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Education for Democracy

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Commonwealth of Learning

Abstract

Forty years ago, after having the revelation of a revolution in higher education during an internship at the infant UK Open University, Sir John Daniel made opening up education the theme of his career. He has nurtured open and distance learning in universities as practitioner and scholar and coordinated the global Education for All campaign. The final months of his work at the Commonwealth of Learning aim to persuade the world's governments to support the concept of open educational resources. The paper will reflect candidly on these experiences in order to ask whether opening up access to the institutions and processes of learning really does foster freedom and democracy.

Introduction

It is a great pleasure to be back at a meeting of the Canadian Society for the Study of Higher Education for this joint session of the Canadian Societies for the Study of Education, Adult Education and Higher Education at the Learned Societies conference.

I enjoy considered myself as 'learned' from time to time, and it is now exactly 30 years since I was President of CSSHE and could use the adjective legitimately. Even then it was only semi-legitimate since I have always been a scholar-practitioner of higher education rather than a researcher. But reflective practice has its merits as Donald Schon's classic book *The Reflective Practitioner* argues persuasively.

In two days time I shall demit office as President of the Commonwealth of Learning and cease to work full time. My next assignment is a substantial multi-year part-time job as Education Master with the Beijing DeTao Masters Academy in China, where my task will be to help top professionals in a range of disciplines from outside China share their tacit knowledge with senior Chinese professionals. That too will be all about reflective practice.

Therefore I am most grateful for Alan Davis' timely invitation to speak to you on the theme of *Education for Democracy*.

It is exactly forty years since, after a stint as an unpaid intern at the infant UK Open University in 1972, I reoriented my career to focus on distance education.

Since then there have been three themes to my work, partly sequential, partly overlapping: distance education, institutional leadership and international development. I shall touch on all those in these remarks, and they have been woven together wonderfully in my eight years as President of the Commonwealth of Learning, or COL.

The Commonwealth of Learning

COL is the only Commonwealth intergovernmental body that is not located in London. We are based in Vancouver with a little satellite operation in New Delhi. From there we help

governments and institutions in the developing countries of the Commonwealth, which account for nearly fifty of its 54 member states, to use technology and new approaches to expand and improve learning at all levels with the aim of contributing to development.

We follow Amartya Sen (1999) in defining development as freedom. Expanding the freedoms that people can enjoy is the measure of development. But freedom is also the means of development, because it is through the agency of free people that families, communities and nations develop.

In operational terms we define development as an amalgam of the Millennium Development Goals, the six goals of Education for All that were articulated at the Dakar Forum in that same millennial year, and the Commonwealth values of peace, democracy, equality and good governance.

Education and Democracy: Correlation and Causality

This means that COL is in the business of Education for Democracy. I confess not to have done full due diligence on what must be a very full literature on the correlations between education and democracy; whether correlation means causality; and, if so, in which way the causality works. Do educated people become more democratic, or do democratic countries invest more in education?

These are questions that merit deep and continuing analysis but I shall take a rough and ready approach and argue two points.

First that education and democracy do go together. Second that educating all people is a sounder basis for democracy than focusing on the elite – or having education systems that are shot through with inequalities of access and outcomes.

First then, do education and democracy go together? I took *The Economist's* excellent compilation, *The World in Figures*, and compared three lists: the ranking of counties on the degree of democracy; their ranking on the enrolment in secondary schooling; and their ranking on the enrolment in primary education.

If you take the first twelve most democratic countries and compare it to the first twelve in secondary education enrolment you find a nice correspondence. Eight countries appear in both lists. They are, in order of democratic credentials: Norway, Iceland, Denmark, New Zealand, Australia, Finland, the Netherlands and Ireland. As a footnote, Canada ranks in the twelve most democratic countries, at 9th, but not in the twelve with the highest secondary enrolment, where it is not even in the top twenty. The US places 17th for democracy and is also not in the top twenty for secondary enrolment.

I tried to do a comparison at the bottom of the list. The ranking of the least democratic countries is straightforward and unsurprising, starting with North Korea and continuing with Chad, Turkmenistan, Uzbekistan and Myanmar. But the tables of low primary enrolment are not very helpful because they use gross enrolment rates, which is the number enrolled as a proportion of the age group. This means that some poor-performing countries have enrolment rates of well over 100% because many older children repeat the years of primary school.

