly benefit.

The development of technology and telecommunication will foster regional integration, thus reducing the marginalization of certain regions or subregions. These developments will contribute economic development in all sectors in my country and in particular to the development of tourism. Cambodia has considerable tourism potential, but it is not enough to have remarkable sites and unique attractions. Accommodation structures are also needed, as are access facilities capable of competing in the world tourist market. Young people in Cambodia have the skills and training to make a major contribution to develop this sector, but we need to open up toward the outside world. I believe that telecommunication development could play a major role in developing tourism in Cambodia by facilitating contacts with other countries.

Concerning the role of the young people, we find that in the coming years ICT industry will be required to meet such huge demands that a large number of engineers will be needed. It is up to the young people to train themselves to become the application developers and content providers that the industry needs.

The young people today will be the leaders and decision makers of tomorrow.

Sheng Zhang
Nanjing University of Post and Telecommunications
Computer Communication
China



ICT: Golden Opportunity and the Role of the Youth

"Do you know ICT"? Maybe you will wear a blank expression. But when you are given a calling card with an e-mail address and ICQ number, or when you're surfing the Internet in your cosy bedroom, you are actually having dealings with ICT. Nowadays, with the development of integrated global cooperation and knowledge economy, ICT (Information and Communication Technology) is playing a more and more important role in our life. ICT itself is developing rapidly and simultaneously. It is estimated that 300 billion USD will be invested in ICT in 2003, according to WISTA's new report. So I, like every young man who cherishes a dream of doing some good for our country, really seethe with excitement at the sight of the brisk market and brilliant future of ICT.

Today, with ICT meeting its peak, new opportunities are guaranteed. And it will surely exert a tremendous influence on lots of aspects, ranging from E-business to the support of enterprises, from transparent and convenient public services to remote education, and from medical treatment to the management and supervision of our environment. What does it mean? To the individual, it means various choices to success. To a country, especially a developing country, it means a golden opportunity to catch up with developed ones.

In spite of its potential advantage, ICT has some problems waiting for it, one of which is that lots of things in ICT cannot be solved by traditional methods, but be solved through the intersection and infiltration of technology. The task of turning the technology into a driving force of development is surely hard and long-term. But, it is our mission! The young generation, who were born during an age when our world is changing rapidly, is duty bound to strengthen our country with the power of new technologies and shorten the gap of ICT between us and others.

Mastering advanced technology, understanding global thinking and being full of energy and yearning, we are destined to stand up and make appropriate strategies for the future and to be responsible for the tomorrow of ICT. Facing the new opportunity, I hope from the bottom of my heart that every young person may speak out loudly: "I can!".

Xin Zhao

Nanjing University of Post and Telecommunications
Information Management and Information System
China



Several decades ago, McLuhan, a distinguished scholar in communication, gave us a vivid description of a fantastic picture of the "global village", a world within our easy grasp. This means we could stay in our home while communicating with people in all parts of the world, enjoying all the comforts and conveniences brought about by information and communication technology.

This dream is pregnant with magnificent prospects, but when man tries to realize it with his own wisdom, there emerges an inevitable problem – "Digital Divide". The data from the United Nations Report on Development (see figures 1-4) show that, with the further advance of the wave of global digitalization and initial formation of the industrial pattern in the information age, the problem of the "Digital Divide" resulting from imbalance has become extremely serious. In a certain sense, it is not only a technical problem but also a social problem which will definitely influence various aspects of the whole society such as the distribution of information resources, culture and employment, and the gap between the rich and the poor. To make matters worse, it may subject those inferior groups and individuals living at the bottom of society to unfair treatment in obtaining information of science and technology and developing their abilities to bring forth new ideas. It is thus clear that the "Digital Divide" not only jeopardizes the rights of the developing countries, but also has a harmful effect on the long-term market interests of the developed nations. In the final analysis, it will have a negative impact on the ultimate prospects of the sustainable development of the world.

Such being the case, it will be quite natural for us to ask the following question: what is the final purpose of developing information and communication technology? And the answer, undoubtedly, should be to make contributions to the noble cause of seeking peace and development for mankind and achieving global common prosperity. The fast-growing information technology has created the "Digital Divide", but meanwhile it makes us more capable of striding across this divide and taking on the great mission to reduce and level this division. Though shouldering heavy responsibilities, we will firmly believe forever that great science and technology, reflecting man's intelligence and the spirit of making innovations, should take it as their fundamental goal to promote the peaceful development of the globe and to benefit various nations of the world. Under the new situation in which the economy is being globalized, capital liberalized, society digitalized and information transmitted all by networks, we the younger generation should face up to the digital crisis in the realistic world, objectively analyze the deeper meaning of the social economy underlying the information revolution, explore the developing trend and the inherent laws of information industry, the information economy and digital civilization, throw ourselves into the wave of economic digitalization, reply to challenges with development, reduce gaps with growth, level the "Digital Divide" with our wisdom and talents and youthful enthusiasm and devote ourselves to building the world into a "global village" whose prosperity will be shared by all regions, all races and all civilizations!

Dear young friends, let's go forward hand in hand, be brave in taking on the historic mission entrusted to us by our time, and make joint efforts to construct a glorious and happy "digital homeland" for all mankind.

Figure 1

Distribution of Telecommunication and Networks in Various Parts of the World in 2000

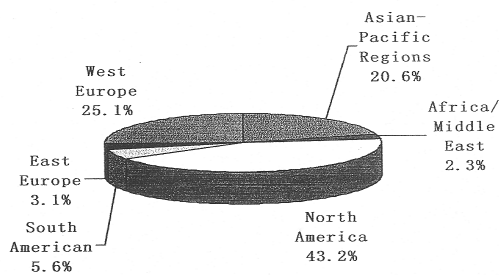


Figure 2

Distribution of GDP of the World (Till 2000)

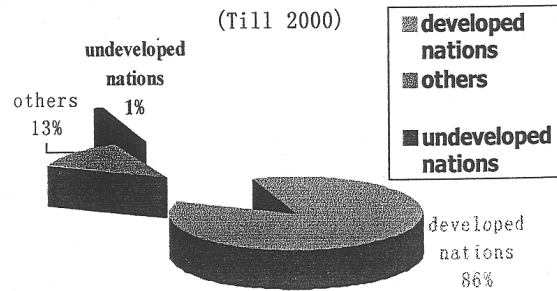


Figure 3

Distribution of Total Number of Internet Users of the World (Till 2000)

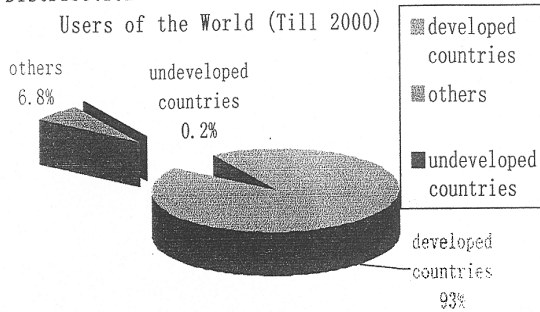
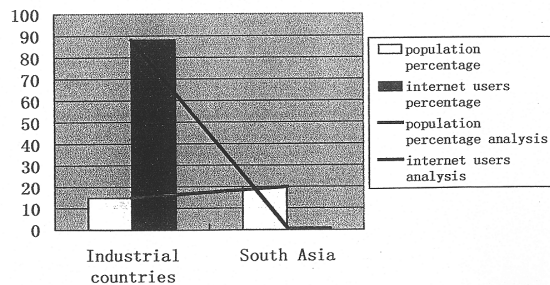


Figure 4

Percentage of Population and Internet Users in Industrial Countries and South Asia Analysis (Till 2000)



Ritesh Menon

The University of the South Pacific

Engineering Technology

Fiji



Today, we live in an information age and not just information but the era of communication technology. Information pervades many aspects of our lives. Radio, television and newspapers have been and still are the main sources of information for most people. When we have information growth there arise many challenges which need strategies to work out solutions for the processing of this information in order to simplify life. The latter can only be done through active development and participation.

Thus, young people play very active roles in enhancing opportunities and turning the complexities of life to simple concepts. They tend to be the postlink for future developments as they are vital for success in this competitive world. Youths are also more open to information processing and handling and can be participants in the restructuring, developing and processing of information, thus being major contributors to information technology. In other words, youths could well be developers who would contribute towards trouble-shooting or restructuring information systems. While the Pacific region may be unfamiliar with new systems, its youth could still make a huge contribution as to how to deal with various information systems, for example by designing device systems or gadgets that are more adapted to their environment and relaying their side of problems in dealing with information, since many solutions are obtained from real-life challenges in information systems. As new developments take place, new perspectives come to light, hence enlightening people more on the concept of information and thus providing greater development opportunities.

To succeed in this kind of fast and competitive environment, we as youths can master the skills needed to overcome the challenges of the information age through development opportunities and active role play, so that youth can become part of the information revolution that is moreover taking this world by "storm".

Aralai Waqatoga
Fiji National Training Council
Technology
Fiji



As the XXIst century ascends into another era, we that live in this rapidly changing world are witnessing massive development processes on the overall communication systems. A vital role is played with the usage of information technology as it creates a link between the various sectors of the fields of work. This, of course, creates an interphase between different individuals and society as a whole.

Nowadays we rely mostly on technologies that are seen to be developing on a far deeper scale compared to the early period of discoveries and inventions. History tells us that information tools were not as fast and efficient as those we have today.

With the stiff competition amongst greater nations with the regard to developing highly sophisticated technologies, smaller countries such as Fiji face the setback of being drawn backwards. Given the fact that the country is at the stage of rebuilding its economic standards, this creates a standstill on the development of its technology systems.

Today, young people's lives are greatly influenced by what they learn through communication medias with the likes of television, radio, newspapers, etc. Such insights affect their ability to think, converse, express opinions and so on. Many seem to have the capabilities to learn and adapt to the information systems of other countries, in particular the Western culture, but meet hurdles in their own environment. Why is this so?

The generation gap could be a considerable factor when younger generations have conflicts with the older ones. Past decades reveal that most of our parents and grandparents were not exposed to the many communication facilities that now exist and which had been an alienated area in their education system.

Cultures and tradition produce barriers amongst Pacific societies with the fear of adapting to changes. Because of the lack of exposure and mis-communication, most people rely more on the old systems still in use.

The education system in Fiji still lacks resources and the level of studies needed to upgrade the information systems. Because of this, massive numbers of foreigners are brought into the workforce to take higher positions.

As a State, this process of absorbing foreign expertise helps to improve our standards of work, but as people of Fiji, we must rise to the challenge.

It is now up to the future decision-makers of Fiji to take a step forward and contribute ideas that would enhance the upgrading of Information Technologies.

Youth should have a lot of exposure to the communication fields, and if they combine their intelligence with the current workforce leaders, more ideas would be introduced and therefore a great boost to the development of the society could be foreseen.



Meeting the challenges of the information age: Development opportunities and the role of the youth



I, for one, believe that if our country seizes the opportunity to develop our communication sector, it would not only create improvement for us but also for our future generations.

Alan Kwok-Lun Chan
The Chinese University of Hong Kong
Professional Accountancy
Hong Kong, China



With the rapid development of information technology in recent years we have entered into the era of information. New information dissemination channels are rapidly emerging; information technology is crucial in creating competitive advantage, and we now receive so much information every day that we can hardly cope with it all. Undeniably, the challenges of the information age are more pronounced for young people; but opportunities always come with challenges as well. So, how can young people overcome the challenges and grasp the opportunities of the information era? Now, let us look into the challenges of the information age first.

The greatest challenge among all is information explosion. As information is disseminated more quickly and inexpensively nowadays, we get access a lot more information than in the past. Undoubtedly, we can make high-quality decisions more easily with more relevant information available. However, we are now receiving too much irrelevant information. Therefore, young people nowadays should learn to use different information tools and sources to obtain irrelevant information more quickly and effectively.

The increased volume of information available also leads to problems with information credibility. The rise of new information dissemination channels, especially the Internet, has provided more economical means to disseminate information. However, this has also resulted in the lack of control over the reliability of publicized information as well. Hence, young people should develop critical minds that can help them to analyze and evaluate information in order to arrive at the true picture.

The quick dissemination of information in the information age has also catalyzed globalization. Whichever industry are you in, you inevitably have to think global. The increased information flows have intensified competition as well. Thus, young people nowadays have to acquire a global perspective through international exposure in order to create or maintain competitive advantages in the keen global race today.

As mentioned above, the information age has also brought about opportunities for young people. Let us look into the two most important ones here.

The increased information flows and dissemination channels have provided new entrepreneurial opportunities. The Internet has created a new marketplace to provide timely services to customers at much lower investment costs. The demand for better information management has also created opportunities in the areas of logistics management and information systems designs. Hence, young people should seize these opportunities to create a better world through entrepreneurship.



As information can be obtained more easily at a lower cost nowadays, there are a lot more opportunities for young people to acquire the knowledge necessary for their work and studies. Education is no longer limited to classrooms, and life-long learning has been facilitated with the development of information technology. Young people today should learn to grasp these opportunities to enrich their knowledge, be better prepared for the challenges ahead, and contribute to society in the future.

In conclusion, the information age has created both challenges and opportunities for young people. In order to benefit from the trend, young people should learn to overcome the challenges and leverage on the opportunities appropriately to be better prepared for their future.

Sze Ling Yuen
University of Hong Kong
Computer Science and Information Systems
Hong Kong, China



The right setting: Developing ICTs in an integrated and whole manner

Issues

According to the *World Employment Report 2001*, the development of new information and communication technologies (ICTs) have brought considerable positive developments to some industrialized countries, such as the United States. Nevertheless, it also has a reverse impact in most parts of the world by causing considerable loss of jobs due to restructuring of the economy. The prospects for an improving global employment situation will depend mainly on whether the current expansion of the world economy can be expected to continue.

Though the onrush of technology development is world acclaimed, its effects are irreversible. "Speed also means disruption and division. Disruption occurs as the inadequacies of existing institutions and regulatory frameworks are exposed to rapid change and new demands. Technological change always favors the prepared: the world's different speeds of change and different stages of preparedness mean that the existing "digital divides" are certain to widen".

(Ref. <http://www.ilo.org/public/English/support/pub/wer/overview.htm>)

Hence, rather than putting huge amounts of investments in developing high-end technology, we should concentrate more in providing easily available solutions to ICT users. In short, the direction of development must be revised.

Solution

Making all information access as easy as possible and transforming the information into knowledge are the two main goals of developing an integrated whole ICT.

ICT enables low-cost creation, access and distribution of information. Yet, while there are numerous commercial initiatives presented to the developing countries, institutions in the public and non-profit sectors are simply not prepared to seize the opportunities. There are also some other easily identifiable barriers, such as the language used, the differences in culture, and the unavailability of help that keep developing economies from exploiting the great potential of ICTs.

In fact, concerns should be shown about how to make ICT development more relevant to the recipients.

One example is that, while building the ICT infrastructure in rural areas, products such as directory of services that help to navigate the web in local dialects, easy to use online shopping services that help with the international transfer of money, the scanning of paper form into digital form which makes the registration of online services convenient to people who don't know how to use the computer, should be made available to people there in order to help them go through the transition towards the digital age. All these services can be easily deployed by the existing intelligent agent and pattern recognition technology. In this way, we are not just providing hardware to the ICT users, but also the one-click benefits that cater their needs.

Pros and cons of the proposed solution

The market which ICTs can bring forth has not yet become saturated. Developing ICTs in an integrated whole manner would enable reaching to a bigger market, which helps the developed country to foster economic growth and the developing country to open up commercial opportunities and eventually eliminate the digital divide.

Strategic Repositioning of the Youth

Youth today should bear in mind that they have the competitive edge over other generations with regard to creativity, which plays an important role in the development of ICTs. The reason for the competitive edge is that youth are less bound by established knowledge and experience. While possessing this competitive edge, youth should remain practical. They should think small, but aim high. When they say that they can do something, they should also have the desire to make sure things get done.

Shirupa Gupta
P.S.G College of Technology
Electrical and Electronics Engineering
India



With the advent of the Internet and the Web since the mid 1990s, the way of living and interaction of humans with each other has undergone a revolutionary change, with the focus shifting from the local to the global level. A person living in a village in one part of the world can avail themselves of facilities and interests with individuals and organisations anywhere in the world and vice versa.

As such, information has already become business and the world will soon be seen asking for "Information" as a fundamental right for every citizen. Already, there are signs of world governments harmonizing their regulatory structures with each other. Eventually, the world administration in the information age will need to become totally seamless with free trade and business between nations. The global governmental administrative systems will need to evolve out of a democratic process.

Youth the world over are going to face challenges on account of the digital divide between those having information and others not having information. The working class constituting the majority of the population, and presently IT-illiterate, will also be affected and the "Information haves" will also have to especially work out and implement systems to improve their quality of life. As business and other life transactions are occurring almost at the speed of thought, young people, who are the potential occupiers of future government positions, will need to be trained to evolve procedures and systems of world governments including aspects related to the political, social, cultural, economic, business and arts spheres. There will also be the challenge of the rural population shifting at an ever increasing speed to urban and cosmopolitan areas, if the above challenges are not converted into developmental opportunities. These will include: (i) information and communication technologies to be developed with larger reliability and user friendliness and universal operability to reduce the digital divide in line with Projects such as "Media Lab Asia" of the Government of India; (ii) development of cheap information and communication systems with broad bandwidth; (iii) development of more and more world-level organizations for specific functions in line with the World Intellectual Property Organization (WIPO), International Telecommunication Union (ITU), etc.; (iv) development of IT enabled approaches for old professions making them IT enabled; (v) development of software in all scripts of world languages for communication between peoples; (vi) universal system for compensation to employees to avoid clustering in specific parts of earth; and (vii) development of world law making information a fundamental right; and finally (viii) developing information security and certification systems.

