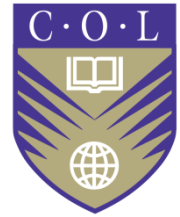


Blue-Sky Thinking for Small States: VUSSC Futures



Commonwealth of Learning

Virtual University for Small States of the Commonwealth (VUSSC)

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Paul West and Sir John Daniel

Introduction

This session for the VUSSC interlocutors is of great importance. So far we have had two meetings in Singapore and the Boot Camp in Mauritius, which raised the work on VUSSC to a new level. Some of your countries are now working collaboratively online to develop learning materials, something that has never been done before.

When Ministers launched the idea of the Virtual University for Small States of the Commonwealth at their meeting in Canada in 2000 they were afraid of being left behind in the eWorld. Far from being left behind you are you now opening up new frontiers in eLearning.

In that spirit I would like to encourage you to indulge in some blue-sky thinking - which seems very appropriate here in the Caribbean where there is lots of blue sky. Later on today and in the days that follow you will be brought down to earth to work on the practical elements of getting the show that we call the VUSSC on the road. This morning, however I invite you to stand back in order to look forward to where all this might lead us.

Paul West and I have worked up this presentation, which we are calling Blue-Sky Thinking for Small States: VUSSC Futures. We shall look first at three trends, then suggest some indicators of possible futures for VUSSC and end by asking about long-term goals for the VUSSC network.

Computers, the Internet and Innovation

The first trend revolves around computers, the Internet and the innovation economy. The kind of

computing power of the put man on the moon in 1969 -- we were already throwing our 10 years ago as being too old and weak for use as a desktop computer. What's on your desktop today you will be wearing tomorrow as you wear your cell phone today - but even more discreetly! If that sounds silly, remember that only a few hundred years ago, if you had claimed you were wearing a device that could tell the time, people would have thought you silly.

Today we carry devices that can play concert music or read books to us while we walk or travel. That would have seemed far-fetched only 20 years ago but now we take it for granted. We also have step counters and heart-rate monitors, which are basically computers that walkers and runners wear.

Moore, who was a founder of Intel, the PC chip manufacturer, predicted that computing power will double every year and that the cost of computing will drop by half every year. The desktop computer that cost \$2,500 in 1981 had a tiny fraction of the power of the desktop computer of today. Indeed, today's desktop PCs are more powerful than the supercomputers of 1981. We can expect that a good desktop computer in 2020 will be more powerful than today's supercomputers. So far, every time that Moore's Law has looked like breaking down a new development has set it off again. It looks likely to apply for while yet.

For example, desktop and notebook computers became available in 2006 with dual processors. That is, two processor chips embedded in one processor unit in a computer. This dramatically increases the speed and power of computers. In 2007, PCs will start to emerge with four processors in one chip; to be rapidly followed by eight processors in one chip. Computing power is still set to soar.

How will this change our lives and the way the world works? Some predict that it will mean the end of national borders. That is particularly interesting for VUSSC states because most of you, because you are islands, have natural borders of sea.

Those borders, and the independence that goes with them, are here to stay. Small states are getting together regionally in organisations like CARICOM here in the Caribbean, just as European states are getting together within the EU. But because of their very strong links with culture and development, individual countries will always want to have full control of their education systems. The VUSSC is a nice example of combining autonomy with collaboration to get the best of all worlds.

Others predict that multi-national corporations will control the world. But nation states, individually and collectively, maintain a strong regulatory function. The European Union has taken strong action against Microsoft for its allegedly monopolistic practices in Europe. Another good example of a country maintaining law and order irrespective of its and others' borders, is Lesotho. Lesotho has laid charges against companies in other countries for carrying out fraudulent activities - bribery in particular - in Lesotho. Borders may be more porous nowadays, but they are here to stay.

The Internet is now seen as the greatest leveller ever. On Friday Sugata Mitra said that it was out of control, so we cannot ascribe aims to it. However, from the surfer's perspective it holds the promise of making all available information available - to all people, anytime, anywhere.