So far, so rough and ready! My other area of interest is the equity of education systems. Just as I was beginning to think about this section of the talk I was riding in the Paris Métro and saw a large advertisement saying “*L'Égalité est la Démocratie*”. It's an advert for Levi's jeans, which

it calls the ‘uniform of progress’ and it makes my point nicely because I shall argue that the equity of an education system is its key contribution to democracy.

I mean equity of access, for which secondary enrolment rates are a reasonable surrogate, and equity of outcome, which is rather different.

Fortunately, equity of outcomes is a major focus of the PISA survey, the OECD Programme for International Student Assessment which, every few years, assesses the competencies of 15-year old students in reading, science and mathematics. This increasingly sophisticated programme analyses its results on many dimensions, not least the variation of performance within countries and within individual schools. I draw two conclusions from the PISA study.

The first is that what counts is not the length of time children spend in school but what they can do as a result. To quote the 2009 survey (OECD, 2009):

“Longitudinal studies have shown that the reading skills which PISA measures are a strong predictor of positive outcomes for young adults, influencing the chance that they will participate in post-secondary education and their expected future earnings. Assessments of adult literacy have also found that the adult population’s measured literacy levels can do far more to explain a country’s economic success than the length of time that they have spent in education.”

My second conclusion is that when countries are ranked by the equity of their systems the highly democratic countries that I listed earlier all score better than the others. In other words, either their education systems do a better job of educating everyone to their potential or educating everyone to their potential fosters more democratic societies.

At this point I enter two caveats. The first is that while most democratic countries do well on PISA, both in mean performance and equity, some non-democratic jurisdictions rank high too, particularly in mathematics. I refer to Shanghai, Macao and Hong Kong which underwent PISA assessments as regions. There are no results for the whole of China.

My second caveat is that the PISA quote I just read talked about ‘economic success’ not democracy. This is definitely not the place to delve into the correlations between economics and democracy. If that interests you I recommend Daron Acemoglu and James Robinson’s recent book, *Why Nations Fail: The Origins of Power, Prosperity and Poverty*. To quote from a review in *The Economist*:

“Some governments get it wrong on purpose. Amid weak and accommodating institutions, there is little to discourage a leader from looting. Such environments channel society’s output towards a parasitic elite, discouraging investment and innovation. Extractive institutions are the historical norm. Inclusive institutions protect individual rights and encourage investment and effort. Where inclusive governments emerge, great wealth follows... There is no quick fix for institutional weakness, only the possibility that steady encouragement and chance will bring about progress.”

While I would not wish to push the point too far, I observe that when educational opportunities are inequitable, with resources being focussed on a minority, they probably reinforce parasitic elites and extractive institutions. Although it did not put it as bluntly as that, this was partly why the World Bank stopped giving funds to African higher education in the late 1980s. It felt that free higher education for the elites, which were almost the only people to qualify for entry

because they had been to private secondary schools, was not as good a use of their funds as investing in primary education.

That policy was bitterly resented by African countries and African universities are still paying the price. On a visit to Senegal ten years ago, when I headed the Education Sector at UNESCO, I remember the Minister of Education imploring me to help him convince the World Bank that a country needed balanced development of its education system so that it could create cadres of professionals. The question, of course, is what we mean by balanced development.

In the rest of this talk I shall assume that it is the broad availability of educational opportunities for whole populations that promotes democracy. I have been fortunate to have been engaged in initiatives to increase access to education at all levels, so you will understand if the rest of this talk is somewhat autobiographical – call it my reflection on practice.

I shall proceed through primary education through secondary education to higher education because it seems more logical, even though in my involvement in each level happened in a different order during my career. I spent many years at the Télé-université, Athabasca, Concordia and Laurentian universities, here in Canada, and at the Open University in the UK, working to expand higher education before moving to UNESCO and engaging with primary education. It is most recently, in my work at COL that I have concluded that the world's greatest education challenge is now at secondary level.

Universal Primary Education

Two important events had occurred in the year before I arrived at UNESCO in 2001. Heads of Government meeting at the UN had agreed on the Millennium Declaration, which included a set of goals for international development, one of which was the achievement of universal primary education – which also implies gender equity – by 2015. Later that year education ministers met in Dakar for a World Forum for Education for All. This articulated six goals for education, including universal primary but also extending from early childhood through adult literacy.

Going into the conference in Dakar the World Bank had assumed that it would be charged with the responsibility for organising the follow-up action for implement these six goals. However, the then new Director-General of UNESCO, Koïchiro Matsuura, made a bid for UNESCO to undertake this task and was supported by African and other developing countries. These countries consider that UNESCO, which operates a more democratic 'one-country-one-vote' system than the World Bank, is more responsive to their needs.