To conclude, the dawn of the information age can be steered towards achieving a harmonized global society if the challenges posed are properly addressed and development tasks are taken up collectively so as to enable the availability of information to all and one.

Ramaswamy Sharadh

Indian Institute of Technology, Madras

Electrical Engineering – Communications Systems

India



The information age began with a bang in the late 1980s, when the power of microprocessors started increasing tremendously. Computers, till then, were meant for only specialized purposes. But, coupled with the advances in communication technology, they have become a part of everyday life. The developments in these two fields have together opened up a mind-blowing variety of opportunities and possibilities, many of which would have been previously unimaginable. Application of communication and information technologies has taken place in business, trade, commerce as well as banking, thus providing for the social upliftment and amelioration of millions of people both in the developed and developing world. But this technological revolution throws up a lot of challenges. Only when these are overcome can the revolution link up people all over the world into the same mainstream and truly benefit all of mankind.

In the new economy, money or purchasing power are no longer impediments to economic advancement. In fact, the cost of computers and communication equipment are decreasing every day. It is the access to information or the lack of it that limits how much a person can achieve in his or her profession. The access to the right information at the right time and the right place leads to better informed decisions, greater efficiency and greater productivity. Geographical separation no longer becomes an obstacle for people wanting to communicate or interact or do business. But without proper access to information, life can be very difficult indeed. Thus, the gulf between the have's and the have-not's is no longer money. The gulf now is the digital divide. Thus there is a need to create greater awareness among people about capabilities of the information age and to make these services accessible to the common man.

And this is where the youth step in. The youth have the energy, zest and commitment to tackle the challenges. Their fertile minds have the capacity to cause tremendous change. The youth have to spread the information wealth to their less endowed peers and fellow countrymen, their efforts must be directed towards creating services that reach out to and help the common man. They have to work for the establishment of better educational opportunities, through development and implementation of remote learning. They have to bring about more responsible and accessible governing bodies through e-governance. They also have to work towards better health care, through telemedicine and remote diagnosis. Also needed are improved methods of food production and management as well as disaster prevention and relief, much of which can be done with satellite technology. The youth must also work towards applying the information technology for faster delivery of justice.

These are some of the duties and roles of the youth of the information age. Therefore, while necessity is still the mother of invention, it is in the hands of the youth to make information the mother of economic advancement.

Irma Handayani

Telecommunication Tehnical College/ STT Telkom
Electrical Engineering-Information Signal Processing
Indonesia



Telecommunication becomes a major need of humans in their life. Every day, most people use telecommunication devices to communicate with other people. The world becomes narrow by telecommunication, people can communicate with other people in other regions or countries just in a few seconds.

Development of telecommunications increases together with human needs. It seems just yesterday when the public phone became a luxur item for humans, but at this moment, Internet and wireless technology are becoming usual items for humans. New and emerging technologies are an inherent part of the world of tomorrow. They are increasingly central to the everyday life of the younger generation who are particularly exposed to the demands made by a constantly evolving Information Society. New technologies will profoundly influence society and culture and more specifically the way people study, train and work. Information and Communication Technologies are offering younger generations across the world unprecedented opportunities. It is the right of every young person to make the most of new technologies and to benefit from the innovative and advantageous solutions they generate.

In my country, Indonesia, a college student is called an agent of change, but in this essay, permit me to use "agent of change" for young people. As an agent of change, young people must prepare themselves for meeting the challenges before them. They must start to think what they can do. Does he become a main actor or just become a watcher? According to me, to become a main actor in this development, we as young people who are called agents of change have to:

- Always study
- Read and train
- Have a good performance in work

Sometimes, young people cannot realize their potential that would be useful for meeting the challenges, so I think governments have to establish a national youth service programme to give young people structured work experience while continuing their education and training; national institutions to coordinate a national youth service programme, youth development to focus on education and training, job creation, and enabling young people to realize their full potential and participate fully in society and their future.

However, to ensure the full participation of young people in the emerging Information Society, it is important to help them conceive and carry out projects, and to formulate and reach certain objectives which must be adapted to a rapidly developing environment.

Arief Prasetyo
Diponegoro University-Semarang
Telecommunication Engineering
Indonesia



The success of an individual country is mostly based on how much information is absorbed. And it is why many believe that "he who controls information, controls the world". The hype of "getting as much information as you can" over the past two decades has speeded up the innovation and development of technology based on the need for information, and this is why the era we are living in now is popularly called "the information age".

The term "information age" is used because today there is an extremely high demand for information. The Internet is the "tool" that enables people all over the world to "browse" and search for as much information as they like. At first, the wireline Internet was able to temporarily satisfy the need for information, but as time goes by, the demand for instant access to the Internet "anytime, anywhere" has forced the emergence of mobile Internet through cellular phones and PDAs (Personal Digital Assistant). The technology related to information access is popularly known as information technology (IT).

The development of IT is very crucial not only to provide information to people all over the world, but also to bring the world together and join forces to fight global enemies (the campaigns to fight drugs, narcotics, pornography; or efforts in network security development to overcome viruses, hackers/crackers, etc.). In the future, instant information should be cheap and easily obtained by anybody, anytime, anywhere. Security and personalization will also be an important aspect in information technology in the future. Information access should be safe and personal (especially when related to money-based transactions).

This requires a synergic effort from the government as the regulator and all the related institutions like IT companies, universities and research centres where the innovation and development take place. A "research atmosphere" must be established in each country so that IT development is a familiar issue, and it must be started among the youth, as the future successors.

IT is a form of edutainment (educational entertainment) because, as people learn to use it, they are also entertained, and this is why it is the perfect tool for the youth. The more entertaining IT is, more interested the youth will get. Once they get interested in IT, they will learn deeper about the technology. As they grow up in the field of study at college or university, they will start to conduct research and projects in IT, and once they are used to conducting research, in the near future the country will have a big "research tank" for IT development.



The government and IT companies should also open up opportunities for students to study and practice in company laboratories and conduct research to give the students a better idea of the topic they are studying. If these efforts can be accomplished, then IT development will rapidly grow, access to information will be unlimited and thus, connecting the whole world will be just like "a click of a mouse".

Farnaz Ghassemi
Amir Kabir University of Technology (Polytechnic)
Electronics Engineering
Iran (Islamic Rep. of)



Development opportunities may be predicted, created, planned and developed by employing the present and future facilities and services provided by Information Technology. For the efficient use of these occasions, all technical achievements and professional skilled manpower should be employed. Among various facilities, telecommunication systems and services have a major role in this arena.

Information and Telecommunications Technologies have changed dramatically in the recent years and will even need restructuring over the next years. All activities in the afore-mentioned fields will have to cope with an ever increasing demand for high data traffic and new services required in the Information Society, while reducing investments and operating costs.

It seems that future challenges consist of, but not limited to, the following:

- Internet capabilities and services
- Software development
- Telecommunication infrastructures such as fibre optics networks and satellite systems for fixed and mobile services
- Access networks
- Data terminal equipment

Information of all kinds may be helpful for individuals, and the private and public sectors in developed, developing and under-developed countries. Subject to proper and reasonable use of the information and by on-time exchange of data related to earth resources, agricultural products, climate conditions, market requirements, natural disasters, social/cultural reforms, sports events, etc., all activities can be managed efficiently.

There are still challenges to be met, but forecasts clearly show that young operators who take up the challenges and implement new concepts in their networks and services will be much more successful than others. New services and applications will be a strong base for revenue in the future.

The youth in the Information Age should promote their knowledge about the related technologies and services. To cope with the future, the young generation should receive the necessary training, enhance their aptitudes for using new facilities/services and prepare themselves to establish a new Information Society for a better and promising future. In this way, all the past experience and new initiatives can be taken into account.

Touhid Zarringhalami
Tarbiat Modarres University
Mechanical Engineering
Iran (Islamic Rep. of)



Development can be defined as an upward directional movement from lesser to greater levels of energy, efficiency, quality, productivity, creativity, enjoyment and accomplishment. Society develops in response to the contact and interaction between human beings and their material, social and intellectual environment. Another factor that has vastly increased the potential productivity and development achievements of society is scientific and technical knowledge.

The agricultural era at the end of the 18th century and at the beginning of the 19th was replaced by the industrial era characterized by technological achievements such as the steam engine, automobile, telegraph lines, telephone, radiocommunication. Now we are in the post-industrial era, known as the information age, in which computers and the Internet are used commonly.

In order to meet the challenges of the third millennium, it is necessary to identify, choose and implement appropriate scientific and technological policy. In shaping a strategy for its development, each country always asks: What are the comparative advantages or dominant resources on which the strategy should be based?

Experience shows that each country has to use its specific qualities. The starting point is a true orientation to create an environment for both general and individual welfare.

The future can be built only on knowledge and expertise. Only capable people and professionals may stop a downhill economic slide, and start a wheel of a speedy progress. Therefore, human resources are a basis for designing all concepts of economic strategy, so inventive ideas and work need special care and support.

The experience of developed countries shows that founding technology centres, for research and development is certainly appropriate. It is the only correct way to decrease the gap among countries with developed and underdeveloped technology. This policy will let the people with a college degree, especially youth, have a chance to use available scientific research premises and focus in a stimulating manner their creative efforts towards achieving results of scientific research directly contributing to people's welfare.

Finally, youth who enjoy good mental and physical health can easily realize their creative and productive potential, design, create and produce new products, technologies, processes, such as communication-information technology, and add value to their communities.

Osama Ali Jasim
Al-Mustansria University
Computer Science
Iraq



The need for young people and their important role in this information era has increased due to the development of the technical and scientific fields. The natural quick minds of young people and the ability to create or adapt in all fields, while having promise and potential, make these young people to be the hope for leading the advanced scientific fields. In the communication field, the role of young people is evident, and mutual communication and discussion among those people will develop their knowledge and ideas.

The explosive growth of personal computing and the Internet made the whole world easily accessible, not just for the selected few who work for the government or the huge corporations with financial resources and technical expertise, but to anyone willing to buy an inexpensive computer and modem.

The modem is needed for the exchange of digital information between computers over analog transmission facilities, in particular over the telephone network.

Other communication equipment would also enable youth the whole world over to be interactive, to exchange their opinions and to discuss their common interests and future.

Nibras Salomi
University of Technology
Computer and Control Engineering Department
Iraq



Our beloved president Saddam Hussain once said: "Young people are the key to the future of your nation". Being young is a privilege, it means you can be what you choose, study what you desire, you have all the paths in the world to walk on, but you must choose carefully and wisely since your choice will not only affect your future but the future of your whole nation.

Can one man or woman make a difference? Can your choice change the destiny of a nation? The answer is yes, by studying history. Many persons all over the world had a great influence on their nation, whether good or bad depends on their choices, whether that person was a leader, soldier, doctor, engineer, scientist, artist, or even a simple farmer, he or she can make a difference.

We, as the young generation of this nation, are holding on our shoulders a great responsibility first to our country and second to the world around us since we are all part of the human race. Today we are living in a very complicated environment, the world around us has changed, and being changed every day, from the age of inventions, to world trading, to the gigantic economical structures up to the information super highway.

As a person of the educated community, I think that I and all the other students in our academic organizations are being invited to make a difference. We cannot make that difference by hiding behind the past, saying that once our nation was great and therefore we deserve to be great. We cannot make that difference by ignoring our heritage and our past since without it we will be worth nothing and we will not be able to build a better future. Instead, we must appreciate the past, learn from the present and look upon the future to make our nation even greater than before.

I think that in order to do that we must observe and study the world around us, open doors on other cultures and learn what other countries know. We must admit that not everything foreign is bad, we can take what is good for us and cast aside what is bad. Things sometimes could be a start for new good ideas.

In fact, our great Arab scientists travelled all over the world to carry out knowledge and wisdom and their efforts were rewarded.

In this age of scientific and technological evolutions, competition is fierce and the challenge is hard, which makes our role even greater. The future of our country depends on us to continue, therefore we must keep our minds open and work harder than ever to the benefit of our great nation and to all human civilization.

Dmitry Epstein
Ben-Gurion University
Israel



"It is understanding that gives us ability to have peace. When we understand the other fellow's viewpoint, and he understands ours, then we can sit down and work out our differences"

H.S. Truman

Humanity has come a long way since it invented the wheel and writing, realizing that it is possible to overcome the limits of space and time. Today's communication technologies created a whole new, information – and knowledge-based, reality that allows not only space and time barriers, but also cultural and perceptual differences to be overwhelmed. One cannot ignore both, the great dividends and divides that these technologies bring to our world.

On the one hand, new Information and Communication Technologies (ICTs) bring a great deal of freedom and transparency to their users. Easier access to information has brought new possibilities to social, political and economical activities such as online community projects, online government and international e-trade.

On the other hand, statistical research shows the majority of the world's population has been left untouched by the digital revolution. Not only that many countries, especially in Africa and South America, lack the connection to the ICT community, but those that were connected suffer from a low level of what may be called "digital literacy". Simultaneously, the great tempo of technological innovation combined with the slow absorption of those changes in developing parts of the world, contributes to expansion of the digital divide.

As awareness of these two aspects grows, governments all over the world are beginning to bridge the digital divide and allow their populations to become full-value participants of the new digital reality. While great effort is being invested in resolving problems of technical access to new media, another challenge of great importance is being paid less attention – the lack of digital literacy. It is not enough for a person to have a telephone or a computer, what is important is the use he or she will make of them.

As those who were born into or grew up together with the digital age, this generation has the necessary skills to make the best use of this digital environment. Our purpose should be to turn the divide into opportunities for expanded applications of ICTs in ways that have broad, social and environmental benefits. Quoting William D. Ruckelshaus, Chairman of the Washington think-tank WRI, a great challenge would be "to get the business community excited by this opportunity, both to do good and, at the same time, for them to do well".

One great example of such application is ICQ, which was created by a group of Israeli youths and evolved into a world-wide acknowledged concept of instant messaging. On one hand, it allows corporate use of application for internal purposes and targeted advertising.



On the other hand, it bridges the gap of national divide by allowing young people to exchange views and thus, they are exposed to a greater variety of cultures.

The purpose of this essay is to emphasize the importance of the content and applications that are distributed via ICTs. Given the recent progress in cultural, political and economical fields, it is our duty, as the next generation of this planet, to make sure that new technologies are used for the benefit of society as a whole and each one of us as an individual.

Tomoko Noguchi
University of Tokyo
International Relations
Japan



The diffusion of information and communication technologies (ICTs) has caused a digital divide between developed countries and developing countries. Within the international digital divide, people in developing countries have faced many difficulties in receiving the benefits from ICTs – the so-called digital opportunities. They lack telecommunication infrastructure, ICT education, as well as computers. To bridge the international digital divide, I emphasize the importance of ICT-related education for young people in developing countries, especially providing the opportunities through which they can learn the usage and applied skills of ICTs by a voluntary organization or NGO from developed countries. I mention below some of the reasons gleaned from my fieldwork experience in Cambodia last year.

The first reason is that young people have flexibility both to accept the latest technology and to appreciate the social or cultural character of their own country. The computer-related education in the technological field applies the theory of “practice makes perfect”. That is why young people have an advantage over older people. Moreover, young people who live in developing countries understand their own country’s society, culture. The computer is not simply technological equipment, but has a cultural aspect in developing applications or software. For example, Cambodia has the Khmer language, which uses complex characters, similar to the Thai language. Therefore, people have to use Khmer writing software. Such software was developed by a young Cambodian engineer. Thanks to him, Cambodian people are able to use computers in Khmer.

This case shows the ability and passion of young people in a developing country. However, many young people lack the opportunity to study the practical training of ICT-related areas, information science, information policy and so on. This is the second reason to expand the occasion. In Cambodia, young people have the passion to study ICTs, but they don’t have enough good quality educational organizations. Certain international organizations or aid agencies have provided some appropriate training programmes or fellowships, but they are limited. I would like to propose organizing an educational NGO which can move within developing countries like a caravan supported by voluntary workers as human resource and by international organization financing. In that way, they could increase the opportunities even in the rural areas.

I must conclude that international organizations and aid agencies should pay much attention to young people’s education in developing countries to bridge the international digital divide.

Reiji Sameshima
University of Electro-Communications
Communications
Japan



While there are countries like Japan, where the telephone has widely spread, the countries and the areas where there is no telephone in walking distance are more prevalent in the world. In those countries and areas, communication, education, and health care are big problems. It is important to develop and maintain a telecom infrastructure in such an area in order to make economic development feasible. But ironically, those who have lines of communication can't understand the importance of communication. Information and communication technologies (ICTs) enable and promote multimedia-based applications, which can bring solutions to those problems.

So first of all, we the youth of the world must convey the current status of digital divide problems and the importance of communications (especially ICTs relating to education, health care, and so on) to all of the people. We should not only receive information, but also have to send out positive information about what technology in the present conditions is required.