Nitin Desai, chairman of the Internet Governance Forum of the United Nations, says that changes in regulations will cause the Internet, telephony and eCommerce to merge. By 2015, there will be more Internet users in Asia than in Europe and North America. There will be more web pages in Chinese than in English. The new users will change the character of the Internet. Western countries tend to use the Internet more for commerce and media, while Eastern countries tend to use it more for public service applications. Interestingly, the highest Internet penetration is in the Nordic countries, where it is used for social purposes as well as commerce.

Note the growing resistance to the exclusive use of the Latin alphabet for referencing Internet pages. Desai believes that the fast-growing Internet will cope with multiple alphabets and thus provide information to people who do not benefit from it now.

This points to a future Internet as a global network of interconnected regional Internet zones that will cater for regional differences.

Wikipedia is now one of the busiest websites on the Internet, ahead of the New York Times and other popular sites. Yet it has only two or three paid staff members and tens of thousands of people who edit the pages without payment. The first attempt to start this community paid people to make entries but this created only a small number of pages. When the project was opened up to let everyone contribute the number of pages multiplied by thousands into its present form.

Wikipedia is a permanent work in progress. It is the best effort of thousands of people to create an accurate, impartial and useful repository of human knowledge. It has more languages and entries than any other Encyclopaedia ever created. It is also more used than any other Encyclopaedia.

Academics criticise Wikipedia usually for accuracy and the occasional vandalising of pages. This does occur because most pages of Wikipedia can be edited at any time, by any person, without them even logging in. Editing is anonymous. The system just records the user's computer address - or IP address - and does not need know who is making the edit.

This anonymous editing is obviously a problem when a student refers to a Wikipedia definition in an assignment. If the tutor marking the assignment finds that the reference incorrect, the student is penalised. One of the founders of Wikipedia recently advised students **not** to use it as a reference for formal studies.

In response to such problems one of Wikipedia's founders is launching a new service called Citizendium. It will include all Wikipedia's content and remain free to anyone, but will be re-edited by experts. The model will be based on both volunteers and nominal payments to people who apply to take on the task. There will be no anonymous editing of entries in the Citizendium as there are in Wikipedia. Its creators believe that this new service will be more mature and accurate.

We conclude that the future will be a blend of fully open web communities, managed web communities and private web communities. Flexibility, diversity and freedom of choice are the watchwords.

What can we expect in 2020? The Internet will be pervasive. It will operate at high-speed through wireless and will be accessible from desktop and notebook PCs, hand-held computers and wearable devices. It will be unusual to find a manufactured product not advertised online. Services such as telephone and television will be fully online and integrated - both in the home and office, and through mobile communication. This is already happening with 3rd generation cellular phones that can display television, surf the internet, send and receive emails and still make voice phone calls!

Approximately 80% of all information will be online and free to anyone who can access it. Email will be text -- it will be video -- it will be audio -- it will be multimedia. The services should run in a fully integrated manner. Collaboration between companies and countries will drive trade. Entrepreneurship and creativity will drive demand.

Today's estimate is that one third of the USA's GDP is based on the innovation economy. This could increase to two thirds by 2015. Indeed, some claim that by 2015, two thirds of the world economy will be dominated by innovation.

There are just over 1 billion people on the Internet today. This is expected to rise to over 3 billion by 2015. The spread of wireless-enabled computers on the Internet will help make societies and productive economies more robust.

Energy

I now come to the second trend: energy. Today three countries account for nearly 40% of world demand for oil. As these countries continue to grow and others increase their energy requirements, the demand for oil could increase by between 50 and 100% by 2020. New oil discoveries are small compared to those found in the Middle East a few decades ago, so there is increasing pressure to find alternatives to our addiction to oil. Although we consider oil expensive at \$60 a barrel today, it may seem like a bargain in

the future when some predict prices of \$300 a barrel by 2025. This will make producer countries very happy but the rest will suffer from not having alternative fuels.

Fortunately there are alternatives, but these will require action from national governments. Hydrogen requires another source of energy to create it, such as atomic or coal-fired systems that turn water into hydrogen. Ethanol is seen as a 100% renewable form of energy because it comes from plants. But is it sensible, in a hungry world, to convert plants into fuel instead of using them for food.