I arrived at UNESCO two months after the Dakar Forum as Assistant Director-General for Education and was charged with implementing UNESCO's coordinating role. It was challenging for several reasons.

First, the tussle over which agency should lead the Education for All or EFA campaign had left some blood on the floor. Second, the World Bank had the big money to invest in education. Third, the rivalries between intergovernmental organisations make those between universities look trivial. Not only was the World Bank's nose out of joint, but the traditional rivalry between UNESCO and UNICEF had been exacerbated by the increased prominence of education in the international development agenda.

Nevertheless, I achieved some success by taking a resolutely collaborative stance and putting into practice Ronald Reagan's dictum that 'you can accomplish much you don't care who takes

the credit'. I have given an account of this period in my book *Mega-schools, Technology and Teachers: Achieving Education for All* that I published two years ago. The most tangible expression of the collaboration between the various national and international development agencies was launched in 2002 and called the Fast-Track Initiative.

(As an aside, I remember Henry Jeffrey, the Minister of Education from Guyana, joking with some feeling at a meeting in Norway that it was an oxymoron to attach the adjective 'fast' to any project involving the World Bank!).

The aim of the Fast-Track Initiative, which was renamed the Global Partnership for Education last year, was to bring the major donors together to provide concentrated support to the task of achieving the quantifiable EFA goals in countries where conditions were judged to be propitious. In practice this meant some 18 low-income and low-enrolment countries.

By this time the definition of EFA – Education for All – was already much narrower than the six goals identified in Dakar. While the World Bank had not been given the lead in coordinating the EFA campaign, it was the official lead for the pursuit of the Millennium Development Goals.

These include one educational goal, which is to 'ensure that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling'. This is known as the goal of Universal Primary Education.

In the work of the Fast-Track Initiative the terms EFA (Education for All) and Universal Primary Education (UPE) were used synonymously. Although UNESCO tried to encourage progress on the five other goals of EFA as well, the big money and international effort was directed at UPE.

I am not saying that this was a bad thing. The challenge of achieving UPE was daunting enough and the money committed by donors never came close to meeting the needs, even for that one goal. Without a tight focus little would have been achieved. And much has been achieved.

In expanding primary schooling for their children many developing countries have achieved in a decade what took richer countries close to a century. There are still large numbers not in primary school, some 67 million – many of them in Nigeria and Pakistan – but for most countries UPE is achieved or in sight. Granted that the pockets of children who still do not have access to school are hard to reach and particularly disadvantaged, but it is time to focus on new challenges.

Secondary Education

In my book *Mega-schools* I identify two crucial challenges, one created by the success of the campaign for Universal Primary Education, the other by its failure.

The failure is that there are 67 million children still not in primary school. To get them there will require, among other things, the recruitment and training of millions of teachers. I shall not talk about the response to that challenge here, except to say that COL is helping countries and teacher training establishments to ramp up the supply of qualified teachers by using scale methods of distance learning for both pre-service and in-service training.

The challenge of success is the secondary surge. The international campaign for UPE has given remarkably little thought to the consequences of success. For years there was a fear that if the world took its eye off the ball of primary education by mentioning needs at other levels the whole campaign would stall.

Even today you hear the Global Partnership for Education talking about 67 million children out of school. But that is only the evolving estimate of those children of primary age who are not in primary school.

The challenge at secondary level is much greater. In 2006 Melissa Binder estimated that there were 400 million children aged between 12 and 17 who were not attending secondary school. Even at the junior secondary level access there are places for only one out of three children in sub-Saharan Africa according to the latest edition of the Global Education Digest (UNESCO, 2011). It notes that ‘globally, secondary schools have been accommodating almost one hundred million more students each decade, with the total number growing by 60% between 1990 and 2009. But the supply is dwarfed by demand as more countries approach universal primary education.’

Even if one assumes that Binder’s figure of 400 million has been reduced by 60 million by the expansion of secondary systems since 2006, there remain a very large number of adolescents without the chance for a decent start in life.

Of course some, like these are well catered for. But others are not so lucky.

As well as being important for democracy, secondary education is also the best medium-term weapon against climate change. That is because the most powerful driver of climate change is increasing population.