Then we must learn and build up knowledge of regulations, policy, and technology to develop opportunities of using ICTs. It is our role to use, manage, develop, and teach those technologies and knowledge to develop ICT opportunities.

Finally, it is important for we young people to communicate actively with many people beyond generations, races, and countries to promote ICT opportunities through communication. And then, not only we youth but also everyone in the world will be sure to notice the importance of communication, and will be able to enjoy and make good use of communications.

Farah Abdel Jaber
Princess Sumaya University
Computer Science
Jordan



Technology has taken full control of our life, as it became the world's first language and everyone nowadays has to learn this language to fit in this siliconage.

Ignorance of new technologies will keep you behind everyone you are competing with to reach your goals.

Technology is helping in making our road shorter and time more precious, and the outcome more efficient. And especially the young people whose life will be more involved and controlled by technology.

So as young men and women, we should give a great importance to knowing technology and trying to learn how to use this technology in our life; in every field of work technology can help to be more productive, precise and efficient.

The educational systems should play a great part in introducing technology to our children from an early age, to help them show their creativity through technology to be more useful to their society.

Now we, as young people, should always update ourselves and knowledge by learning this technology and the new things it helped to develop, to be able in the future to play our role in developing the technology in all the fields that it is needed, in the future. Because we are the ones on whom the world depends for this development.

So we could understand that without this involvement and knowledge a person won't be accepted in his society because he won't be able to communicate and contact with everything and everyone around. For this technology as I previously said is the language used worldwide. So we all have to help in starting and achieving the knowledge for all the coming generations to be able to live our coming life in an easy and comfortable way.

Zakria Al-Qudah
Yarmuk University
Computer Engineering and Automatic Control
Jordan



As the information age began, new concepts were raised in the human mind and other concepts vanished, huge developments in the field of information transfer and processing technology not only provide human beings with the ability to think about many things that were impossible in the past, but also provide the ability to achieve things human beings never even think about.

Technology plays the main role in the development of the different fields of science, economy, manufacturing operations, and all sides of human life. Because of the great importance of IT, people have begun adopting technologies, and now some countries have achieved a very high level of technology utilization. Recently the leaders and populations of other – including third world – countries have become very interested in this field because they believe now that it is very important in achieving many aspects of development. This central role of IT in human life leads us to think about how and to what extent we can develop it. In fact, IT affects various development fields, and I think that each of them has a very high development capacity.

Computer hardware systems, databases, programming languages, compilers, networks, artificial intelligence, operating systems, applications, and all other fields of computer and communication systems can accept more and more innovative ideas. As we know, youth is the future, so they must play their central role in this field effectively.

I think that this role is divided into two parallel sides: the first regards young people specialized in the field of IT – they must carry the responsibility of generating innovative ideas and developing what is available (but all members of the community must help them to do so, by creating the proper atmosphere that motivates innovation). Moreover, I think that building new universities that are specialized in teaching information technology, utilizing the very qualified minds throughout the world, and holding such fora as the Youth Forum, are some aspects of creating this atmosphere.

The second side regards the young people unspecialized in this field – they must invest in the abilities that IT provides, in order to break the barriers between nations, increasing social welfare, preserving human rights, developing in people's minds the value of respecting the personality of others, and developing all other exemplary behaviour of civilized people.

Finally I hope that countries throughout the world give opportunities to people to use technology in their daily lives, because this is one of their rights, and I hope that continued studies succeed in making technology cheaper and cheaper, in order to make its benefits available to all.

Renat Bostanov

Almaty Institute of Power Engineering and Telecommunication

Radio Engineering

Kazakhstan



What is the most important event for you in the last century? I think your answer will be occurrence of the Internet. The advent of the Internet is considered to be as significant in its effect on society as that of the telephone or even the printing press. While it took the telephone nearly three-quarters of a century to reach 50 million users, the worldwide Web (www) achieved the same feat in only 4 years. It is certainly impressive, but a closer look reveals that there are great disparities in Internet access across geographic regions. Today, there are almost as many hosts in France as in all of Latin America and the Caribbean, and there are more hosts in Australia, Japan and New Zealand than in all of the other countries in the Asia-Pacific region combined. Internet users account for only 5% of the world's population, of which 85% are in developed countries where 90% of all Internet hosts are also located. So there is a real problem. To solve this problem, policy-makers, businessmen and even users will have to find ways of rising to a number of challenges. The very first challenge is to expend access to the Internet at affordable prices. Today, the high cost of the service in many countries remains one of the main barriers to Internet diffusion in addition to that of the shortage of telephone lines. The content of the Internet must be available in many different languages, and not just a privileged few. All nations must have the requisite infrastructure, most notably telephone lines. The price of Internet access must be brought within the reach of all people. To reduce this cost, policy-makers need to determine how to price bandwidth to spur Internet up-take, how to deploy infrastructure cost-effectively and to decide what technologies are best suited to network expansion. Programmes should be developed to increase technology and computer skills among young people so as to build, from an early age, an Internet culture. Knowledge has long been synonymous with power but, with the advent of the Internet, access to knowledge is quickly becoming a requirement for power – whether social, political, or economic. In our increasingly interconnected world, we must work together to see that all people have access to the knowledge the Internet has to offer. Young people with their fresh ideas can make a big contribution to the development of technology. If I had enough rights and power, I'd make some forums or competitions in the field of new technologies to select some young guys. Then, in the future, I would make these guys the professional specialists.

My request to the young generation is to surf the net. Don't you want to make yourselves totally computer-literate? If is not available to you, ask for it... And make sure you get it. My young friends, tomorrow we shall be the leaders. Therefore the future of tomorrow's generation depends on us. We should use our best efforts to make that future light and happy. So guys, we have to make ourselves computer-literate. Because this age is the information age.

Dina Irgebaeva

Almaty Institute of Power Engineering and Telecommunication

Broadcasting, Television and Wireless Communication

Kazakstan



As you stand on the threshold of the information age, take a moment to look around. What do you see? Among other things, a whole host of tiny cellular telephones, notebooks, and refrigerators with built-in video cameras and Internet access. As microchips are developed, machines are becoming ever more compact, distances are shrinking and people are getting closer and closer to one another, to the extent that one sometimes gets the feeling that we will soon be able to hold the world in our palm and travel the universe as we now travel around the world.

A few years ago, when I was faced with the problem of choosing a profession and way of life, I did not need to spend time mulling it over. I had witnessed many events and discoveries which had fundamentally changed our lives. Within the space of 18 years, technological progress had taken a leap forward that our parents could not have even imagined, and it was clear to me that the field in which I was to work had great potential, and that our challenge was to open it up and develop it. And in the meantime we have to accumulate experience and knowledge, take part in forums, put forward proposals and exchange opinions. What I am seeking to do here is explain in brief why I would like to attend this forum.

Kazakhstan is spread over a huge territory and has dramatic natural contrasts. It occupies around two per cent of the whole of the Earth's surface. This has its advantages: Kazakhstan is very rich in mineral resources (almost all the elements of the periodic table can be found beneath the surface of our country); but it also has disadvantages, with many areas of the country being difficult to access. The very large number of people who live in the provinces and in remote towns are unable to communicate with their regional centre, let alone with the rest of the world. I would like to set up a programme to computerize Kazakhstan and develop communications throughout the whole of its territory. And in view of the fact that a considerable amount of effort and financial outlay are required to lay a standard telephone cable from one populated area of our country to another, I think that the best solution for Kazakhstan is wireless communication. I would like to attend this forum in order to see the latest developments in this field and find out which of them would be the most economical and suitable for Kazakhstan. I would expect my presence at the forum to be of help not only to my own country, but also to other countries with similar problems. For in debate, truth is born!

Sang-Hee Park
Korea University
Multimedia Processing and Communication
Korea (Rep. of)



With the extensive demand for information and communication technologies in the developing world, developers must meet the requirements. So, the youth of today must prepare development opportunities. The best development opportunities are those which ensure that the volunteer is equipped with the most current knowledge, information skills and abilities. Consequently, above all, the role of youth is preparation for the best development opportunities.

First, to be an empowered developer, training and education are an important factor for the emergence of the information society. This leads to active and full participation of youth in global information age. And training and education should not be limited but be wide ranging. Thus, a young person in this information age has to be a person with a broad outlook. But this knowledge should not be shallow. That is to say, a young person needs to be a T-type developer.

Second, youth's view of the information society must be universal. So, the second role of youth is that information inequality can be reduced. Concretely, the incorporation of marginalized groups such as developing countries, backward countries and the poor into the global information society must be realized by the youth of the information age. For example, young developers could visit a backward country, such as North Korea, and teach advanced information and communication technologies.

Third, the role of youth in the information age is communication with other countries. In other words, the youth must abandon exclusive possession of information and share the knowledge of information technology. Like GNU, if the knowledge of information technology was shared by youth, the growth of technology would be accelerated.

In short, the youth of the information age should learn wide skills, keep an open mind, give their own knowledge to all other people, and help them to participate in the information society.

Ja-Young Park
Ewha Graduate School
Digital Media Design
Korea (Rep. of)



A few years ago, one interviewer asked Paik nam-Jun (the famous video-artist) what he thought was the most serious pending question in Korea; he answered "That is the shortage of Information" without hesitation. However, things have dramatically changed in Korea. Approximately half of the whole population have a computer and even kids use the Internet skillfully. It seems that our problem isn't "shortage of information" any more but "the right choice of the information".

The information age means the time when one can get the information very quickly and cheaply and at the same time use it at any times and place. The amount of information acquired by this easy process does not however lead to a diversity of thoughts. Because of the various communication tools, even though people have same idea, they misunderstand that they have many-sided thoughts. Moreover, as people hold many ideas in common (this is natural today), they get typical ideas.

In this situation, if one gigantic power suddenly shows up and controls more information than the others, this could be very dangerous. Someone might think this imagined scenario is ridiculous. So how about the situation where most people use "Windows" as though other software doesn't exist at all. Isn't it strange? The scenario might already be real.

For protection from this situation spreading, we need talented youth who have various backgrounds. They should meet and intermingle, bringing together different talents and create a dynamic culture and information. As a student who studied civic science in university, I started to study communication technologies, which is connected with digital media. Many people didn't understand why I chose such a different field. Everything can't be perfect. When foundation work meets technologies, we experience huge synergy. To be a society which has fundamentally creativity and diversity, we need youth who have experienced many different fields. I think it is the most important task which we, as young people, must carry out.

Talant Abdullayev

The Academy of Management under the
President of Kyrgyz Republic

New Information Technologies in Business

Kyrgyzstan



The imperatives of the information age required an adequate and imaginative response and necessitated the creation of a communications culture. I think the world could not overlook the challenges of an information society, namely that of access to information and technology. A key challenge is the equal and free exchange of information.

The so-called traditional means of dissemination had to be maintained and improved while new technology had to be introduced rapidly and should be ever conscious of the specific circumstances of each country or region. In my opinion, our global development policy should be focused on three core themes: understanding the role of knowledge and information in economic and social development, and the profound changes in the development process wrought by new technologies; sharing strategies and experiences in harnessing knowledge for development; building new partnerships that empower the poor with information and knowledge, foster international dialogue on development, and strengthen the knowledge and information resources of developing countries.

I believe the youth have to take part in the following developing opportunities:

- a) The special challenges and opportunities the information revolution poses for the world's poor and for developing countries.
- b) The strategies, tools, partnerships and lessons of experience that developing countries can draw on in trying to ensure access and equity for all, in building opportunities for individuals and communities through the use of knowledge and information.
- c) The success and best practices in using information and knowledge to build opportunity for the poor; the policy and regulatory frameworks that encourage the growth of the information economy, foster the growth of learning organizations in both the public and private sectors, build knowledge capital, and encourage private-sector investment in information infrastructure.
- d) Mobilizing appropriate technologies and knowledge strategies in a sustainable manner to assure universal access to information and knowledge and to meet specific development challenges.
- e) The information economy makes possible, and necessary, life-long learning, as individuals and communities must continually adapt to changing circumstances and opportunities brought about by technological innovation. New technologies also open new horizons for distance learning, for sharing knowledge globally and for learner-oriented approaches to learning.



Partnerships are a vital element of any comprehensive strategy to enhance the knowledge and information resources of developing countries. The development community must actively seek to build and participate in new public-private partnerships to support knowledge for development.

Nur-Zia Murzabaeva
Kyrgyz Technical University
Communication Networks and Systems of
Telecommunication Systems
Kyrgyzstan



In my essay I shall be brief and I shall begin with a description of the existing problems in development and implementation of information and telecommunication technologies (ITT) in the Kyrgyz Republic.

During several years, after the disintegration of the USSR, ITT in our Republic developed very slowly, and in some cases the services accompanying the development of ITT have ceased to render services. This was connected to the unprofitability of the enterprises rendering telecommunication services and, on the other hand, was connected to the insolvency of the enterprises and of the population that was using their services.

The main reason of unprofitability of the enterprises, rendering telecommunication services were the type of ITT existing at that moment. They were not flexible and did not answer to the requirements and demands which existed at that moment. It brought the enterprises into a vicious circle of hopelessness and one by one they left our markets, and the information hunger-strike began in our Republic.

The youth receiving instruction in colleges and universities has hardly gone through it. You see, they should become an executive part, which would introduce new information telecommunication technologies, but the absence of complete and trustworthy information about new technologies and development in that short time held our country back from developing and the implementation of new ITT for several years.

Realizing this lack, the Government of our Republic created some years ago an independent body of state regulation in the field of telecommunications which provides equal access to radio-frequency resources of all applicants, adjusts the relations between telecommunication operators, licenses their activity, certifies the equipment and conducts a state policy in the field of telecommunications. Results produced were operators of cellular communications, the Internet service providers, operators of trunking, paging and WLL systems, among others.

As students, we investigate these and other introduced technologies of nowadays on 2-3 monthly industrial courses within enterprises and, during study, we receive tuition about tomorrow's ITT, supplementing our knowledge from the bottomless resources of the Internet.

And we – both students and all young people belonging to today's and tomorrow's world – are able to introduce in our Republic the technologies responding to such requirements as fast implementation, small initial investments, multifunctionality of rendered services, gradual expansion, integration with existing networks, fast self-compensation of investments, thereby allowing our Republic to enter into the Global Information Infrastructure (GII).

Olalak Khamkhosy
Faculty of Engineering and Architecture
Telecommunication-Electronic Department
Lao P.D.R.



Nowadays, we are very concerned about Information Technology. So we can say that we are in the Information Age. Therefore, many countries such as the USA, Japan, Singapore and Hong Kong, which have a high level of Information Technology, have strong businesses. In addition, having advanced Information Technology gives you lots of other benefits.

There are many advantages of having high or advanced Information Technology. It makes our life more comfortable. For example, by watching TV, we are aware of the world situation permanently. Furthermore, Information Technology makes our world smaller. This means we can communicate to each other easier, no matter how far it is, because of accessing the Internet. The Internet has become an essential tool for students and business people. Using the Internet, people are able to get up-to-date information from a variety of sources, including books, magazines, reference libraries, newspapers, and photo libraries. Also, people can join online discussion groups to talk to experts about subjects they are interested in. Consequently, we should learn to use and develop it, especially we the young, as we are the most important part of developing countries. This is because, if we want to develop the country, first of all we should develop human resources. However, Lao youth have less chance to learn about these technologies because of the country's weak condition. In our country, there is only one national university. Thus, many students cannot get into university after they graduate from high school.

All in all, Information Technology has many benefits. It can bring development to our country.

I'm glad that there are ITU Fellowships to provide for youth around Asia. This is a good opportunity for youth to exchange knowledge, skills and culture. Even though it is only for a short time, it is a good experience you will carry with you for the rest of your life.

Keolavanh Outhavong
Nuol Fea University
Electronics and Telecommunication
Lao P.D.R.



As we are aware, information is the fuel that drives a knowledge-based economy and builds a civil society. We understand that the information age is very important, but how to strengthen the information and communication infrastructure still causes problems, especially for the poor countries such as Lao P.D.R. and others.

The lack of information and knowledge on technology is one of the main factors causing country development to lag behind, whereas a well-established and efficient information communication and technology network will greatly enhance the activity of institutional networks within the country and on the international level as well. It will improve coordination, communication and facilitate the information flow.

It also gives disadvantaged people the possibility to access to the wider world directly. It provides people the opportunity to learn and share needed information through modern technology such as: radio, television, telephone, Internet, etc.

Before talking about the establishment and development of a sound and efficient communication network, we should at first discuss human resource development. The government of any state has to pay attention to human resource development, provide people scholarships and the opportunity to take part in training courses, study and research in order to strengthen the information and communication infrastructure. It cannot be done without skilled persons.

Who should be provided the opportunity to train? Everyone of any age? Maybe not. Considerable funds are needed to train people. Therefore, it is necessary that people who are supported should offer their best to develop society in the long term. Only youth can reach this aim. Youth play their role as the backbone of humanity. Nobody can stay alive or move without a backbone. Youth serve as the strong labour force and bright minds to develop the country.

Therefore, there is no doubt that youth have an important role to play to develop the information age and they should be provided the opportunity to train. In addition, because of the limited experience and lack of related materials to train in a developing country, the opportunity to train and exchange information in developed countries should be considered.