Most developing countries enjoy warm sun year-round. As the cost of solar power panels comes down, solar generation will become increasingly cost-effective. Power generation from wind and water will also become viable alternatives as the cost of oil rises and its availability diminishes.

Education

Education, which is at the heart of COL's work and VUSSC's mission, is the third trend we shall look at. In some industrialised countries, surveys show that 97% - that is to say nearly all young people of hope to enter the some form of post-secondary education. This already translates into up to 60% initial enrolment rates in some countries like Canada. Taking drop-out into account, this further translates into somewhere around 30 to 35% post-secondary completion rates.

In the years ahead, some 75% of the skilled workforce must be retrained for a changing workplace just to keep the job they already have. Of particular interest to us is the forecast that up to 80% of jobs will require post-secondary education by 2015. This implies numbers of learners that would be impossible to absorb into any traditional post-secondary system.

Contrasted against the industrialised country participation rates in post-secondary education of 30% and more, some developing countries have post-secondary participation rates of less than 10%. Developing countries risk losing both their citizens with higher skills and those with lower skills -- many countries now not only provide the industrialised world with qualified doctors, teachers and engineers, they also provide expatriate labour such as cleaners, builders and farm workers.

The Virtual University for Small States of the Commonwealth is one mechanism for increasing post-secondary participation rates through collaboration. The aim is to increase the numbers of learners and offer more appropriate courses. People coming out of post-secondary institutions need to be immediately productive in their new working environment.

We frequently hear the lament - especially in central Canada - that the developing countries of the world have the world's best weather! Could we create an immigration drive for skills to the countries with the

best weather? Many skilled people might like to escape the dark and cold climates of the North for sunny countries that welcome them.

Intellectual property

We come now to a very different topic, intellectual property. Having just completed the 4th Pan-Commonwealth Forum, COL will now publish its second document on Copyright and copies will be sent to Ministers of Education. We shall recommend that national legislation be reviewed in the light of the TRIPPS agreements and your educational needs.

Countries should have procedures in place to ensure that they make copyright payments only when necessary. There are various flexibilities in international copyright law and we believe that many countries pay copyright even when they are not legally required to do so. This depends on the laws you implement in your countries within the flexibilities allowed under TRIPPS.

Cross-Border Education

Participation in producing open educational resources will help to create a large bank of materials for educational use, thereby reducing the costs of development for everyone. Although there has been much talk about cross-border education, there is relatively little export of education from industrialised countries to developing countries because of the high costs. However, Cross-Border education presents some opportunities for networks such as VUSSC. It could allow the smaller economies to export cost-effective education to larger countries.

We need to help institutions and education systems to leapfrog their use of technologies in much the same way that cellular phone companies are helping countries to expand access to telephones and the internet. This will involve educators working and collaborating online with colleagues from across the globe on a daily basis.

VUSSC and the Future

So what is the future to which VUSSC is contributing?

First, through the commitment of your Ministries of Education and the collaborative efforts of networks like the VUSSC, we can look forward to better education for populations in the small states with a knock-on effect to other developing countries.

Second, we shall see online access to PCs and mobile devices becoming commonplace. This is now happening quickly because of the spread of cellular telephones.

Third, educated and connected countries will attract investment in their economies.

Fourth, this helps to create the sort of environment and quality of life that encourages immigration and the repatriation of skilled people to help build the economy further.

Fifth, you can take advantage of the new technologies and favourable exchange rates to offer quality online programmes to other countries, thereby creating new economic opportunities.

The key to all this lies in the education system. It must have a range of high-quality, formal, non-formal and informal educational offerings.

Our aim in taking you through these possible future scenarios is to invite, you, as you begin this VUSSC meeting, to develop a long-term vision for what VUSSC can do for your country. How can it help you to participate in the globalised economy whilst strengthening your own culture and sense of community?

How will it help to position your country? When the Ministers of Education launched the idea of the Virtual University for Small States of the Commonwealth one aim was to become less dependent on the big states. How can you make VUSSC contribute to that?

That is the blue-sky thinking that we wanted to discuss with you. I leave you with those questions and invite Paul to lead a short discussion to help us identify the key areas to focus on if we are to achieve our long-term vision.

Thank you.