Since the industrial revolution the world population has grown by a factor of seven and each human being today, on average, makes seven times greater demands on the earth’s resources. That’s a fifty-fold increase in two centuries. Slowing population growth is one way of limiting that demand. Women with secondary education have, on average, 1.5 fewer children than those without. A difference of one child per woman means 3 billion more or fewer people on earth by 2050. Secondary education for girls must be a priority.

Expanding secondary education is – or soon will be – the key priority for many developing countries.

Yet in a time of economic difficulty countries need to strive for greater efficiency and in many countries secondary education is not at all efficient. Hence, COL stresses the importance of expanding open schooling, which is the adaptation of Open and Distance Learning to education at pre-university level.

We do not simply propose the creation and expansion of open schools as a separate and distinct element within national school systems. We believe that open schools should be seen as catalysts for integrating all elements of schooling into an educational ecosystem fit for the 21st century.

The key point is that it will not be possible to accommodate the secondary surge through the conventional provision of secondary schooling, skills training and adult education. Governments must encourage alternative approaches and foster providers that can deliver quality learning at scale with low costs.

As well as extending conventional public school systems, governments should encourage the expansion of private schooling for the poor, draw lessons from projects involving ICT, and give special priority to expanding open schooling.

Developing and expanding open schooling are particularly promising alternatives that can also be integrated with other approaches to make them more cost-effective and cost-efficient. An integrated approach also holds the promise of providing education that is better adapted to the needs of the 21st century.

It can blur the unhelpful distinction between formal and non-formal education; build a bridge between knowledge acquisition and skills development; and has the potential to reduce the inequalities of access that blight conventional provision in most countries. Very importantly, open schooling is less expensive than conventional schooling and the differential is increasing.

The expansion of conventional public schooling at the secondary level faces major challenges of both cost and effectiveness in developing countries.

Professor Keith Lewin's research shows that if unit costs at secondary level are more than twice those at primary level, a country will never achieve universal secondary education (Lewin, 2002 & 2008). In most developing countries the difference is far greater than that, ranging from factors of 3 to 6 and beyond in most African countries. Moreover, despite this expenditure, in some countries public sector schooling is losing credibility – and often pupils – as parents choose alternatives to schools plagued by decrepit facilities, uncommitted or absent teachers and a general lack of accountability.

Higher Education

Let me conclude with some remarks on higher education.

This, takes me back to the earlier part of my career when, as a callow assistant professor of Metallurgical Engineering at Ecole Polytechnique, Université de Montréal, I enrolled in a Master's programme at Sir George Williams University thinking that it would improve my teaching skills to know something about the academic study of education.

I don't know what it did to the effectiveness of my teaching but it certainly changed my life because in 1972 I fulfilled the programme's internship requirement at the UK Open University, then only in its second year of operation but already enrolling 40,000 students. Those three months were a revelation: the idealism of the staff, the eagerness of the mostly adult students, the scale, the use of media, the geographical reach – all these were truly inspiring. I returned to Montreal no longer at ease in the old dispensation and eager to join the distance learning revolution.

An opportunity to do this occurred almost immediately because the Université du Québec was setting up the Télé-université and I was the third person hired. My colleagues at Polytechnique thought I was mad, but it was a good decision and led me into a fascinating career. 17 years after being an unpaid intern I was appointed Vice-Chancellor of the Open University, which I still consider to be the best job in higher education anywhere. Those eleven years were an extraordinary experience.

In over a hundred convocation ceremonies I shook hands with 50,000 graduates and had short conversations with each one of them. This, above all, convinced me that educating all people to their potential is the route to democratic and inclusive societies. Because of the team approach used in their development Open University courses are particularly good at making people think their way through different perspectives.

Many Open University academics conceived their task as helping students towards an intellectual stance of systematic scepticism. I well remember the graduate who told me on stage that after doing a degree at the Open University he couldn't see less than six sides to any question! I took this as a signal compliment.

Another clear memory is of meeting Maureen Mackintosh, our professor of Economics, in the cafeteria one day and asking her casually what she had been working on. She said that she and a group of colleagues had spent the morning going through one of their courses and challenging every assumption of normality that it contained. This was at a time when the Open University student body was diversifying rapidly, both in age and geography, as more and more students were non-British and studying outside the UK. Personally I don't believe you can have a course that is rootless and context free, but I think it vital to find those implicit assumptions about the student and the world and make them explicit, as our economists were doing

These days, when there is such a combination of hype and fear about open, distance and eLearning, with technology too often at the forefront of the discourse, it is good to be reminded that when the founding Vice Chancellor of the UK Open University, Walter Perry, was asked what he thought was the OU's key innovation he said it was the course team. Perry was a medical doctor and pharmacologist, not an adult educator or instructional technologist. When asked why he took the job of being the founding head of the Open University he said that it was a tremendous opportunity to improve what he saw as the lamentable state of teaching in UK universities at the time.