Nabil Fouad Nicolas Chebib
Saint Joseph University, VSJ-Esib



Lebanon

There is no doubt that the information and communication technologies will impact now and in the future on every aspect of our lives: cultural, social, economic...

However, many challenges and opportunities jut out in this networking revolution. The passing years have demonstrated that the successful penetration of Internet technologies within existing structures (social, economics...) depends mainly on people. In consequence, the readiness of people to change and adopt to new technologies will certainly determine the role and the nature of the impact. By impact we mean last transformations.

Among those people is the young generation of Internet users that can stand to benefit in the age of change. Although their role has been so far neglected, the youth can and will play one of the most basic contributions into the information age. In the following, we shall try to conceptualize the position of young people, look at approaches and highlight some information technologies geared towards the youth and future prospects.

As known, young people constitute a large proportion of any nation's population. They are dynamic in their approach to life. They are ready to change and they represent the working population of tomorrow. Human resources development especially targeted toward the youth should be significantly highlighted in any policy deliberation. Telecenter project involves sensitizing the youth on on-going initiatives on the information society agenda and training them in various technology areas.

On the other hand, the Internet should be used to denominate information that young people can use to actively participate in any aspect of decision making, e.g. governance and business. It can be used to provide career information that can help them to prepare their future role in their communities. However, lack of information in many societies has resulted in ignorance that has had detrimental effects. Young people should be made aware of the dangers that they are likely to face such as health issues, drugs and crime. The Internet has the potential to disseminate all information that is crucial to building knowledge-based societies.

Therefore, new technologies can be used to unleash creativity and innovation among the young people. In this scope, many recommendations may be brought to business, government and international communities in order to set up more appropriate information and technologies environment for young people to prepare them to play a critical role in the global society. For example, they should offer training schemes to young people on Communication Technologies to have an information-literate generation prepared to face the challenges of the information economy.



There is a need for collaboration among youth worldwide to exchange ideas, thoughts, and experiences to actively participate and influence the key players in their respective societies. That information can help the youth to develop thinking and analytical skills surely demonstrates that societies are investing in the leaders of tomorrow.

Pamela Youssef Massaad
American University of Beirut (AUB)
Computer and Communication Engineering
Lebanon



According to Mayan mythology, our world is in the great Baktun period, 3088 BC-2012 AD, by the end of which the earth will start a new cycle. Little did their ancient clerics know how true this prophecy would be, and that indeed, very soon, we would witness the coming of a new age: the Information Age.

Some people have heralded it as a revolution, and yes, perhaps it is. Yet, with revolution comes responsibility, obstacles, and challenges that must be overcome before the veritable fruits can be harnessed.

The change incurred by the coming of the information age is imposing, and one of the brick-walls it will face is adapting people to this change. What good would it be to have the latest, state-of-the-art Internet connections if people reject the very idea of cultural exchange? No, this can never be the case, and as such, the first task we should think of is to *orient* people, to tell them that no one should be living in turtle shells, or in cocoons, especially the ones that are self-inflicted. Once we have the psyche that is ready for breaking down cultural barriers, the sky is the limit.

When it comes to development in the telecommunication field, I believe that we have barely etched the surface of technology. So many opportunities are ahead, and we must move at light speed to fulfill them all. Even in the smallest and poorest countries, ones with no current telecom infrastructure whatsoever, we can do miracles right now. For example, new technologies will be hit by a lack of the will to take risks, once we try to apply them in countries with a well-established infrastructure. Underdeveloped countries in this way can provide the means to test, while at the same time getting on par with the rest of the world, and sitting at the edge of technology.

We should stop taking smooth slopes, and accept the fact that, at some point, we will have to make a jump. We can't go on living by the lowest common denominator, trying to merge standards within standards, to accommodate this or that country's poor infrastructure. Once people are in the proper frame of mind, we should work on a dream: that one day, the whole world – each and every country – will be linked by the same network, a network fast enough that anyone can be, literally, anywhere he or she wishes to be. This will require all the countries to meet, and will require a major overhaul worldwide.

Our young people are the only means for us to reach the Information Age. Youth's fresh minds are open, and that is of paramount importance. They should be responsible for sending the message to the entire world, to demand the breakdown of all barriers. Our youths should also be prepared for careers in research and development, to create the tools for tomorrow's communications, be those satellite, optical or RF. They should participate more and more in conferences, seminars and debates to make a push towards a new horizon.



Meeting the challenges of the information age: Development opportunities and the role of the youth



We have a golden opportunity to move to another level, to another triumph for humanity. Don't you think we should take it?

Azmi Shariffuddin Halpi
University of Malaysia Sarawak
Electronics and Computer Engineering
Malaysia



The new information and communications technologies (ICT) revolution is the convergence of three differentiated technological sectors, whose convergence has generated a qualitative difference in the way youth can generate, disseminate and transfer knowledge, and thus on its capacity to contribute to development. These technological sectors are telecommunications technology, informatics: computers and information processing technology and data and image transfer technology and interactive multimedia.

As the new generation in the information era, youth will be the leaders and they are the only persons that will change the way people can improve their life. ICTs will be the basic principles for youth to invent new ideas in order to modernize current technologies. In the future, the education and training industry workforce will be able to take full advantage of ICT when its teachers, researchers, trainers and support workers are able to effectively integrate the new technologies into their activities. Its managers and decision-makers, at all levels, can lead and manage the individual and organizational changes that will be required to take full advantage of ICTs. In addition, its providers have access to the skills needed to effectively plan for the development and maintenance of their IT infrastructure.

Nowadays, a lot of countries are urged to develop employment and training programmes that will enable their young people to participate more fully and meaningfully in both subsistence and cash economies and also encourage them to be involved in self-employment initiatives. These encourage the participation of young people at various levels of decision-making because of the great importance of youth policy in shaping the present and future of society. This involves the establishment of supportive national frameworks and responsive programmes to cater for the increasing demands of young people, thereby contributing to the development of their full potential and the achievement of their life goals.

Today, about 65% of the population is under 30 years old. This percentage continues to rise, but employment opportunities for young people are severely limited. This statistic ensures that some countries have grown slowly and have been unable to absorb the large numbers of school leavers and graduates who annually flood the market. In fact, the informal sector accounts for up to 80% of gross domestic product in some developing countries. However, the bright side of economic restructuring and accelerated change is that it also presents youth with new opportunities. In all probability, ICTs are here to stay, and they will increasingly become a part of the everyday life of youth, as has happened in other parts of the world. Youth will be prime players in linking Asia to the information highway.

Umi Sabriah Haron al Saharon
Multimedia University Cyberjaya
Information Technology
Malaysia



Millions of computers inhabit the earth and many millions of miles of optical fibre; wire and airwaves link people, their computers and the vast array of information handling devices together. Our society is truly an information society, our time an information age. There are already clear indications that Malaysia, with one of the highest penetration rates of Internet use in the world, is feeling the effect of Information and Communication Technologies (ICTs). The introduction of new technologies and changes in the organization of work is affecting Malaysian citizens, including the youths in the country.

Young adults are dynamic and creative in their approach to life. They are ready to change and they represent the working population of tomorrow. Many IT-literate youths use the Internet for entertainment purposes only, with less intention to grasp as much as possible what the information age offers. Youths can in fact sell the most valuable assets that they possess, which are their knowledge and skills. The Internet offers numerous business opportunities in which the younger generations can take part. They can gain their own income while at the same time pursuing their education, not by working in coffee shops but by sitting in front of their computers and developing applications or software that they enjoy doing. In addition, they will also obtain business experience and indirectly play a part in escalating the nation's economy. Hence, youths should not have low self-esteem and they should also believe in themselves and their ability to make a difference in the world.

Malaysia is rushing to complete the Multimedia Super Corridor (MSC). But while the infrastructure and hardware are being put in place, a shortage of knowledge workers (k-workers) remains a critical issue. Thus, youths in Malaysia are carrying important responsibilities on their shoulders to support the nation in achieving its aspiration. Youths should be ready not only with the essential knowledge but also the right mindset and attitude in becoming competent k-workers. In order for them to keep up to date with the fast-growing technology and knowledge, they have to be lifelong learners. Consequently, they ought to continually be self-motivated and passionate in their area of interest. Youths should participate in knowledge-sharing activities, whereby they can seek and share their knowledge, opinions and ideas.

Younger generations should not assume that the responsibility of disseminating ICTs in any nation is in the hands of the government, non-profit organizations and private sectors only. Each individual has a significant role in educating ICT illiterates in order to narrow down the digital divide and concurrently ensuring that everyone heads towards a mutual goal. Hence, a youth community should be established with the intention of opening others' minds on the information age, its technology and perspectives. Various activities can be structured which will educate these IT illiterates and offer them opportunities to reveal their ability and talent.



There is no doubt that ICT will impact on every aspect of our lives, now and in the future. The information age gives rise to many challenges to the nation as a whole and to each individual exclusively. Nevertheless, there are always solutions to each problem and youths should be ready to meet the challenges in this knowledge-based era.

Abdullah Ali
Faculty of Management and Computing
Management and Accounting
Maldives



The impact of the industrial revolution was a turning point in the history of the world. Likewise, another revolution is changing every aspect of your lives and spreading development to even the most remote corners of the world. Such a major change would have been almost impossible in the past. The ICT revolution could be said to be the best thing that has happened to the poor and for people with great skills and ideas but no opportunities. It has removed the ever present barriers to growth and development, from the least to most developed nations in the world.

The opportunities that are created due to ICTs are enormous. The most developed countries have used ICTs in improving their health sector education, commerce, and even social problems that sprung up because of poverty and lack of education and opportunities. ICTs are the tool that enables us to share, transmit and analyze vast amount of information that assist in making informed decisions on all walks of life in the fastest possible way.

The result is the introduction of new ideas and ways of managing services. The best example of this is the emergence of e-commerce which has changed the economic and financial landscape of most developed countries. As a third-world country, these are the changes we should embrace in order to speed up our economic growth, strengthen our education and health sectors. It could also be used to effectively manage our public services by removing too much bureaucracy and ineffective management practices.

The developing and under developed countries are still behind in ICTs compared to the developed countries. However, it is an opportunity not to be missed if we are to come in line with the developed countries in terms of growth and development. For a country like Maldives with dispersed islands, ICTs could eliminate most barriers that hinder dynamic growth of commercial and other sorts of activities.

The key to this kind of development is a well trained work force that is not afraid of meeting new challenges and opportunities. We could use ICTs for enhancing knowledge and creativity of the population and especially the young generation. The youth has a great role to play in spreading the ICT revolution to all corners of society. We need to train and encourage, and provide them with opportunities in meeting this challenge to help the society as a whole.

Educating especially the youth in ICTs is the key to meeting and overcoming the challenges we face in developing the country.

Aishath Mizna
Faculty of Engineering Technology
Civil Engineering
Maldives



The importance of the information age can now be viewed in its relationship to the changing economy in the world. It is a necessity to train the youth to compete in the global economy and attribute any future economic success to the educational attainment of the individual. While the tie between development and information technology could never be denied, information technology has been playing a wider role. Information, science and technology have become a prerequisite for youth success.

With success in development seen as being so important, the disparity between genders grows in significance. From early childhood through to youth, the results show that, in gaining better equality, development increases.

At each stage development opportunities tend to increase and the role for the information age is getting wider and more successful. The success of development opportunities can be seen by the challenges for the future generation. The opportunities for the promotion of equal gender rights is also getting better in connection with development.

The role of youth (especially the female gender) has hitherto been in the background but recently there has been a drive to encourage the youth to see their contribution to society as being beyond that of tradition, and can now realize this through employment. The road to open opportunity works within the framework offered by the government.

The acceptance of the need for qualifications to succeed in society has altered the role of youth and qualifications are highly regarded. Education together with the latest technology is an important policy area for those involved in social inclusion and ensuring everyone has a role in society. The opportunities have been restructured to absorb those of the information age who are now being given a chance to make their role successful, to ensure their continued participation or inclusion through employment. A key aim in such a role is the development of core skills or personal employability. Developing the opportunities and skills that could be more productively encouraged among the youth has become a more visible policy for implementation.

The case of equality has been won on the level of ideas. Few people would argue that the role of women should be limited. Statistics have to be given for the increased participation of women in the developing countries. Feminine values are even accepted as being preferable to their male equivalents.

Discussing the role for youth regarding development opportunities has its problems, because sometimes there is potential failure through lack of support offered by society and also shortcomings in society for the youth.



It is not enough to merely suggest that the opportunities and development are the solution to an information age that can offer employment to its citizens. Now and also for the future it is of utmost importance to give full support to the youth to fill their role in the country.



Staner Lorennij
College of Marshall Islands
Computer Science
Marshall Islands

Technology has always been the root cause of economic and social changes. In fact, today it is no different. Technological innovations, including computers, databases, telephones, satellites, and fibre optics, among many others, have created challenges, by way of the rapidly booming Information Revolution. It has done so in changing the nature of global interactions and in fostering economic development, educational opportunities, scientific breakthroughs, and cross-cultural communication. These challenges, however, have given the global societies opportunities for development. Thus it is crucial to provide the types of actions specifically targeting the Information Age, as well as acquiring access to learning tools that will enable young people to gain related information which they can tap into the opportunities that are available.

It is therefore necessary to tackle these challenges, by changing them into viable development opportunities that would not only benefit the youth, but also society in general. Quite frankly, the Information Revolution has created profound effects on all age groups, but particularly the youth. It doesn't matter whether they are from a developed country or from a remote islet in a developing country, information can and will reach them.

The positive thing about the Information Revolution would be the fact that the challenges it brings have created a vast pool of development opportunities. Therefore, the roles of the various institutions are needed in finding ways to engage the youth in facing these challenges.

One of these would be "discovery" learning for the youth. They have to explore new knowledge for themselves by seeking facts from those who possess the unique knowledge, tools and advice, in order to turn these development opportunities into benefits. This is intellectual development because, armed with a strong knowledge base, the youth of today will be fostering a higher standard of learning if this is offered through educational systems.

Secondly, the economic and social changes caused by technology itself will require young people to be prepare a plan for a living, and be capable of learning many new skills over the course of their lifetime. These are needed in order to take good command of such technological opportunities, and that is the sole reason why the role of youth is needed in a rapidly changing world.

Furthermore, through constant exposure to such educational resources, youth will then be able to turn such feasible development opportunities into positive gains.



In brief, a quick look into the future reveals a great need for a higher standard of learning to acquire the knowledge and skills needed to test the opportunities created by the challenges of the Information Age. Moreover, it should be noted that the role being played by youth should involve having the capabilities to learn new skills, and the preparedness to think for a living.

Erdenesuud Dashjamts

Mongolian University of Science and Technology (M.U.S.T.)

Information Technology Engineering

Mongolia



We are living in the information age that is developing at an extremely fast rates. It is also called the knowledge century in the world's many countries. Youth's part in developing information technology is very important. I think that it isn't necessary to write here about the role of the information demand for humanity because, for example, if we receive a letter rapidly, we can reply so quickly. It means that development is going quickly. Somebody exists behind the development of any high-technology. Therefore, this problem concerns humans and human knowledge.

The information century is also the knowledge century. What does it mean? Information is very important to obtain knowledge and an education. But high-technology is used to transfer this information. Thus, there is a need to develop high-technology or information technology. To develop information technology, young people majoring this field, should master their profession very well, to my mind. Most importantly, youth must develop themselves. What can we do for this to happen?

Nowadays, large organizations are beginning to test IQ (Intelligence Quotient) of people who want to work in their office. For example, I heard on TV that the world's largest corporation in the computer software field, "Microsoft" chooses people who have an IQ more than 210. That is why I understand that humans need to think about things from every angle in order to develop their IQ. Another example of knowledge is that students are increasing so quickly in my country Mongolia in the last few years because of knowledge requirements. There is an old saying in Mongolia: A tireless person can pierce a mountain. I always think of it.

In conclusion, I'd like to say that young people around the world should develop their intelligence, be healthy, and work hard although they need to coordinate their jobs and holidays.

Knowledge is the most important thing for developing information technology in my view. Opportunity is knowledge and the role is to develop knowledge and intelligence.

Let's fulfil our role, youth around the world!

Sonomdagva Gunchin-Ish
University of Computer Science and Electronics
Computer Science
Mongolia



Many developing countries in the world like Mongolia have adopted broad-scale reforms to improve economic efficiency and accelerate growth in information services. The "Information Revolution" is increasingly affecting the world in general and my country Mongolia in particular.

We live in a world increasingly dominated by the information revolution. Accelerating globalization, technological innovation, changes in capital markets and so on have created an environment full of opportunities. Also, the accelerating globalization, technological innovation and the deregulation of the telecommunication market have placed the entire telecommunication industry at a dramatic turning point. Information infrastructure and telecommunications are experiencing rapid changes, not only in the field of technology but also in the political and regulatory climate in which they operate and the role of youth managers. Executives in telecommunications, increasing is policy-makers, regulators and industry today are faced with many challenges as the environment is getting increasingly dynamic and unpredictable.

The needs and expectations of customers are changing dramatically and so is the ever increasing intensity of international competition. As such, telecommunications businesses throughout the world face a powerful array of driving factors which must be addressed if they are to succeed in the longer term.

I would like to discuss and to have talks with my youth colleagues about the correlations between economic performance and the level of telecommunications in developing countries, as well as the consequences of telecommunications shortages and the real requirements for telecommunication developments, rural development and the contribution of young people in developing countries. There are lots of topics we have to discuss all together.