Many still look with suspicion on institutions that teach large numbers. Yes, it contributes to democratising education, but what about the quality? Perry and his successors like me argue that distance learning not only gives economy of scale but also quality of scale. One reason is the course team. If you are teaching at scale you can afford to have the courses developed by teams of academics and mediated by a force of trained tutors. Using media to teach has the same effect: if you are creating a video that is either being broadcast by the BBC or being downloaded thousands of times a week from iTunesU you might as well make it a quality product. I was very proud that by the time I left the Open University to go to UNESCO it ranked 5th in England, one place above Oxford, for the quality of its teaching.

Technology has been a great force for democratisation generally and can have the same beneficial impact in education if we respect the natural dynamics of technology. Sadly in education we generally have not done that.

In his report *2011 Outlook for Online Learning and Distance Education*, my fellow Vancouverite Tony Bates (Bates, 2011) identified three key trends in US higher education.

The first trend is the rapid growth of online learning. Enrolment in fully online (distance) courses in the USA expanded by 21% between 2009 and 2010 compared to a 2% expansion in campus-based enrolments.

Despite this growth, his second finding was that institutional goals for online learning in public sector higher education lack ambition. He argues, like me, that the intelligent use of technology could help higher education to accommodate more students, improve learning outcomes, provide more flexible access and do all this at less cost. Instead, he found that costs are rising because investment in technology and staff is increasing without replacing

other activities. There is little evidence of improved learning outcomes and often a failure to meet best quality standards for online learning. It seems that the traditional US public higher education sector seems has little heart for online learning. Some institutions charge higher fees to online students, even though the costs of serving them are presumably lower, perhaps to discourage this development.

A third finding, which should stimulate the public sector to take online learning seriously given its rapid growth, is that the US for-profit sector has a much higher proportion of the total online market (32%) than its share of the overall higher education market (7%). Seven of the ten US institutions with the highest online enrolments are for-profits. For-profits are better placed to expand online because they face less resistance from academic staff and need not worry about exploiting an earlier investment in campus facilities. Furthermore, the for-profits adopt a team approach to the development of online learning courses and student support, whereas most public institutions simply rely on individual academics to create and support online versions of their classroom courses. Bates calls this the 'Lone Ranger' model and argues that it is less likely to produce sustainable online learning of quality than the team approach (Bates & Sangra, 2011).

Finally, Bates projects that over 80% of US students are expected to be taking courses online in 2014, up from 44% in 2009. The for-profit providers that are already well established in this delivery mode are likely to reap the advantage. Bates concludes his report with a warning to Canadian universities by saying: "If public institutions do not step up to the plate, then the corporate for-profit sector will" (Bates, 2011).

Technology now allows institutions to deliver their programmes through media and to give students more control as distance learners. This can cut costs substantially without loss of effectiveness and the cost advantage of distance learning is increasing steadily.

How does technology cut costs?

Since I am just two days from the end of my last full-time job I'm sure you will indulge me by letting me explain how technology works by using my signature iron triangle.

At one of my first meetings of the Council of Ontario Universities after I became president at Laurentian, George Connell, then President of the University of Toronto, remarked that the challenge facing ministers of education was to widen access to education while improving its quality and reducing its cost. I found this insight very stimulating and decided to give it some graphic wings.

We can visualize this challenge of access, quality and cost as a triangle of vectors, which makes the simple point that in conventional classroom teaching there is little scope to alter these vectors advantageously. Improving one vector worsens the others.

Pack more students into the class and quality will be perceived to suffer. Improve quality by providing more learning materials or better teachers and the cost will go up. Cost cutting may endanger both access and quality.

I call this the 'iron triangle'. In India they call it the Daniel Triangle, whereas really it should be called the Connell Triangle. Anyway, whatever its name it has constrained the expansion of education throughout history by creating in the public mind an insidious link between quality and exclusiveness. But technology is able to stretch this triangle to achieve, simultaneously, wider access, higher quality and lower cost.