The information infrastructure development strategies and policies of individual countries will necessarily differ, depending on their levels of economic development and development opportunities and the role of youth managers and engineers.

Moe Moe Aye
Yangon Technological University
Information Technology
Myanmar



Since olden days, people have gotten information through various media such as newspapers, telephone, television, etc. Nowadays, due to dramatic advancement in technology, the world of computing and information handling has undergone a revolution and now we can get information with an increase in speed and capacity which is an executing and challenging event for society.

First of all, in these days of information age, the number of bits of information can be stored in a unit whose surface area has increased by 10^{5-6} times and the same data could be applied for speed. At the same time the quantities of raw materials and energy needed increase in speed and capacity and unit cost of an electronic device has decreased by 10^{4-9} and 10^{9-4} tunes respectively. The number of logical or mathematical operations which in the past would have taken a man's whole life can be done by a single microprocessor in just one minute.

The advancement in information technology was due to the development of silicon chips. Between 1971-1978, information could be housed in a single chip from 1,000 to 64,000 but the cost of chips remained constant. Now billion bit chips are in widespread use, for example small offices, car engines, at air line booking offices, etc. All things seem likely to be greatly extended in the near future. So, in the place of piece of rectangular paper which can store information for more than two millennia, will come the plastic disc. In other words, IT has changed from paper-base to data-base. As the technology continues to develop, computers are being able to accept inputs to the form of either the human voice or visual patterns. Every human activity which involves data handling will be affected. As fibre optics and satellite communication become more and more common, we can make two-way access to data banks, shopping without leaving the home, contact with other people via the system of electronic mail. Later we can use an online system with Internet.

Thirdly, we have to consider in development of software, which has not progressed with the same rapidity as the hardware. Many experts say that the computer revolution will really occur only when the current generation of computer-literates reaches a position of social responsibility. In addition, we should be aware of that only the intelligent and appropriately trained people might get opportunities for jobs.

The utmost important fact is that personal information is everywhere, processed and manipulated, stored and sold. That is why it is the duty of young generation to weight benefits and risks of this information age.

In conclusion, today information can be regarded as a resource along with other resources, such as materials and energy. Action of any kind depends on materials and energy. Without materials, there is nothing and without energy, nothing happens. But without information, nothing has meaning, materials are formless and nothing is aimless.

Tay Zar Aung Lwin
Yangon Technological University
Architecture
Myanmar



The role of the youth must not be neglected in the information age. Throughout all ages, the role of youth has been important. Now, the information age is coming and the role of youth is even more important. When young people are active, strong, healthy, they always want to learn, investigate and succeed. They believe that their creations and inventions make the world a better place to live.

Nowadays, information technology has a strong influence over the whole world and it is leading towards the future world. Because of the development of information, the developing countries can imitate the technology from the developed countries and try to develop their own countries and improved their knowledge. Information technology is one of the main resources for building a developed country. So, in every country, citizens should be trained to use the computer and explore information technology. In Myanmar, the Government has opened multi-media classrooms all over the country and given computer lessons to students beginning from middle-school level. Moreover the Government has opened the Myanmar Information, Communication and Technology (M.I.C.T.) park in the capital city and has been encouraging its citizens so that people can take part in the process of development using information technology. Now people around the world are using Internet facilities and making the world like a village. Using the Internet, we can make friends with everyone and study more about the world. And by using electronic mail, we can send letters, messages and information all over the world rapidly. That's why people call this age "The Information Age".

Since the world is changing rapidly, there are many challenges in every field. We should not get scared and run away from them. The right way is that we make good preparation and meet the challenges bravely, and thus be well prepared to meet the challenges of the information age. At the same time, the new age of information creates many opportunities for those who are ready to seize them. Since "an opportunity has wings", we must make ourselves aware of the chances which can give us success and development in life. Being a youth of the information age, I prepare myself and try to meet these challenges.

The young people of today will become the leaders of world affairs in the future. The decisions of the young people can change the future of our society. So, there should be good ideas and good morale in the minds of young people. If the future leaders can understand about the important role of information technology and are ready to meet the challenges of the information age, the world will definitely become more beautiful and more developed.

Sangya Amatya
Institute of Engineering - Pulchocok Campus
Computer Engineering
Nepal



The word information, though it sounds quite simple, has got a deep and vast meaning in the present context. It signifies any type of news, description, data or facts and findings that can be useful to broaden the view regarding a particular topic. In this modern world, when progress and developments are speeding up at unbelievable pace, the facts and information are also increasing tremendously. Along with such heavy inflow of the information, the management of all these data pieces itself has become a great challenge.

As nothing is useful unless utilized properly, all the available facts and data can be of no use if not retrievable when required. So we can say one of the major challenges of the information age is to keep up with the rapid growth of information and make them easily available. Each day we get all sorts of new news and information to enrich our knowledge in various fields. However, if all these are treated carelessly, it will result loss of data and future reference would be impossible. For this what we need is the awareness regarding importance and preservation of information. Many people around the globe are still reluctant to use the modern technology for information sharing. So what youth can do here is to create the environment of awareness for the proper utilization and preservation of the information. The youth themselves have been playing a vital role in this field by generating new ideas and techniques of information collection and sharing. There are many examples of students developing informative sites and search engines in the World Wide Web (w.w.w.) for better information flow. An important point to be noted here is that it is not always necessary for a youth to be technically skillful to contribute in the information world. It should be clearly understood that collection of information is as important as developing a platform to display it. In fact, without collection there would be nothing to share and display. Youth should, therefore, be motivated to teach others how to become self-directed learners using modern technology and self-publish content the locally and globally.

Today, thanks to advancement of modern technology, we do have powerful source and media to spread the information worldwide. Using different modern communication devices – telephone, television, radio and computers – we can easily share information from one end of the world to the other. But in this race of development, we seemed to have forgotten a few hidden corners where radio and telephones are still alienated. This is another essential task in the path of development of the information age – bridging the gap between information technology and underprivileged community. Youth, as they are technical leaders for tomorrow, should realize this shortcoming and develop the concept of de-centralization so as to capture the entire world in the communication network. They should work not only for advancement of the information technology but at the same time contribute towards filling the gap that exists in minor communities.

With the development of all modern devices and tools, like telephone, computer network, internet and intranet systems, etc., sharing of information has become very easy and effective. However, it has also opened the doors for intruders and trespassers. In computer systems, such intruders, often known as hackers, break the security code and enter the restricted information area. Looking straight forward, these hackers, which mostly consist of youth, are not doing right by invading the private networks and leaking the secrets. But from a better view, they are in fact challenging the experts to develop more powerful security logics. Thus, in a way, youth are helping in meeting the security challenges that existed ever since the information age evolved.

Technically speaking, a lot has been invested and discovered for enhancement of the information age, but there is always room for improvements. Youth, being development foundations of today and pillars of tomorrow, definitely plays vital role in meeting the challenges of current information era. Youth are the ones to continue the process of development. They should thus clearly understand the difference between use and misuse of technology.

It should be clear that communication technology is more than a means of entertainment. Such awareness is again much better created by youth-to-youth approach where youth inspires youth to utilize their talent in development of information technology. Besides all these, one of the important aspects often neglected is the concept of technical skill and technical literacy. An individual technically skilled in using certain equipment is not necessarily well educated about its working techniques. The emphasis should, therefore, be given to producing technically literate youths as well. Since youth are the ones to retain the current technology and improvise it in future, they should be inspired to understand the technology related and not only method of using it. Thus to face the challenges of the information age, the youth power should be equipped with technical knowledge and moral awareness.

Hence, with youth working hand in hand, along with aid of modern technology and social support, we can advance towards a well-educated and well-informed society, the actual information age!

Shailendra Joshi
Kathmandu University
Electronics and Electronics Engineering
Nepal



Every place we go, everyone we meet, there's only one thing which can be heard. "This is the Information Age." What is this Information? What is this thing that has created such a huge impact in the whole of the Universe.

Information may be anything the occurrence of which is unpredictable. It just evolves out of nothing and from nowhere. Any ideas that may strike ones mind can be called information and so can an event happening in an isolated place of the universe. The stages of development the world has gone through is the outcome of the sharing of this information over the period.

We still remember the days when we had to wait for days to know about an event that took place in a corner of our very own country. But now, with the technological advances, information from one end of the world can be sent to the other in the blink of an eye and moreover with greater accuracy and efficiency. The developments and inventions in the field of information have taken the world into a new age: "THE AGE OF INFORMATION TECHNOLOGY".

The world has seen through the various stages of development in information technology. The history of information interchange started with the development of languages and then came writing. Now the information technology has gone digital. With every step of development, transferring information from one place to another has become faster, reliable and accurate. The thing which used to take days and months can be done in seconds now.

Advancements in Information Technology have opened the door to vast opportunities of development. On the small scale, for example for a business organization, the technology has brought greater exposure to the consumer. It is now easy for an organization to take marketing decisions and take the products to the consumers. The other aspect of development (though not directly related to information technology) is a business can produce larger quantities of product at a lower price. This helps the organization to improve the economy. Similarly, in the context of a country, developments in information technology have increased the employment ratio and directly or indirectly contributed to the economy of the country.

As every coin has two sides, technological advancements also have their darker aspects. In the present context, the information web has become so vast that anyone across the world has easy access to it and anyone can introduce information. Some people (organizations) are taking advantage of this facility that the information technology has

given to the world for better information interchange. In other words, where the technology has been developed for better purposes, it is being misused by some (mentally disoriented) people. These people put undesired information on the Web which can cause socio-economic harm. For instance, there was an incident, in the recent past, where a virus (software) on the Web caused damage worth millions of dollars. Pornography sites on the Web is another example of misuse of technology for cheap entertainment.

The main problem regarding the drawbacks of the information technology is the ever increasing gap in the economic standards between the developed and developing countries. It is true that information technology has opened the door for development, but not all the countries are able to utilize those opportunities. The developed countries with wider range of access to the information technology are progressing at a faster rate compared to the developing countries which are still advancing in the field of information technology itself. This problem has become a major challenge in the present age of information technology, which the youth of present society has to face.

We now have to take up this challenge and overcome the increasing economical gap. The greatest challenge lies in creating equal utilization of opportunities in developed and developing countries. Much depends upon youth to handle the challenge. Young people are thought of as the powerhouse of society. They are quick to adapt to any changes and to bring about changes. We have to integrate this ability with knowledge and intuition to lead the world to a new dimension of equality and humanity with the aid of information technology.

Katie Martin
Auckland University of Technology
Business
New Zealand



The advancements made in technology over recent years have caused major changes in the way we live our lives and operate our businesses. Technologies such as the Internet have helped to create a more highly educated society and made the world advance towards an "Information Age" where knowledge is key.

A knowledge-based economy creates many opportunities for new business and new markets. The technologies involved in this process have improved efficiency and ease of communication and helped to create a closer global community with highly-educated citizens. While the development of the Information Age brings many benefits and opportunities, it also presents challenges. These include integrating the use of these technologies into our everyday lives and ensuring the leaders of tomorrow realize the opportunities a knowledge-based society can present.

A major challenge is ensuring that the Information Age does not create a "digital divide" where the world is separated by the "haves and the have-nots", and a privileged few benefit from the Information Age while millions are left behind as technology stampedes ahead. This is a major development opportunity which is particularly pertinent for the Asia-Pacific region where penetration of ICT technology is relatively low (ITU Asia 2002 Information).

The threat of the "digital divide" should be turned into an opportunity where people and businesses are encouraged to adopt new technologies such as phones, cell phones and the Internet that will help to propel our global community into the Information Age. Businesses and the IT industry will benefit by unlocking potential markets and increasing efficiency, while the community will benefit by being able to advance their skills and knowledge through information technology.

It is essential that access to new technologies is improved so the global community as a whole can reap the benefits and move into the Information Age. We cannot let the Information Age further increase the disparities in our society, we should use it as a tool to decrease the gaps.

As the youth of today are to be the leaders of tomorrow, it is essential that they play an integral role in this process and understand the opportunities an Information Age can present. The role of youth is to recognize and analyze these "challenges" early so they can be turned into opportunities. As future leaders, they need to distribute the wealth of information gained through ICT throughout society to all walks of life. This will involve educating and training the public so they can fully realize the benefits of technology. Essentially, the role of youth is to intrinsically understand the Information Age so they are capable of recognizing opportunities and developing them. This will ensure we overcome the challenges and truly succeed in the Information Age.

Clarry Shchiglik
Victoria University of Wellington
Information System and Accounting
New Zealand



In our present times, the information age, telecommunication facilitates communication across many boundaries and is fundamental in many facets to the world as we know it. Although the World Telecommunications Development Conference (ITU, 2002) reports that there has been considerable improvement to telephony access since the famous 1984 Maitland Commission, it also reports that the technologies in which the digital divisions currently exist are more influential and carry greater potential than those promoted twenty years ago.

Of special significance are Internet technologies. They have the capability of unleashing such a great wealth of information so as to provide a channel for the traditionally "lagging" developing countries into today's information age. For example, consider the far-reaching implications when using e-learning for promoting education.

As technologies become increasingly capable and contribute to humanity there nevertheless exist obstacles to overcome. A significant illustration can be seen with the progress of the Internet. Despite all its promise, the development of the Internet appears in some respects suppressed. In certain cases in which companies have isolated themselves from each other, even while working in the same evolutionary area, a dilemma of inconsistent standards has arisen. For instance, Microsoft and Netscape have developed their own HTML extensions. Consequently, their respective HTML codes conflict in certain areas and result in inoperability between HTML and web browsers, a hindrance towards utilizing the potential of the Internet. Further evidence of the Internet's inhibition is reflected in a recent Microsoft event in which Bill Gates' comments about how the slow adoption of broadband Internet connection technology is hampering the progress of the Internet and deterring advertisers (Cozens, 2001).

However, just as there are challenges to break into the next boundary of technological sophistications, there are also challenges that arise with the technology-associated policy. Is the technology appropriate? Are there any conflicting social concerns? What will be the required return on investment and how will the investment be measured? The list of possible questions is endless and although broad in nature these questions can still seem infinite when considering specific circumstances.

One of the beauties that lie within youth is hope. In the context of meeting the challenges of development opportunities in the information age, it is a hope for a continuation of progress and making changes for the better. As today's youth have grown up with the paradigms of the information age, they stand in a first-rate position to advance notions of a new economy where distance is eliminated, time is compressed and the major resources



are brain power and the ability to acquire, deliver and process information. Additionally, mass customization is promoted and replaces the notions of prefabrication and mass production of the industrial age. Positive youth development will help guide the leaders of tomorrow to fulfil the potential of development opportunities presented in the information age.

The above discussion is based largely on my opinion, which I have developed over the course of my tertiary studies and personal reading. In developing my thoughts for what I have written, my interest, enthusiasm and passion for attending the Telecommunications Union Telecom Asia 2002 Youth Forum have been even further enhanced. I would dearly cherish the opportunity to attend.

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Fahad Al Hadhrami
Sultan Gaboos University
Information System
Oman



People are the most important asset in any country. The youth are the most important group among any society. The contribution of young people towards the development of any country is the most important. Young people should ask themselves which path to take when they want to develop themselves. Developing themselves will directly develop the society in which they are living.

Young people need information which is right and relevant. Besides that, getting the information at the right time is also important. The Internet is the right place for that. In third world countries where educational resources are hard to find, the Internet has really changed our life. It has changed the way we spend our time. It has created new jobs with new opportunities. Young people learn from each other from the Internet. There are lots of opportunities on the Internet. Young people should take advantage of it. Furthermore, they should encourage each other to enter this world. Young people need something to believe in, something to get excited about. The world is changing every moment. We are now young. We can create opportunities.

I live in a third world country and the number of young people in my country is very high. The government is doing its best to provide jobs for this group of people. This is not enough in my country for a young person to get a job. We should create opportunities for ourselves. Taking the paths which are new is more risky.

One of the rules of life is: more risk, more reward. Taking risks needs special people with certain skills, people who are energetic, who can work for long hours, have ideas, and creative. Many people have those skills that I mentioned. But those skills reach their highest level when we are young.

We cannot develop if we are living in a world with wars, terrorism and violence.

The power of youth should be used to develop society and the country.

Wafa Mubarak Al-Oreimi
Sultan Gaboos University
Information System
Oman



Information technology provides new ways of exchanging information, and transacting business. The world is rapidly moving towards knowledge-based economic structures and information societies. As we know, that technology plays the role of backbone in many fields. In this essay, I am going to explain the challenges of information technology in the fields of communication, education and business sectors and development opportunities. Then I will state the role of youth for the development of the information age.

First, in the field of communication, electronic communications present new opportunities for the self-help movement. Electronic chat groups, bulletin board systems and online forums are easier to attend than face-to-face meetings, so people can participate even if they lack transportation or have schedule problems.

Second, in the field of education, private tuition is costly and often even alienating. On the other hand, electronic tuition is less expensive, it can be individually tailored, and it affords intensive interaction among students residing in different countries.

Third, in the business field, technology helps an organization to buy and sell what it needs via the Internet and that helps it to reduce transaction and communication costs.

Youth have a role to play in development opportunities for technology. They like to buy new technology that have just been introduced into the market, and to give their opinion, which will help in improving this technology. Also, young people like to study any new technology to discover something new.

Ayesha Khan Rauf
University of Engineering and Technology - Peshawar
Electrical Technology
Pakistan



Introduction

In the days of the information boom and its explosion, a gateway for development has been opened. The changes and challenges in every walk of life due to this explosion can be handled by the youth all over the world. We should tax our minds and energies in this direction universally, irrespective of politics and other factors for the betterment of humanity, globally. Remember the Star Child? The Star Child was a mysterious interplanetary foetus that floated portentously toward Earth in the closing scene of Stanley Kubrick's great 1968 science fiction film, "2001, a Space Odyssey"; he seemed to signify that a new stage in human evolution – or enlightenment or something – was about to begin.

Putting the World in the World Wide Web

The entire world with its youth force should be put on the Web. Presently, the Americans are leading in this field, as are other nations like Britain, Germany, Singapore and Sweden. Youth can play a vital role to break the monopolies. The computer is such an invention that has provided a breakthrough to the development of technology. It has made the impossible easy. It's hard to tell where reality ends and imagination begins. From capture to output, digital imaging technology enables us to create our own reality. There is a need for development of wireless technology for use in everyday life. The fresh and open minds need to get together on a network, with their bright ideas and new perspectives on technology to make human life easier and enjoyable.

World Trade

Information technology should spread all over the world instead of being monopolized by a few industrialized nations. Capital and profits should soar. Healthy competition should be encouraged among the youth. New trends set up by the youth in trade can boost up the economy. New economy should replace the old economy with the youth force behind it.

Improvement of the Human

In improving the human body, we should be innovative. We have been able to tinker with our physical bodies in quite amazing ways by installing a chip here, inserting an artificial organ there and making genetic adjustments that could block the onset of fatal diseases. The distinction between human beings and machines is about to start narrowing and the young people must play their part accordingly.



Conclusion

A heavy responsibility rests on the shoulders of youth in this Age of Information. Vast fields are open in which youth has to play an important role globally to share out the benefits, instead of their being monopolized by a few nations. Novel ideas by the younger generation should be put into practice for the universal good.

Rashid Hamid Qazi

NWFP University of Engineering and Technology – Peshawar

Dept. of Electrical & Electronics Engineering

Pakistan



In a turbulent world, it's impossible to know exactly where you're going and exactly how you'll get there. This presents an enormous challenge for the youth of the present age, who must promote a strong sense of vision while encouraging people to be constantly searching for new opportunities and potential new directions.

The radical technological changes in the Information Technology and Telecommunications industries have contributed towards a more information- and interaction-intensive paradigm for human-computer interaction. This trend, which is expected to continue, raises a whole new range of social, economic and technological considerations, regarding the structure and content of societal activities at the turn of the 21st century.

The great challenge presented by the information age is universal accessibility. It is important to develop high-quality user interfaces, accessible and usable by a diverse user population with different abilities, skills, requirements and preferences, in a variety of contexts of use, and through a variety of different technologies. It is the right of all citizens to obtain and maintain access to a society-wide pool of information resources and interpersonal communication facilities.

We are entering an information age with rapid growth in technological innovation. Critical thinking and creativity are the engines of human progress. We must have an inquisitive mind and stand ready to explore. Independent thinking, good communication skills, proper application of knowledge, and an open mind to new ideas are crucial in keeping us in step with social progress.

The role of youth is extremely important in an era of information. The world has turned into a global village and people are coming closer and closer. Young people living in different countries and cities are faced with different challenges. But there are certain principles, which apply equally to young people no matter where they live. Young people are cooperative, active in their society and care about current issues. They acquire an international perspective and can understand others.

Important issues that concern us are trends of global development and the challenges of the 21st century. We have to look into the opportunities and challenges faced by the world in the new millennium, encourage active community participation, promote the spirit of creativity and innovation among young people, enhance global awareness of the importance to train up young people, understand the competencies for managing in an information age and train the youth to deal with the Einsteinian world.

Mostafa El-Amree
Al-Azhar University
Computer and Information Technology
Palestinian Authority



Young people are active and full of energy, therefore it gives them great pleasure to partake in gymnastics and exercise. The importance of hard work for young people is a protection against hunger but idleness is a source of misery. As a matter of fact, the harder young people work, the happier they become because they earn more and they play a more important role in the development of their country.

In the last twenty years, modern technology has invented computers. They are already connecting the world with the Internet; the world is now a small village thanks to the Internet. Most of Internet users in the world are young. So, meet the challenges of the information age, high technology in our lives plays an important role in the development of youth knowledge.

Self-confidence in young people is the golden road to success in life; it gives you the courage to face danger and to solve all problems.

Learning foreign languages has become necessary to enable youth to understand what's happening in the world. Moreover, it is useful if they know the language of the country they visit.

A friendship made in hard times shows the true value of friends. So the friendship between the young people of the world is useful to improve the knowledge of all civilizations.

Deema Besiso
Ali Bahar University
Information Technology
Palestinian Authority



The information technology sector is significant as an important field in the industrialized developed world; we can consider that information technology is a measure of the development in the world. Each country which doesn't follow the information technology trend will be considered as an undeveloped country.

In our Arabic world, the diffusion of information technology is very slow due to several factors:

- Poverty, ignorance, and the domination of the government to information technology sources.
- We find in the industrialized countries that the growth rate of information technology is the highest growth rate in the world, and that there is an information technology revolution which will up-grade roles in the worldwide economy.

For this reason, it is recommended that we build a strong base and follow new policies, which could make a huge difference to these conditions.

Users of Internet in the Arab world reach around 10%. This must be increased to improve human resources and the economy of Arab countries.

The Arab experts said during an international meeting that the Arab world is at least five years behind other world countries in the field of information technology. It would need yearly about 10 million USD of investment in order to reach the other countries' level in information technology.

In order to reach a higher level in information technology, the following should be taken in consideration:

- Develop the telecommunication infrastructure, in order to cover the small villages in Palestine.
- Make the telephone service, the mobile telephone service, and also satellite telephony easier.
- Develop the regional network to make data communication and transfer easier.
- Develop the education sector using new Internet methods in the schools.
- Participate in conferences and exchange experiences.
- Develop competencies in human resources in information technology.
- Reduce communication costs of Internet, in order for it to be available to everyone.
- Develop the industry of hardware material in information technology and lower taxes on this equipment.



- Ask for help in this field (Information Technology) from advisers and form relationships with the countries of the region in order to support the development of information technology.

Our objectives should be:

- Make the region a developed region which can produce and use information technology.
- Reach the level of the developed countries in the information technology.
- Develop the Palestinian economy.
- Share information and experience with the other countries in the region.
- Open the Palestinian market for telecommunication technology.

Rebecca Bajandou Emori

Divine Word University

Arts

Papua New Guinea



With the dawning of the 21st century, information has become a priceless commodity. Along with it came a completely new field of endeavour – computer technology. Computer technology is at the centre of a new industrial revolution that has transformed modern life. The computer is one thing that has brought the term Information Age into existence.

During the industrial revolution, there were many factories that employed people. These people were working in factories but many of them were living in poverty. A good lesson learnt from the industrial revolution is the danger of people living in poverty. If the information age is left to take its full course in the world, it might create problems for the under-privileged and benefit the privileged ones just like what happened during the industrial revolution. If the information age fully takes place in the world, it should help everyone earn a good lifestyle instead of making some live in poverty while others live in luxury just like during the industrial revolution.

The information revolution, unlike the industrial revolution, came to Papua New Guinea within the last ten years. Its full potential is yet to be realized. This revolution is a culture shock for many Papua New Guineans, because we are not prepared for it. Most people in rural areas do not know how to use telephones and computers for these things are not accessible. They simply enjoy whatever lifestyle they have at the moment.

Papua New Guinea cannot benefit from the information age unless young people learn the necessary skills and ideas. There should be a commitment made by young people as part of their role in meeting the new revolution. Once they gain their skills, they should teach and train the unfortunate young people in remote parts of this country. Conducting computer seminars and workshops can be of great help.

These challenges are not setbacks but opportunities for development. There are opportunities for making information technology work for our communities and to make our lives better. There are also opportunities to make the world we live in a better, safer, cleaner and healthier place. Yet other opportunities are to make our living from it, or we could even become another Bill Gates by developing some new space-age software or hardware to integrate information technology with computer technology that could see us becoming billionaires overnight. This will also be an opportunity for the whizz-kids who will become successful by learning about the information age at an early age due to their natural skills and intelligence. The opportunities are never-ending.

In conclusion, there are a lot of challenges in this information age. The opportunities then pose the question of the role of youth. The youth, in order to fully realize the benefits of the information age, have to take on a leading role in learning and acquiring the skills. These skills then should be used to train the other unfortunate ones. By doing this, the unfortunate young people will be able to acquire the same skills as the fortunate ones. Only then would we have met the challenges and, as young people, will have done our utmost to get the best out of it.

Herman Kunsei
PNG University of Technology
Communication Engineering
(Telecommunication and Network)
Papua New Guinea



The beginning of the 21st century introduces the change from the industrial age to the information age. The change also brings with it some challenges. These challenges can be opportunities for developing today's youth for tomorrow. This essay discusses issues in preparing the youth to meet the challenges of the information age.

The information age is evolving rapidly. For this reason, we as the youth of today must be prepared to meet the challenges that will come about as a result. The information age is heading towards the Internet or the World Wide Web (WWW). Huge amounts of information can be shared over the Internet with the advances in information technology. With advancement in computer technology and the reduced cost of purchasing a computer system, the access to this information is more readily available.

In third-world countries such as Papua New Guinea, however, the majority of young people today do not have access to the Internet and thus to this vast information repository. Only a minority in higher institutions such as the universities and some colleges have access to the Internet and, thus, the privilege of obtaining and using this information in learning is limited. The cost of running such a service is another limiting factor that widens the gap between the two groups. Even the institutions with Internet access are demanding better/improved access. The challenge to the privileged young people also involves how they can assist in narrowing the gap that is being created.

With government assistance this can eventuate. The government, as the policy-making body, must develop proper policies in telecommunications and the use of information technology, which will be flexible in meeting the ever-increasing demand for access to information. These policies must be applicable now and for the next century in meeting the challenges of the information age. With the direction from the government streamlined through its appropriate subsidiary departments, young people can be developed to meet the challenges of the rapidly changing information age. To facilitate this, the government must also be committed financially and in every other respect.

In conclusion, one could argue that the challenges associated with the transition to the information age are opportunities. When these opportunities are properly utilized, they will equip the young people of today for developing the younger generation to come. The government of this developing nation has the opportunity now to equip the young people. The youth of today are tomorrow's leaders; therefore, well equipped young people of today will be better leaders of tomorrow in the information age.

Maria Evigene Bañez
University of Santo Tomas
Engineering-Electronics and Communications
Philippines



Hungry? Order food through the phone or the Internet and it will be delivered to you right at your doorstep. Anxious to call somebody? Try SMS, it's easier. Couldn't find a pay phone booth or you ran out of coins? No pay phone card either? Buy a cell phone, it's more convenient. It's your Mom's birthday and you can't leave the conference room to get her a present? Order flowers through the Internet and have them delivered to her, or you can call or send her a text message. It only takes a minute. Welcome to the Information Age where the possibilities are endless and opportunities abound!

Easy, convenient, cheap – these are the words that define man's modern lifestyle. The same words are the exciting challenges that define the daily quests of information technologists in their profession. The fast-paced development of information and communication technology has reduced the world into a single community. Every day, business deals are sealed across the oceans through video-conferencing or teleconferencing. Peace is achieved between warring camps through telecommunications. Freedom is won by people long bound by the shackles of tyranny. Lives are saved; happy moments are captured and sealed in a disk.

We virtually live our lives around technology's comfort zone. We are suckers for it. We relish and babble to its ways, made easy, convenient and cheap. After the discovery of that "chip" that started it all, it now seems impossible, even for the simple street sweeper, to leave home without a Cell Phone. As its fast-paced development proceeds, the challenge to sustain it appears to extend beyond the present generation. Indeed, the need to carry on the information technology revolution is one of the biggest challenges that the youth of today must face when their turn comes. Equally challenging is the need to keep the seed of humanity's conscience within information technology's amazing and awesome possibilities.

Technology's benefits must be enjoyed and taken advantage of. It must evolve based on society's needs, and not the other way around. The New Generation must nourish and preserve our norms and unique culture with the use of technology. Cell phones and electronic mails, for instance, may be used to keep in touch with loved ones because we Filipinos are traditionally family-oriented. Networking technologies, where help may be accessed in a snap of a finger, may be used to modernize the unique Filipino tradition, hayanihan. The practice of tradition may be made easier and more enjoyable through technology. The New Generation must view these things as an opportunity to add a unique touch to the fascinating and exciting Information Age.

There is no peril in being technologically advanced, for technology advancement is an indicator of man's evolving knowledge. Coping well with the changes that it brings is an indicator of modern man's growth in wisdom. But to compromise our values and morals, and to fail to give modern technology a heart and conscience is unacceptable. Yes, we must keep an open and rational mind that welcomes change, but at the same time, we



must keep our values and morals above our thirst for knowledge, above our need to discover the wonder of Information and Communication Technologies. This is the enormous challenge that the New Generation must address.

Almin Manalo
Polytechnic University of the Philippines
Computer Science
Philippines



The youth – young people – are more than an age group: they are the bearers of the future, the fruit of the past; they represent a diverse range of people undergoing tremendous development. By discussing the stages they go through and by identifying differences between groups of young people, an accurate picture of the youth population today can be formed.

Our whole environment now is being transformed by technology. It transforms at a more rapid rate all the time, and the most dynamic transformation is taking place where youth interact with each other and with ICTs or Information and Communications Technologies. And because the youth are early adaptors in technology, opportunities for youth are beginning, using Information and Communication Technologies to shape learning opportunities to go beyond the boundaries of geography, time, expertise and even leadership.

Youth is the vehicle for following-up on the commitments of the government. Youthful energy, creative ideas and the fact that youth will serve as future leaders are all important reasons for young people to be involved in the practical, action- and technology-oriented society. Because ICTs are rapidly consolidating global communication networks and international trade with great implications for people with lower economic and social livelihoods and borders, the responsibility of youth is to take advantage of the benefits of ICTs for poverty alleviation, economic engagement and social mobilization. The youth of today have the greatest responsibility for the refinement of the global community, a bridge for a tribal society to access a technology-based vicinity and a population to receive and redistribute services and information and to globalize internal information. Young people provide an opportunity for today and tomorrow to work together making recommendations to expand and improve locally and globally, develop strategies to promote the collection, quality, comparability and use of ICTs for practices that benefit society, assist in the effective use of automation, build an edifice for a strong, immovable community and accelerate the socio-economic development of the society in general and their specific needs in particular to enable them to play a positive and decisive role concerning decisions to be made on the acquisition and utilization of ICT to accelerate development.



Youth and ICTs share power, influence and responsibility. Young people are actively involved in all discussions sharing their opinions, viewpoints, information and enthusiasm, and share an appreciation for the needs and expectations for the future using ICTs while demonstrating a positive attitude of real confidence and trust. Everyone needs to take responsibility for contributing to the discussions, sharing responsibilities and being receptive to the changes technology offers. Youth is power and important and the starting block in the race to build a global community. We are not the leaders of tomorrow, **we are the leaders of today**. We must use our energy, enthusiasm, creativity and intelligence to show the world the "**Power of Youth**".

Tafiga Lumanai Godinet

LE University Aoao o Samoa (National University of Samoa)

Computing

Samoa



Samoa, a small dot on the world map, with a population just over 171,000 has, without a doubt, a lot in common with her neighbours and big sisters around the world.

What our country and every other country needs is educated youth that will run a successful future government. Every now and then we see changes – almost everywhere – in our homes, work, schools, towns and the country as a whole. These changes have affected our way of thinking, speaking, understanding and living; they occur every day, every hour, every minute and even a split second. We may not be aware of it, but they are gradually taking place in our country.

Samoa has a lot of development yet to complete. This development relies on people with experience and expertise to continue its success and prosperity. Our ancestors endured the Stone Age, the Medieval era and the Renaissance. Back then, our people had no easy access to the outside world. Their means of transportation were canoes or probably swimming from island to island. Their way of life was a struggle because things were done indigenously. We still have some of the older generations among us, but many have gone past their limits of accepting new changes. Some of them prefer their traditional ways of surviving. Today the young people are engulfed by the arms of the Information Age.

As mentioned earlier, changes affect our way of life. Look around and you will see numerous changes. These changes demand a lot from our young people because we will be the future leaders. We need to be informed, well-conversed, well-equipped, and technology-literate to make the challenges come about.

Technology has played a huge role in our lives. In our homes, we have appliances that using switches or remote controls that, by the click of a single button, we can operate.

Our radios, TVs, videos are operated by the single press of a button. Our involvement with the computer has broadened our view of the outside world.

We are able to send money back and forth in a matter of minutes. Our use of automatic-transfer money cards allows us to do transactions at any point of sale. To talk privately to a long-distance friend can be done when owning mobile phones. New possibilities are: viewing movies on PCs or by DVD (Digital Video Disc); sending letters overseas via e-mails. Our modern cars are electronic, and facilities can be spotted by installed programmes. Nearly everything is within our reach.