This revolution of providing high quality teaching to large numbers at low cost was originally achieved with traditional learning technologies (print, audio, video and stand-alone computers). It was based on the principles of industrial production, which were identified two centuries ago by Adam Smith as division of labour, specialisation, economies of scale and the use of machines and media (Smith, 1776).

Today's new generation of digital technology is characterised by the concepts of networks, connectedness, collaboration and community. As well as increasing economies of scale, since digital material costs almost nothing to distribute, this technology also speeds up and intensifies the interactions possible between students and their teachers.

Open Educational Resources

The huge advance in the last decade, which has the potential to break the triangle wide open, is Open Educational Resources. This will be my last point.

I begin by situating Open Educational Resources, which are part of a wider trend towards greater openness and sharing that has been gathering momentum for over twenty years. It is helpful to divide its manifestations in education into three inter-related elements

Open source software has a long history.

The term 'open access' is usually used to refer to open access to research results, especially where the research has been supported by public funds. The open access movement is thriving and controversies about access to research journals have been in the news recently.

Open Educational Resources are defined as educational materials that may be freely accessed, reused, modified and shared. The term Open Educational Resources, or OER, was coined at a forum held at UNESCO exactly a decade ago. The topic was the *Impact of Open Courseware for Higher Education in Developing Countries* and reflected the growing movement to make educational materials freely available for adaptation and reuse. At that event participants declared their wish to develop together a universal educational resource for the whole of humanity, to be referred to henceforth as Open Educational Resources.

For the last three years COL and UNESCO have been engaged in advocacy for that ideal.

We began with a project called *Taking OER Beyond the OER Community: Policy and Capacity for Developing Countries*, led by UNESCO's Zeynep Varoglu and COL's Trudi van Wyk. The project took us through 2010 and 2011 and achieved some useful outcomes. We held nine workshops on OER for education leaders in Africa and Asia along with three online forums and a policy forum in Paris. Taken together these workshops reached hundreds of decision makers from many countries, most of whom previously had only a vague idea of OER and their potential.

Following the advice from those meetings UNESCO and COL produced two documents late last year which have been made widely available across the world: *A Basic Guide to OER* and *Guidelines for OER in Higher Education*.

This work laid the foundations for the current stage of the project. Having increased awareness of OER among educational leaders the project moved its focus to governments. It is called *Fostering Governmental Support for OER Internationally* and is partially funded by a grant from the Hewlett Foundation.

We are doing this because it is now clear that Open Educational Resources have great transformative potential for education at all levels. They enable governments to maximise the benefits of their considerable investment in educational materials and are also a strong statement that education and knowledge are public goods.

The implication for institutions of higher education is that you no longer have to have large numbers of students in order to be able to create high quality materials. Some institutions are now creating excellent courses by mixing and matching OER from the web. Or, if you look at it another way, any institution with a bit of will-power and organisation can launch into distance learning at scale and help to democratise education.

That is a good place to end because Harvard and MIT have just launched their online edX programme to anyone in the world with an internet connection.

I quote ‘in general there will not be an admissions process. For a modest fee credentials will be granted to students who earn them...but such certificates would not be issued under the name of Harvard or MIT’.

This is a lovely example of trying to have your cake and eat it. Harvard and MIT are not about to abandon their business model based on scarcity and exclusivity, but they would like to polish up their democratic credentials. It will be very interesting to see where this goes.

It is a splendid manifestation of the situation described in your conference title: “Crossroads in Higher Education: Which Way Forward?”

Conclusion

I shall stop there and note again the ten most important points I have tried to make.

First, democracy and education go together.

Second, the most democratic countries have equitable education systems that give all citizens the opportunity to develop their potential.

Third, after a colossal effort the world has made great progress in getting all children into primary school.

Fourth, this has created the biggest educational challenge of our age. The surge out of primary school means that hundreds of millions of children are now seeking secondary schooling which is not available.

Fifth, to prevent this surge becoming a tsunami of uneducated, unskilled and resentful youth that destroys the societies in its path, all means must be deployed to expand secondary schooling.

Sixth, open schooling is one such means and is very cost-effective.

Seventh, the open universities have created a new paradigm for higher education which all universities could now adopt using online learning and taking advantage of open educational resources.

Eighth, public universities generally have not taken advantage of online learning to give a new push to the democratisation of higher education by increasing access, cutting costs and raising quality.

Ninth, this means that more and more of the teaching in higher education will be taken over by the for-profit sector.

Tenth, I express my sincere thanks to you for inviting me and listening to me.

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