I believe that we cannot live without these changes. We have accepted that they are part of us. If we reject them, we are lost, alienated and probably regarded not worthy to live. Our lives are intertwined with these developments, and we, the young people, must make a move to stand up, get involved, be educated and learn the importance of ICTs (Information and Communication Technologies).



When things change, people change. Our economy is no comparison to that overseas; however, we are affected when the "big boys" economy is non-profitable/profitable. We must (and I emphasize *must*) understand that in order to outface the unknown future. We should be prepared to tackle the problems, find solutions and be able to fit comfortably in a fast-paced and changing work environment. So for us, the future leaders of our country, grab the opportunity while it is at hand, be educated and technology-literate so that we can face the challenges of this Modern Information Age.

Julius Vaalepa Vaai
The National University of Samoa
Information Technology and Networking
Samoa



Meeting the challenges of the information age is a complex task and the role of youth, especially with regards to development opportunities, is becoming increasingly important and vital. In the modern global world, new information and communication technologies (ICTs) are greatly affecting societies, governments, industries, communities and individuals. ICTs are especially impacting on the youth as they make up a large percentage of Internet users and Information Technology (IT) professionals. Indeed, the information revolution is rapidly transforming every aspect of human activity, but the questions raised about the nature, content, cost and impact of this new information age, particularly with regards to the youth, are still far from being answered.

ICTs impact on everything from working hours to home movies to the balance of trade between countries, from the micro to the macro level; it would be impossible to think of a world today that did not function without these assets. The exact nature of the challenges posed by ICTs to existing societies and economies must be understood in relation to terms like "information society" and the "creative economy" as well as "equity" and "access for all". We need to develop strategies to allow ICTs to develop not just in rich urban societies, but also in developing countries, and create development opportunities for all in these societies and countries.

At the present time, access to the skills, equipment and network's that allow entry to the information society are largely the privilege of rich countries and not so much for the poorer. This must be addressed and rectified. Currently, developments in the North are moving much faster than those in the South and the flow of information, knowledge and resources is mostly North to South. One of the biggest challenges for youth, especially in the countries of the South, is to become involved in a more balanced scenario in the future.

Overall, the challenges are multiple and exciting but with faith, vision and perseverance goals can be reached and fulfilled. The role of youth is to energize, activate and break down the barriers so that the information age and development opportunities are available for all.

Seng Hwee Gee
Singapore Polytechnic
Multimedia Software Engineering
Singapore



The information age that we are living in has changed our lives significantly. The use of the Internet has revolutionized the way people communicate. People have accepted the Internet with readiness and it has become an indispensable part of our lives. This breakthrough in Information Technology (IT) has affected a vast array of individuals, including young people.

The information age has provided many development opportunities for the young people of today. This new technology has given them a wider choice to satisfy their hunger for knowledge. The fields include networking, programming, security, design, artificial intelligence and many others.

Realizing the importance of equipping young people with this knowledge, the education infrastructure has taken a shift towards incorporating IT in daily lessons. This is evident in tertiary institutions where school compounds are installed with the necessary facilities to provide ready access to the Internet for anyone who has a laptop or a personal digital assistant (PDA). A school's cafeteria filled with students accessing the Internet on their laptops is no longer a rare sight. As such, it is crucial that young people today accept and learn this new tool for gaining information.

Discussion and debates play an important role in the development of a person. Online portals and forums allow young people of different races and backgrounds to interact with one another, providing room for cultural exchange and mutual understanding. This new style of gaining information with ease and speed has definitely motivated young people to seek more knowledge. This puts them in a better position to address issues such as news, careers and society.

Abundant opportunities are available for young people who wish to pursue their education in this direction. Other than the basic computer training given in secondary schools, tertiary institutes also offer courses such as computer engineering to empower young people with IT skills.

Being the IT-literate generation and as leaders of tomorrow, much is expected from young people. As such, they will have to develop thinking and analytical skills that will be beneficial to themselves and society. With greater emphasis on the efficiency in transmitting information, IT is advancing at such a great pace that the young people cannot afford to lag behind, as this would inevitably lead to a loss in productivity and efficiency. Hence, to be able to constantly upgrade to keep up with the pace at which IT is advancing is one of the main challenges the young people must face. Keeping themselves afloat amidst the huge wave of information that is drowning them would also be one of the major concerns.



The information age has affected almost every aspect of our lives, and will continue to do so. The youth being the pillars of tomorrow's world, will be the most ideal people to start cultivating. The large number of young people owning laptops or PDAs would be the evidence that the government has succeeded in exposing young people to IT. All these will ensure that the nation will have competent successors, prepared to take on their roles in the future.

Leonard Ng
Nanyang Technological University
Communications
Singapore



The Information Age has brought unparalleled opportunities and ultimately economic success for societies that enlisted widespread use and adoption of Information and Communication Technologies. Traditional distinctions and barriers are breaking down resulting in escalating ease to communicate or do business on a global scale.

The Internet is the fastest growing market place in the world economy. It became the key for easy access to information for all sectors of an economy. With it came the birth of e-commerce.

E-commerce represents one of the most dynamic features of the Information Age. With its introduction, a wide variety of business transactions were able to be carried out electronically, thereby enhancing the efficiency and competitiveness of those organizations who harness this technological breakthrough. However, there remain several challenges facing the e-commerce industry as reflected by the high dot-com death rate in recent years.

In view of the already intense economic competition among nations, the lack of communications access will have dire consequences in the Information Age. Having established communication systems will boost a country's global competitiveness. Businesses which were previously restricted to domestic operations will have easier access to worldwide demand.

The rapidly emerging land-based wireless systems may render wired networks obsolete in the near future. The much hyped Bluetooth technology has already opened up new frontiers in the communication industry. From the commercial point of view, a good example where wireless technology can open up new opportunities would be in the agricultural sector. Countries with a large agricultural sector can utilize cellular overlay systems as a means of communication between farmers and the market even before wired systems are set up.

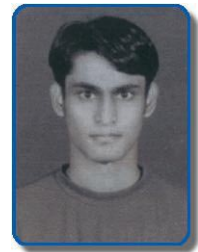
With the advancement of the GPS technology and satellite systems, humankind will soon witness technology that goes beyond its wildest imagination. Road guiding systems and aids for the visually handicapped are just a few of the applications that have already benefitted from GPS technology.

The younger generation of any nation represents the working population of tomorrow. They are receptive towards changes and crave new technology. Through the integration of their creativity and drive, our youth can further advance the current state of their countries' information industry. By investing in Internet and information technology in schools, the government of any nation will provide the foundations to prepare youth for the Information Age. Additional training programmes and overseas forums are also important to prepare youth for the challenges awaiting them in the information industry.



Youth should embrace any available opportunities to interact, exchange ideas, thoughts and experiences, not only among themselves but also with their foreign counterparts and the older generation. Only by working and thinking outside the box can the younger generation truly excel in the Information Age and propel the current state of information technology to new heights.

Thushara Gunaratne
University of Moratuwa
Electronic & Telecommunication Engineering
Sri Lanka



Travelling back in time to the age of our ancestors, we can visualize a man hunting an animal to find his days meal... Well that was the beginning of human beings. Then came the discovery of fire, which opened up a whole new horizon. Man learnt how to build weapons, mostly to kill prey and for protection from harmful animals. And little by little came machines and it can be seen that lifestyles were beginning to change. All these led to an industrial revolution, then world wars during which experiments on computers were carried out, and the outcome of all of these developments have brought us to where we are today that is the information age.

Today we have computers, the Internet, satellite communications that have made it possible to send information from one side of the earth to the other in less than a second of time. And the ways of banking, doing business, communicating with each other have become solely dependent on computers. The ultimate aim, as the scientists predict, is to make these facilities accessible to everyone in the shortest possible time. Therefore, in years to come, everybody will be given an identification number when they are born and you will be inside the whole network of facilities. But this will bring a very bad effect on human privacy. You will never be able to escape from the tracking satellites looming above. So this is a challenge we have to face, do we really want to live a life like that? Moreover, since the whole world is going to be dependent upon these systems, what would happen if the system crashed or if the third world war finally took place? These are some of the things that we don't want to imagine ever happening.

Globalization is a golden aspect of the modern world, which has brought all the developed civilizations dispersed throughout the world into a village. And exchange of information among these parties has made the globalization possible. Therefore it is evident that the information age depends on globalization and globalization depends on the information exchange systems. As the youth of this country, we have to be well informed about the various changes in globalization, especially how they will affect undeveloped countries like Sri Lanka. Especially for a country like Sri Lanka, while playing a major role in the information age, it is important to obtain the maximum output for the benefit of the country and its people. Also we should participate in the development of the information industry, especially by developing innovative concepts and by actively engaging in research programmes.

Apart from technical developments, it is important for the existence of any industry to have a strong marketing and management side. For the development of the information age, the information industry has to remain as a multi-million business, in order to facilitate further research and development and other strategic developments. So the marketing process should be a strong and innovative one and the industry should be market-oriented to survive the modern world. This is another opportunity for the youth to engage in.



It is evident that the information age is immensely influenced by the innovative youth engaged in it. Therefore, as it is the youth who will be in the industry in the near future, it is our responsibility to sharpen our innovative skills and push forward this golden era of the information age ever further for the benefit of all living beings on the planet Earth.

Premila Robert
University of Peradeniya
Electrical and Electronics Engineering
Sri Lanka



The need for sharing information is the vital factor that has driven the world to develop into the stage it is at today. Since the age when people shared information and communicated with their close neighbours using natural resources, people have felt the need for a more sophisticated way of communication. Thus, today we are in an information age, where we are able to enjoy many facilities that extensively support the sharing of information around the world. The greatest achievement of the information age, in this respect, is the Internet, which provides any information around the world in a few seconds at the fingertips of the user.

The more the technology of the information age develops, the more the possibilities of further development. This fact can be clearly identified in the telephone communication system. After the introduction of the telephone for audio communication, there was the need for a more sophisticated system including audio-conferencing; then, it went further to video-conferencing and to wireless communication. Again, the need has made these a reality through the development of appropriate technology, which has developed to a stage where communications are established as and when required by the user, but automatically. This is the Bluetooth technology.

Therefore, it is obvious that each new day of the information age brings new challenges to the technology, demanding systems that are more complete. Thus, the Bluetooth technology is not the final stage of development. People do demand more modifications of the technology and more facilities from the technology. This means new challenges!

The most important issue is facing the challenges with new ideas and satisfying the users. For this, the most suitable team would be the youth of the information age. With fresh and fast-working minds and a sound knowledge of the existing technology, young people will prove to be the best choice for meeting the challenges. Many are in the process of developing the Bluetooth technology to support many new requirements. For example, a fully integrated module has been developed recently for automotive applications such as sound systems, navigation and telematics devices and hands-free kits, using this technology.

Thus, youth has to be prepared to play a major as well as a responsible role today in the fast-developing world. In order to play their part to perfection, they must first learn the current environment of the technical world and must develop the ability to identify the needs of the world. Giving the right thing at the right time to the right person is the most important requirement. Thus, creating a vision of a more developed, more sophisticated world each new day and trying to bring it to reality will be a preparation to meet the new challenges the information age is facing daily.

Ramia Abd Al-Ghane
Syrian Telecommunications Institute
Data Processing
Syria



We must always try to do our best and seek out everything that is important for our future. Two years or so in any university or institute are not enough for education because the development of scientific knowledge is endless and life must be a continual battle involving education and development.

A successful person must not limit his or her knowledge to study periods but must continue research about the subjects that develop the way to extend experience and to increase competence. The most important thing is to have determination to do this and reinforce self-confidence to strengthen existence and position in society and to improve performance. In this way, a young person will be active and gain many opportunities to be offered work in several domains.

The chance to work does not come effortlessly but comes from a level of knowledge that came from learning and applying this learning.

To do this a person must acquire much experience, knowledge and culture and all these matters generate from our awareness that nothing came from a void but from studying that and a good understanding of its meaning.

The opportunity of work should be available to all persons in this life and we must always remember that.

The role of young people is very important in this society and they must realize that they are responsible for developing society and its progress to its best possibilities. They are an ambitious generation, and by their scientific knowledge and talents are equipped to promote progress and inspire a revolution of a civilization through their concepts and activities.



Ramez Habib

Syrian Telecommunications Institute

Digital Optical Stations and Micro Stations

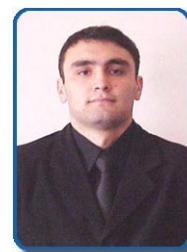
Syria



We always try to continue our studies and not stop at a definite age. We should improve our knowledge to obtain enough experience to meet the challenges of life. I have spent two years in this institute and I hope to complete more because education for two years or so in any university or institute is not enough since the development of science is endless and life must be a continual battle involving education and development. A successful person must continue during study periods to research on the subjects that develop his experience. We as the youth must have the determination to increase our experience and knowledge because youth cares about the purpose of life and the world is depending upon them to built a strong world using this experience and knowledge. A successful person gains confidence in himself and also becomes an active person and shares in the construction of his country and its progress. Everyone should be certain that knowledge and experience do not come from inaction but they come from research and learning and the application of this learning and research.

Finally I hope to be able to live in a safe world and to share in the development of my country and the world. I want to apply the learning and knowledge which I acquire and develop them in order to be an active and successful person.

Ismoil Abdulvakhobov
Tajik State National University
Information Technology
Tajikistan



We young people are very happy that we are living in such interesting times which we can call the information age. This is a time of rapid development of information and communication technologies: mobile cellular communications, satellite and wireless communications, CMPSR, Internet, IP-telephony, etc.

However, not all of us can enjoy using these new technologies, especially the people living in developing and least developed countries. Most developing countries are in the process of transferring to the market economy, and are experiencing political and economic crisis. Most people in such countries have a very low income and are in deep poverty. They cannot afford to use the new information and telecommunication services and they are not even able to access the basic set of services. In a number of countries, the rural areas are underdeveloped and the penetration rate is even lower than 1%. The existing telecommunication infrastructure has no capacity to provide overall access to the telecommunication services as it is based mainly on outdated analog equipment.

There is an urgent need in modernization and digitalization in order to ensure integration into the information society. We, young people, should do our best to promote the bridging of the digital divide. And we hope that the Youth Forum will assist us to deeply understand the role of youth in the information and telecommunication technologies age. This is also the best opportunity to meet young colleagues from the different countries of the world, to discuss the challenges related to ICTs, to exchange experiences of the introduction of the new information services in the developing countries. It is a great opportunity to strengthen cooperation and unite in achieving the above-mentioned goals.

Zarina Badridinova

Tajik State Institute of Languages

Marketing Analysis in the Field of Communication and Information

Tajikistan



On the threshold of the 21st century, we are the witnesses of unprecedented demand for higher education and its wide diversification along with an increasing comprehension of its decisive importance for welfare and economic development and the creation of a future in which younger generations should take possession of new skills, knowledge and ideas. The second half of the 20th century will be remembered in the history of higher education as the period of its most difficult development. Alongside it, in the same period, the huge gap between industrially advanced and less developed countries, in particular least advanced countries, has increased concerning access to higher education and scientific research, and also concerning the resources earmarked for them even more. This period was characterized also by large socio-economic stratification and the growth of distinctions in opportunities of getting an education in countries without adequate maximum education and research establishments, creating a critical shortage of qualified and educated people. A country not capable of ensuring real steady development cannot reduce the gap between them and industrially advanced countries; sharing of knowledge, international cooperation and the new technologies are capable of opening up new opportunities for reduction of this gap.

Education, whose history covers some centuries, has convincingly shown the viability and ability to change, and to assist transformations and progress in a society.

Throughout its whole history, humanity has sought for the ways of improving the standards of life. This aspiration was a source of numerous discoveries in the field of information technology.

The experience of the industrially advanced countries shows that, without the inclusion of young people in social, political and economic society structures, the social environment can be a grave cause of overall instability. It is necessary to give priority to the specialized intensive programmes of training of personnel in less developed countries in the centres of advanced knowledge incorporated in regional and international networks, which attract and preserve qualified human resources to promote the return of scientists and researches with a high level of preparation to the countries of their origin.

Vipavinee Artpradid
Mahidol University
Social Science
Thailand

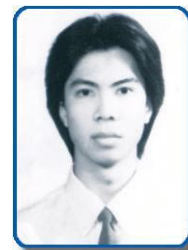


The Information Age: an age of networks – an era of connections. What humankind has established is an immense labyrinth of links and ties enabling the instantaneous transmission of information from one side of the globe to the other. Consequently, knowledge is being dispersed at an amazing pace, and as a result, the doors of new opportunities for this knowledge are being thrown wide open for all. That is, for all who have the means and the money. It is here that we see the main challenge of the information age – the challenge of being able to offer this giant database and communications system to every single human being. The task of offering the opportunity of infinite knowledge to every single member of our young generation – our youth.

Many factors contribute to the proper development of a child, but the most important and primary aspect of human life in the globalized world today, apart from the basic necessities, is education – with the *opportunity* for education being a prerequisite. The problem we are faced with at present is that access to computers and the Internet is so unevenly distributed that we find high concentrations in specific parts of certain continents while other areas may have no access whatsoever. Obviously, the main goal that the global community must accomplish is the dispersion of information technology – giving the *equal* opportunity for all to step into this labyrinth, at the lowest cost possible, or better yet, at no cost at all.

For those of us who already have access to this vast library of information with merely the click of a mouse, we may take it for granted. Reality shows that an overwhelming majority of the youth of the world still do not have access to phones, computers, or the Internet. Globalization and information technology is affecting the whole human population, and therefore everyone should have a chance to know what this Information Age that is affecting them is all about, and more significantly, they must realize that they too, no matter what colour, creed, or social status they are, should be able to benefit from it as well. As long as my conscience tells me that there are still young people of my age out there who have never touched a computer, or who do not even know about the existence of the Internet and what new horizons it has to offer, the feeling of guilt will still cling on to me every time I use a computer.

Anucha Parnpichate
Srinakharinwirot University
English Major
Thailand



Nowadays, we live in a world of globalization, and there are a large number of information and communication technologies which are continuously being developed in order to help people communicate and exchange all kinds of information more easily. Therefore, we can take advantage of these technological advances and allow them to become opportunities for living a better life.

Because of advances in communication technologies, people can exchange information rapidly. We can send and receive information easily, and we can receive information which is served in "real time" on the Internet minute by minute. Moreover, these technologies are useful in the field of education. Students will have a chance to study and become familiar with all types of communication technologies. When they are used to these things, they will be able to exchange their information with their friends and other people throughout the Internet. They can also search for some useful information that is important for their studies. This means an expansion in the number of opportunities of gaining new knowledge. Furthermore, when we are in a world in which information and communication play a big role, children will be living in a different environment than in the past. This means that they will be growing up in different surroundings and this will have an effect on their attitude, on their thoughts and on their way of living. Children will realize the significance of the information and knowledge that they acquire through telecommunication. As a result of these new information and communication technologies, I think children will become more mature and more confident because if they learn more, they will know more. I think the more children learn, the more they will understand the world in which they live.

However, there are some problems in living in this information age. We do not have enough communication technologies to supply all the demands of the users. Moreover, we do not have enough expert and proficient instructors who can teach all the educators about how to use the new technologies and also instruct people about the real purpose of international telecommunications. Sometimes, we may have enough computers and Internet service, but there may be no one who can use it. Therefore, this potentially useful equipment is used only as office tools because we do not possess the qualifications to make maximum use of these technologies. Besides, we also have to be aware of the limitations of some information. I think information that is wrong and inappropriate could lead to trouble. Consequently, it is important to control and limit some information that is on the Internet and to ensure the use of what is right and appropriate. This is especially so, if we want our children have a better education and better life in the information age.



All in all, I think that if we can keep up with new knowledge from scholars around the world, we will not miss out on important information. Furthermore, I think if people can precisely select information that is good and useful for their daily lives, they will be successful in their life. On the other hand, if people do not know how to improve their knowledge, or they cannot select information that is useful for them, it will be a waste of their time, and this will obstruct them from being able to effectively reach their goals.



Joye Unga

Distance Education and Communication Centre

Information Technology Studies

Tonga

Becoming a youth offers a variety of opportunities. But we have to understand that our current age and opportunities have to deal with the challenges of the Information Technology Age.

For me, as a young person, what I need is to learn and gain more technical skills which are related to technology innovations. We must try to obtain more studies and further our academic career in order to open our eyes to see and understand the reality of this information age.

Moreover for the young, learning about advanced experiences will improve the skills and experiences of the future technology generation to meet the challenges of the information age. This seen can be in the work place where youth can work and gain more knowledge on how to meet those challenges. It is great to improve your skills from your experiences on the job and in other work places.

It is our responsibility to explore and search for facts that will encourage us to keep up with the challenges of the information age. This can be seen when we, as youth, interview old people and analyse their story of their generation and try to predict the point of view for the next generation, and we should try to be alert and find a solution to meet those changing challenges of the information age from generation to generation. Even in the family, parents can reveal the reality of what happened in their time, and compare it with this information Age.

Everything is changing day by day. Technology, culture, the way we dress, religion and even for our behaviour is changing. I do believe that when a youth reaches a time of knowing how to make choices, this is one of the vital stages in their whole life. Are they are going to cope with this changeable world? Or, do they still want to adopt their family, old generation culture? The answer is individual feedback. But for me, I do believe that is wise to cope with the challenges of this information age.

We must avoid getting bored and feeling discouraged from meeting those challenges. But the fact is that what is in our hearts and minds will determine the way we will face at the future. If you want your future to be enjoyable and fantastic, try to remember that God created you in his image and gave you the right to make free choices. You have a choice of your own desires. Be wise in your choices. This world is in the palm of a person who created everything. With Him nothing is impossible. But we have to have faith. A faith that is sure and steadfast and will determine your future, even the rapidly developed technology.



Young people will become a strong vendor when they work together and focus on a goal to face, up against the challenge of the information age. Government, society and religion will join together in holding hands to educate and train our youth to open their eyes and understand the wonderful reality of technology that we use to live and the challenge of the information age.

Whatever, development opportunities will not stop, and technology will progress. But the role of youth is to get through by doing our best to make them our allies.

Seini Vikilani
Distance Education and Communication Centre
Computer Science
Tonga



The youth of Tonga today will be the leaders of tomorrow and the navigators of this new Information Age. No doubt that Tonga is in the early stages of this world trend towards the information technology, and our youth will be the key players thus helping Tonga follow or keep up with the rest of the world if given the opportunity.

The challenges of this Information Age are by far greater in Tonga than most of the developed countries. Extending the development of human skills to enhance and cope with the fast developing Information Age is one or maybe the major challenge that Tonga faces today.

Tonga needs people with the skills and knowledge to accommodate this growing demand. These people are not only required to know how to run and use the systems but they should recognize and respond to common system-related risks. There will be no better group for this task than our young people. If their knowledge and skills in the Information Technology are deepened, no doubt they can respond well to tomorrow's changes.

Computers make the world smaller and smarter, and Tonga's geographical isolation, which hinders its development, will be a thing of the past. Meeting these challenges will open up development opportunities of Tonga in all areas. This will include business, health, education, entertainment, etc. For example, with the proper tools, a doctor here in Tonga can get diagnosis from a medical expert hundreds or thousands of miles away. Distance learning and video-conferencing are concepts made possible and accessible to people here in Tonga through the Information Super Highway. It provides the opportunity for development in all areas because the Internet these days provides data and information that anyone can access to.

Today's youth is indeed Tonga's greatest asset. Developing their skills and their knowledge in today's new technologies will make them great leaders and make Tonga a better place. They will be the ones who will be faced with the ongoing developments in the information world, whether they be Internet, communication, health or whatever; Tonga's future depends on them.

Bader Al-Hosani
Abu Dhabi Mens College
Electronics
United Arab Emirates



Almost everyone with or without a computer is aware of the latest technological revolution destined to change forever the way in which humans communicate – namely, the information technology, best exemplified by the ubiquitous Internet. Already, millions of people around the world are linked by computer simply by having a modem and an address on the “Net” in much the same way that owning a telephone links us to almost everyone who pays a phone bill. In fact, since the computer connections are made via the phone line, the Internet can be envisaged as a network of visual telephone links. It remains to be seen in which direction the information technology is headed, but many believe it is the educational hope of the future.

The World Wide Web, an enormous collection of Internet addresses or sites, all of which can be accessed for information. Anyone can set up a site: promoting your club, your institution, your company’s products or simply yourself, is what the Web and Internet is all about. And what is more, information on the Internet is not owned or controlled by any organization. It is, perhaps, true to say that no one and therefore everyone owns the “Net”. Because of the relative freedom of access to information, the Internet has often been criticized by the media as a potentially hazardous tool in the hands of young computer users. This perception has proved to be largely false however, and the vast majority of users, both young and old, get connected with the Internet for the dual purposes for which it was intended: discovery and delight.

Actually, there are a lot of development opportunities in many fields such as education, health, electronics, aviation and so on. For example, in the education field all subjects and courses can be online with a simple explanation so there is no need for the students to attend all classes. In addition, the students can also submit their homework assignments and projects via the Internet by using the e-mail.

Moreover, the youth can play a very important role to develop the country in many ways. They can increase the progression of the country by using their knowledge and also they will be able to give good and useful ideas to keep the system of work or education easy and popular.

Oybek Askarov

Tashkent University of Information Technologies (TUIT)

Management in Telecommunication

Uzbekistan



Those countries which have given themselves the purpose of supporting the youth of their country understand that they will play a great role in defining the perspectives of developing their country. So, the role of young people in each country is very important and topical.

Now, when the world is moving towards globalization, it is very necessary to find a mechanism for helping society. The youth of tomorrow in particular will be the main factor in developing and improving the economy of all countries. Youth must study sciences much more than now, because the demand for specialists in telecommunication, computer science and new technology will be always high.

In our Republic, measures to develop opportunities for the youth are already accepted. For instance, many new colleges, lyceums and institutes have been opened in the past years, so each young person can choose one of them at will. It also should be said that these educational offices are equipped with hi-tech technologies for worldwide enquiry. Here the young people can obtain all necessary knowledge and experiences for their future career.

Concerning forums such as student exchange between countries or training courses, I'd like to just express my appreciation. These courses will help students to know what is happening around the world in the case of telecommunications, new technology, or similar. Students from different countries will have opportunities to meet each other, to share their opinions, to express their own vision of challenges in the information age; when the problem is looked at from outside with a different vision, in many cases it will help to solve it. Therefore, the youth of all countries are the most powerful and strongest part of society, and the question is, how to use it.

I think the solution is in the form of cooperation and trust in young people. Finally, today's, youth will manage and govern the States of tomorrow and we will be ready to fulfil this great mission.

For developing countries such as my country, what we need is highly qualified, intelligent and educated youth. We have to make an effort to reach the highest achievement in each field of economy and life. Our country gives us the chance to study everywhere around the world. Thousands of young people learn in the USA, UK and other developed countries.

I trust that the country trusts us and we will never let it down.

Natalia Seydullaeva

Tashkent University of Information Technologies (TUIT)

Telecommunication

Uzbekistan



One young television actress said: "Teenagers are an important resource in improving the quality of life for all people". And that's true. Children are the future of every country. What is good for the youth, is good for the future of the country. For that reason, people everywhere are interested in peace, security and a good stable economy.

Most youths look forward to their future with hope and optimism. While filled with high hopes about the years before them, today's students aren't labouring under any misconceptions about what they must do to realize their aspirations. They admit that hard work lies ahead and claim they are willing to make the sacrifices needed to reach their goals.

Much attention is paid to the positive development of youth and their preparation for employment. The government of each republic pays great attention to the education and upbringing of youth. They have every opportunity to study. Many roads are open for youth.

Since its independence, Uzbekistan has been establishing relations with many countries. Telecommunications in general in the Republic of Uzbekistan have been developing and have been modernized during the independence years at a sufficiently fast pace. Understanding that telecommunications are one of the determining factors of human development in the 21st century, the authorities have taken constructive measures on the development and modernization of telecommunication networks in Uzbekistan.

For those reasons I am a student of Faculty of Telecommunication and Information Technologies of the TEIC. The purpose of my choice of this specialty was a huge desire to achieve success in the sphere of telecommunications and to add my contribution to the development of this area in Uzbekistan.

I think that the development of high technology depends in many respects on the purposefulness, talent, knowledge and enthusiasm of youth. It's the young people who'll take the world's future in their hands. That's why it's necessary for them to develop their own interests and goals and to recognize and understand the problems of today.

And I want to mention the feasible contribution of the newest technologies to development. Also important are the roles played by international cooperation and exchange of experience in various areas of public life (in particular in the fields of science and education) of which this forum is an example.

Therefore I place huge value on the participation of students from Uzbekistan in this event.



Thanks to this forum, I hope to receive a lot of new information and to further use it to develop myself in the sphere of telecommunication technologies in the name of general progress through mutual enrichment by experience and knowledge. I think it's my debt to bring to Uzbekistan my contribution to the development of information technologies.

As a means of realizing and developing the huge potential of our young State, such fora are steps towards to strengthening international connections in the Asiatic region.

Dung Luong Viet

Posts and Telecommunications Institute of Technology

Electronics and Telecommunications

Viet Nam



It is said that the 21st century is the century of an intellectual economy developing on the basis of human resources, an information era with super technologies and enhanced telecommunication services such as Multimedia Networks (B-ISDNs) based on the ATM switching technology, the third generation (3G) mobile telephony or wireless Internet, etc.

But is that really the future world? I do not think so.

Until now, it is estimated that more than 1 billion people in the world are living in poverty with less than 1 USD income per day. About half of the world population cannot get access to telecommunication services just because they are not rich enough to benefit telecommunication corporations. Therefore, many developing countries are still standing on the edge of the Information Society.

Bridging the gap between the developed world and developing one plays a vitally important role in building a stable world economy and a developed society. Thus, together with developing and expanding new and enhanced telecommunication services, developed nations should assist and support the efforts of developing ones to gradually improve the quality and scope of telecommunication infrastructure by:

- Investing capital and transferring high technology through business cooperation and development projects;
- Supporting training and education to train young talented people in the field of ICTs.

In terms of developing countries, they must have suitable development strategies and use the supported sources of capital efficiently. The ICTs should be considered as a priority in economic development to put the country in a higher position and integrate into the world economy.

Youth is surely the great potential of the country. We, the ICT youth, need to take all advantages available, actively seek out information and study harder in order to perfect ourselves and contribute to the development of our country. We need to inherit what our predecessors have left for us and continue to develop this to a higher level.

In conclusion, the youth is the future of the world. Hard work, creativeness, friendship and close cooperation among the youth in the field of ICTs as well as other fields are the key of the stable development of the world and human progress.

Thuy Nguyen Thi Thanh
Posts and Telecoms Institute of Technology
Information Technology
Viet Nam



The Information Technology Revolution (IT Revolution) made a considerable change to the telecommunication-informatics' image. Formerly, IT and telecommunications were treated apart from each other, but there has been in recent decades a convergence process of the two above technologies that has integrated them into one named Information and Communication technologies (ICTs). The new communication technologies and the broadband, high-speed communication networks have been providing favourable conditions to worldwide multimedia services expanding. A symbolic example is e-commerce that is changing traditional procedures in commercial relations such as selling, buying products or services. Although e-commerce is in the beginning of its development, there are nevertheless great changes in the world's business affairs, economic transactions, and cultural activities thanks to the continual development of the intelligent networks supported effectively by Internet.

In statistics, distributed density of ICTs to national economy is relatively high and IT becomes more and more important to the development of other economic branches. This has provided opportunities favourable to developing countries having good conditions of approaching, developing the knowledge economy, and reducing the economic-social gap compared to developed countries.

For young people, ICT development will give them plenty of opportunities of learning and studying, and raising one's creativeness much more than before. Universities have many labs and Internet rooms to encourage students towards conditions for approaching new technologies and new knowledge, and the most interesting, important fact is to force theory into practice, which is, once again, particularly important.

For the development of ICTs, the whole of society in general, and our youth in particular, must be aware of each person own role and responsibilities. Firstly, we must realize the worldwide changes that made styles of contact, working, studying, and learning change. The appearance of the Internet – humankind's knowledge treasure – can be considered as a symbolic example. If we know it well, know how to utilize it, apply this knowledge source reasonably, then we will enable an overall economic-social development to enrich our lives and make them more and more beautiful. And we know ourselves that many difficult challenges have emerged from the development of ICT: the digital technology development gap between the more IT-developed countries and the less IT-developed; difficulties of education and language in developing countries. As we know, English is the major language of the Internet but in many Asian countries the level of using English is in general low.



To solve the above question properly, our young people have no choice but to study continually, improving our own knowledge, especially while we are in a course of learning at universities, growing with that we will research, finding out and being creative in the practice of our work. Our youth generation pledges to do its best to contribute to some extent to national development.

The IT Revolution has offered many advantages to the universal development of the whole world, speeded up one's own ability and creativeness, particularly for the youth. Although, many challenges will appear ahead, the most important thing is to persist in achieving all targets – shifting from a machine-based society to a knowledge-based one.

Waleed Al-Rwaishan
Sana'a University



Yemen

At the dawn of the new millennium, telecommunication became not only a tool that facilitates person to person communications, but a foundation that is used in a huge number of human activities, from international trade and commerce to health and increasingly education. The telecommunication convergence with all fields of information calls for a telecommunication-based information age. The information and communication technologies can no longer be regarded as a luxury accessible to only a handful of countries. The worldwide move to an information age, recent technological advances and other structural and economic developments have produced a rapid fall in the cost of communications.

As a youth, I will try to go to limits that have never been explored before. I want to be part of a truly Yemeni software industry, an industry making use of technology and being part of its development process. It is said now that the world is a small village, but I hope in my generation that it will be a small house.

Youth are the main building blocks of architecture in any age, especially in the information age. The challenges that face a truly information age are many. The most important challenge is learning and understanding the uses of technology and how it can be incorporated in the daily life of every society specific to its environment. This is one of the reasons that I have chosen Computer Science as a major. I want, through knowledge of computers, to make software specific to the needs of the people of Yemen and Asia as well as trying to compete in the international arena. I am still in the beginning of the road, but I will reach my goal in the end.

In conclusion, the information and communication sector is a productive sector and will be for a long time to come. It creates jobs and wealth, and enables integration in the new economy. New technologies still have a bright time ahead, but their growth is heavily dependent on the youth. They are the ones who will accelerate the process of development in the sector. The young people of today are the managers of tomorrow. Let us prepare them to fulfill this mission!

